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Gifted High-School Students' Perspectives on the Development of Perfectionism

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Through the use of in-depth interviews, this study investigated how gifted high-school students scoring high on at least one measure of perfectionism (self-oriented, socially prescribed, or other-oriented) perceived their perfectionism as developing. Findings suggested support for three family history models outlined by Flett, Hewitt, Oliver, and Macdonald (2002). Lack of challenge in their early academic experiences was also indicated as an influence. Findings are discussed within the context of the current literature on perfectionism in gifted students, and avenues for future research are suggested.

Keywords: anxious rearing, authoritarian parents, environment, family, gifted, modeling, perfectionism, social expectations, social learning, social reactions

Research examining perfectionism in gifted students has explored typologies of perfectionism (Dixon, Lapsley, & Hanchon, 2004; Parker, 1997; Vandiver & Worrell, 2002) as well as the extent to which this trait is more or less prevalent in gifted students compared with the general population (Orange, 1997; Parker & Adkins, 1995; Parker & Mills, 1996; Roberts & Lovett, 1994; Schuler, 2000). The origins of perfectionism in gifted students, however, are just beginning to receive attention in the literature. The purpose of the present study is to extend this current line of research by examining how perfectionism develops within a sample of gifted high-school students.

Though theoretical papers and research studies of how perfectionism may develop within the gifted population are limited in number, a comprehensive theoretical article has been published on the development of perfectionism in the general population (Flett, Hewitt, Oliver, & Macdonald, 2002). The findings of the few studies conducted with gifted students are consistent with the components of their theoretical comprehensive model suggesting that this may be useful to consider when understanding this phenomenon in gifted students. This model, and the findings from the literature in gifted education that are consistent with it, are summarized.

Flett and colleagues' (2002) comprehensive model indicates three areas of influence on the development of perfectionism: family, child, and environmental factors. Beginning with the family dimension, they proposed four influential family history models, including social expectations, social reaction, social learning, and anxious rearing models. In the social expectations model, Flett and his colleagues theorized that perfectionism may develop in response to parental approval that is contingent upon the child's performance. Children experiencing such contingent approval may develop a sense of helplessness if they are not able to meet their parents' expectations. In response, conditional self-worth is likely to develop within the child, a central component of socially prescribed perfectionism. Additionally, the theorists suggested that perfectionism may also develop in the absence of parentally delineated standards; in this situation, children may try to achieve perfection as a way of coping with the lack of guidelines and attention from their parents.

The social expectations model may be particularly important for understanding perfectionism in gifted children, as contingent self-worth may develop in response to children consistently receiving positive feedback based on their high intelligence level (Kamins & Dweck, 1999). Because

their advanced levels of thinking and accomplishments often amaze adults, gifted children may receive an abundance of such feedback from their parents and teachers. As Kamin and Dweck suggested, they may begin to perceive their self-worth as contingent upon their high intellectual level. Gifted children may interpret failure as an indication that they are not as intelligent as previously thought and, consequently, not as worthy. They may strive for perfection in an attempt to preserve their self-worth.

The social expectations model is consistent with previous research findings on the development of perfectionism within gifted college students. The self-oriented perfectionists in Speirs Neumeister's (2004) study reported that their parents had high expectations for them but that they were also supportive rather than punitive when the participants did not meet those expectations. Additionally, in a study examining perfectionism in middle-school gifted students, Siegle and Schuler (2000) found that parents of either gifted first-born or gifted male students reported parents as having high expectations for their performance.

A second model, the social reaction model, described by Flett and colleagues (2002), indicated that children may develop perfectionism in response to exposure to a harsh environment, including physical abuse or psychological distress caused by love withdrawal, experience of shame, or chaos within the family dynamics. According to Flett and colleagues, a child in this situation may develop perfectionistic tendencies as coping mechanisms to escape abuse, reduce exposure to shame, or develop a sense of control in a chaotic environment. Flett and colleagues noted that though this model may overlap with the social expectation model, the primary difference is that within the reaction model, individuals experience harsh punitive effects including hostility and lack of warmth when expectations are not met.

Support for this model can also be found in the literature on gifted students and perfectionism. Speirs Neumeister (2004) found that the socially prescribed perfectionists in her study indicated that their perfectionism resulted in part from the experience of growing up with one or more authoritarian parents. The participants described these parents as being harsh, demanding, and having unrealistic expectations for their children's performance. When expectations were not met, the participants indicated that they were either punished or made to feel shameful, resulting in insecurity and feelings of self-worth contingent upon their achievements.

In a quantitative study of perfectionism in high-ability college students, Speirs Neumeister and Finch (2006) also found that both authoritarian and uninvolved parenting styles predicted insecure attachment, which then predicted either self-oriented or socially prescribed perfectionism. These findings may be consistent with either the social expectations or the social reaction models. In their discussion of the social expectations model, Flett and colleagues (2002) noted that perfectionism can develop when children do not receive any parental input or guidelines. In this situation,

children set high expectations for themselves as a way of coping with their uncertainty about how their behaviors will be received by their parents. This may explain why uninvolved parenting in Speirs Neumeister and Finch's study predicted insecure attachment, which then predicted perfectionism. Likewise, their finding regarding authoritarian parenting may be consistent with the social reaction model because by definition this type of parent has high expectations but lacks demonstration of warmth and affection for the child.

Flett and colleagues (2002) identified a third model, the social learning model, which emphasizes the tendency for children to model perfectionistic behaviors they observe within their parents. Support for this finding within the gifted population is also evident. Speirs Neumeister (2004) found that when participants were directly asked what contributed to the development of their perfectionism, both self-oriented and socially prescribed perfectionists said the observance of their parents' modeling perfectionist behaviors. Interestingly, with a much younger sample than utilized in Speirs Neumeister's research, Parker and Stumpf (unpublished manuscript, cited in Parker, 2002) found that parental perfectionism contributed little to the variance in the perfectionism scores of their academically talented sixth-grade sample. Perhaps parental influence is greater understood or reflected upon as one enters and moves through adolescence. One of the goals of the present study is to investigate this question with the use of a high-school sample of students to determine to what extent they perceived parental factors as influencing the development of their own perfectionism.

Finally, Flett and colleagues (2002) suggested a fourth model of influence, the anxious rearing model. They theorized that individuals with perfectionistic tendencies that include an overconcern with mistakes as possibly indicative of a history of exposure to anxious parents who worried excessively about mistakes and their negative implications. No studies have yet directly tested this model within perfectionistic individuals.

Greenspon (in press) provided a clinical explanation for why perfectionism may be influenced by the family variables highlighted previously. According to Greenspon, ". . . the intense self-pressure, and other behavioral, cognitive, and affective aspects of perfectionism do not . . . originate in an isolated mind with a predilection of irrational thinking. Rather, they reflect a perfectionist's approach to self-coherence and acceptability to others". This view of one's world develops in childhood through interactions with adult caregivers and then eventually with peers and others. It is through our interactions with others that a sense of self develops and the realization that our actions have meaning from the evaluative perspective of others (Greenspon). Within this framework, the influence of the family factors in the various models proposed by Flett and colleagues (2002) on perfectionism are readily apparent.

In addition to the family factors noted previously, Flett and colleagues' (2002) comprehensive model of the development of perfectionism also includes specific child factors such as temperament, attachment style, openness to societal influence, and need for approval and recognition. Other child factors, including ability level and previous experience with achievement versus failure with the school context, may have particular importance when studying perfectionism within the gifted population. Support for this notion can be found in the literature on gifted education, suggesting that perfectionism in gifted students may arise in part out of a lack of challenge in their early educational experiences (Schuler, 2002; Silverman, 1999; Speirs Neumeister, 2004). If gifted students are not challenged, it is often easy for them to achieve perfection; based on these experiences, they maintain perfection as the acceptable standard for their performance, even as they encounter challenging material later in their academic careers. In response to this observed tendency, Tomlinson (1999) contended that if gifted students were challenged from the commencement of their school experiences, they would have more opportunities to experience failures and therefore they (and others) would be less likely to expect perfection within the academic domain.

Finally, in their model, Flett and colleagues (2002) also proposed that environmental factors play a role in the development of perfectionism, including the nature of society and culture within which the individual lives. They indicated, however, that little research, has been published investigating how specific environmental contexts may influence perfectionism. They suggested that competitive school environments, as well as relationships with peers, may influence perfectionism. This notion merits investigation when studying perfectionism in gifted students, because the type of gifted service model (self-contained, pullout program, differentiation in the regular classroom) may influence the degree to which gifted students adopt perfectionistic beliefs.

When attempting to understand how perfectionism may develop in gifted students, the comprehensive model provided by Flett and colleagues (2002) may provide a useful framework to guide the inquiry. Because so few studies have explicitly examined the development of perfectionism in gifted students, the main purpose of the present study was to extend the literature base in this area. In addition, because previous studies have focused on either perfectionism within middle-school or college students only (i.e., Parker & Stumpf, as cited in Parker, 2002; Schuler, 2002; Speirs Neumeister, 2004; Speirs Neumeister & Finch, 2006), the researchers selected high-school gifted students to participate in the present study. Specifically, the research question guiding the study was how do gifted high-school students with a high level of perfectionism (as defined by scoring high on one more of the three dimensions of perfectionism as measured by the Multidimensional Perfectionism Scale; Hewitt & Flett, 1991) perceive their perfectionism as developing?

METHODS

Participants

This study was part of a larger, overarching study on perfectionism in gifted high-school students. The methods are the same as employed in the other published study examining a different research question utilizing these same participants (Speirs Neumeister, Williams, & Cross, 2007), and are described again here as well. Fifteen high-school students in their junior or senior year attending a public, residential academy for gifted students participated in this study. Maplewood Academy[1] is located on a public university campus located in the Midwest. Admission into Maplewood is determined by multiple factors, which include the following: scores from standardized achievement or ability tests, current high-school transcripts, recommendations from current teachers or guidance counselors, essays, and an on-campus interview.

Methods of Data Collection

Participant Selection

Criterion sampling, a strategy of purposeful sampling (Patton, 1990), was used to identify participants in the present study. In this method, the criteria necessary to fully investigate the research question are predetermined, and individuals meeting these criteria are then invited to participate in the study. In the present study, the criteria used for participant selection were (a) gifted, as defined by admission into the academy for gifted students; and (b) evidence of perfectionistic tendencies. For the purpose of this study, perfectionism was defined by Hewitt and Flett's (1991) three dimensions of perfectionism, including self-oriented (having high expectations for one's performance); socially prescribed (perceiving that others have high expectations for one's performance); and other-oriented (having high expectations for others' performance). Students were considered perfectionistic if they earned a high score on at least one of the self-oriented, socially prescribed, or other-oriented subscales of Hewitt and Flett's Multidimensional Perfectionism Scale (MPS; Note, this scale is not the same as the Frost, Marten, Lahart, & Rosenblate [1990] scale of the same name.)

To select the participants, the MPS was administered to 293 students. For the entire sample of 293, the average score on the Self-Oriented subscale was 68.19 with a standard deviation of 16.28. For the Other-Oriented subscale, the mean was 57.26 with a standard deviation of 10.69.

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[1]Names of school and participants are all pseudonyms.

Finally, the average score on the Socially Prescribed Perfectionism subscale was 55.2 with a standard deviation of 14.29. The means and standard deviations for each of the subscales are similar to the means and standard deviations noted by Hewitt and Flett (1991) in their description of the norming sample for the instrument.

All of the MPS questionnaires were scored, and participants with scores at least one standard deviation higher than the mean scores on at least one of the subscales were recruited to participate in the interview study. The researchers began by recruiting those students with the highest scores on any subscale first and then proceeding down the list until no more participants could be reached to seek consent for participation. Table 1 includes the pseudonyms and type of perfectionism for each of the participants.

Instrument

The Multidimensional Perfectionism Scale (Hewitt & Flett, 1991) consists of three subscales: Self-Oriented, Socially Prescribed, and Other-Oriented Perfectionism. Self-oriented is defined as having high expectations for one's own performance. Socially prescribed is defined as perceiving that others have high expectations for one's performance. Finally, other-oriented is defined as having high expectations for the

performance of other people. Each subscale consists of 15 questions on a 7-point Likert scale. Coefficient alphas for these subscales were .86 for Self-Oriented, .82 for Other-Oriented, and .87 for Socially Prescribed Perfectionism. Test–retest reliability over a 3-month span of time was .88 for Self-Oriented, .85 for Other-Oriented, and .75 for Socially Prescribed (Hewitt & Flett, 1991).

Because the MPS was normed on a college student sample, the researchers ran a principal components analysis (PCA) to replicate the analysis reported by Hewitt and Flett (1991). An analysis of the scree plot indicated that five components should be retained, accounting for 48.69% of the variance. Of these five components, the first included the items on the MPS designed to measure self-oriented perfectionism. These had loadings ranging from .58 to .81. The second two components combined included the items on the MPS designed to measure socially prescribed perfectionism. These items had loadings ranging from .44 to .86. Finally, the last two components combined included the items on the MPS designed to measure other-oriented perfectionism, and they had loadings ranging from .34 to .76.

In their discussion of the MPS properties, Hewitt and Flett (1991) wrote that their principal components analysis yielded a scree plot that confirmed their three dimensions of perfectionism, which included self-oriented (item loadings ranging from .45 to .66), socially prescribed (.39 to .63), and other-oriented perfectionism (.24 to .32). This analysis accounted for only 36% of the variance. The difference between their analysis and the analysis in the present study may be because the participants in the present study were younger; however, the differences may also have been due to the sampling. One cannot determine this from simply examining the PCA provided by Hewitt and Flett. However, because the students in the present study were all identified as gifted high-school juniors and seniors, they were likely comparatively similar cognitively to the college students in Hewitt and Flett's norming sample.

Interviews

Data collection consisted of in-depth, semistructured interviews. In-depth interviews involve asking open-ended questions designed for participants to reconstruct their experiences and to explore their meaning (Seidman, 1998). Following this format, the researchers created an interview guide consisting of predetermined topics to be addressed within the interview. The predetermined questions in the interview guide stemmed from a review of the factors contained within Flett and colleagues' (2002) comprehensive model. Though the goal of the present study was not to confirm Flett and colleagues' model, the researchers felt that the contents of the model could inform some of the prompts for the interview questions. The researchers noted the fact that the sample consisted of gifted students and, as a result, they considered that other factors may be pertinent to the

TABLE 1
List of Participants and Type of Perfectionism

Participants	Perfectionism type	MPS subscale score	Family model
Travis	Self-oriented	95	Social expectations
Jamie	Self-oriented	87	Social expectations Social learning
Tom	Socially prescribed	71	Social expectations
Katrina	Socially prescribed	73	Social reactions Anxious rearing
Linda	Socially prescribed	78	Social reactions
Robert	Other-oriented	73	Social expectations Social learning
Darren	Other-oriented	70	Social expectations Social learning
Juliette	Other-oriented	72	Social expectations
Alex	Self-oriented	87	Social reactions
	Socially prescribed	78	
Haruko	Self-oriented	94	Social expectations
	Socially prescribed	94	
Kaitlyn	Self-oriented	82	Social learning
	Other-oriented	79	
Trevor	Self-oriented	103	Social expectations
	Other-oriented	76	
Katie	Socially prescribed	80	Social expectations
	Other-oriented	69	
Max	Socially prescribed	69	Social expectations
	Other-oriented	68	
Justice	Self-oriented	98	Social reactions
	Socially prescribed	91	
	Other-oriented	69	

development of perfectionism in addition to those proposed by Flett and colleagues for the general population. Therefore, the interview was not limited to just these predetermined questions stemming from Flett and colleagues' model. Rather, the participants were also given ample opportunity to suggest new topics or expand on the predetermined topics in any way they perceived as meaningful to addressing the questions (Payne, 1999).

One of the three researchers conducted one in-depth interview with each participant. Additionally, member checks consisted of follow-up correspondence via e-mail to clarify points in the interview and to ask additional questions that arose through the data analysis process. Sample interview questions included the following:

1. How do you think your perfectionism developed? Please give me some illustrative examples.
2. Tell me about your relationship with your parents and siblings in as much detail as possible (prompts: early childhood, elementary/middle, and current relationship now that student is living at residential academy).
3. Please describe your relationships with your peers throughout school (prompts: competitive, supportive).
4. Tell me about your earlier school experiences (prompts: experiences with teachers, level of challenge, participation in gifted program).

Methods of Data Analysis

The interviews were transcribed verbatim, and the data were analyzed through procedures of inductive data analysis (Bogdan & Biklen, 2003; Coffey & Atkinson, 1996). The process of inductive data analysis by hand began with the researcher coding the data with words and phrases that marked regularities and emerging patterns, as well as topics covered in the data (Bogdan & Biklen). This method of coding was parsimonious in that it facilitated organization, management, and retrieval of meaningful data components (Coffey & Atkinson). In addition, however, it functioned to open up the data, allowing the researchers to develop a schematic representation of the data through the process of raising questions and generating categories of similar codes (Strauss, 1987). Each of the categories was then examined and merged together into broader concepts and themes. The researchers then went back to the data once again to code for explanatory linkages between and among the themes in order to reach a consensus (Coffey & Atkinson).

To control for potential researcher bias, member checks were completed with each of the participants (Lincoln & Guba, 1985). In the present study, the member checks consisted of sending interview transcripts and a draft of the analysis and interpretations by e-mail to all of the participants for verification. Participants were encouraged to reply if they felt that the analysis or interpretation misrepresented their perceptions. No participants responded with concerns

over the analysis. Additionally, two of the researchers initially independently coded and analyzed the findings and, following this procedure, met to discuss the findings and to verify consistency within the interpretation. In a few instances where discrepancies were noted between the two interpretations, the researchers went back to the original data and searched for additional evidence in order to clarify the interpretation and reach consensus.

FINDINGS

Models of Perfectionism

In accordance with the developmental models of perfectionism proposed by Flett and colleagues (2002), several themes emerged from the accounts provided by the participants' discussion regarding the origins of their perfectionistic behaviors.

Social Expectations Model

The responses of several participants supported Flett and colleagues (2002) social expectations model indicating perfectionism may develop "in response to contingent parental approval" (p. 90). For example, Jamie discussed how she felt she needed to prove herself in her family stating:

In my family, to prove that you're smart, you just had to get an A in that class, whatever it took. [My parents] have such a high expectation, and if I don't get that certain grade or that certain mark or get help if I'm struggling, then they just get on me.

Another participant, Darren, explained how he wanted to "work so [he] could meet his [parents'] standards" and added that because his "mom has always hounded [him] to do things right and the correct way" he thought it "increased [his] level of perfectionism."

Experiencing this need to be perfect in order to receive parental approval influenced some individuals to make decisions based less on what they wanted and more on what their parents desired. For example, Max said,

I've always worked basically for [my parents] because they were the ones who wanted me to go to the Ivy League school, pressing me to finish my application. I really don't want to go to those places, but I felt like I had to at least fill out the application and go through with it all for my parents.

Others perceived the expectations of their parents to be more implicit. For example, when describing his parents' reactions to his perceived failures, Robert commented, "They expect a lot out of me, like I should have a 4.0 GPA. . . . [My parents] won't yell, but they will be very disappointed, and they make sure [I] know it." Similarly, Trevor

mentioned the covert expectations for college that his parents had of him. He explained,

> I know that I have to complete college as the minimum required education set forth by them, and I do want to compete that, and I want to go farther than that, but at the same time I know for a strange reason if I decided I didn't want to do that, that wouldn't really be an option.

Implicit expectations were also mentioned by Juliette who said, "It was more, they understood that I was having problems, but they expected me to put more energy into it, that I didn't have." Some participants indicated that they continued to carry their parents' expectations with them, even as they were attending a residential academy and no longer living at home. Tom's comments were a reflection of this notion. He said, "Things he would say to me as a child I would really think about later when I'd be by myself and mostly applied what he said to me in school and whatever I did."

Social Reactions Model

Another model for the development of perfectionism proposed by Flett and colleagues (2002) was the social reactions model. Within the social reactions model individuals believe that if they do not achieve perfection then there will be harsh consequences. Katrina said that though her dad motivated her by gifts, he also yelled, threatened, and ridiculed her for not meeting his expectations. She explained:

> Ever since he's seen some bad grades from the Academy he tells me I'm going to end up working at Wal-Mart as a greeter. He tells me I am not going to get into college, especially since I got the rejection letter from MIT. He teases me that he wants to get a bumper sticker that says My daughter's an MIT reject. . . . [My parents] find all of my faults and try to make them better. It's never good enough.

This authoritarian type of parenting was also described by other participants such as Alex, who described the environment in his household as the following:

> My mom is the strict one. She tries to use old-fashioned rules on us, kind of like the 50s perfect household, you know, she tries to make us act proper and behave. . . . My mom was the Nazi of the family. I don't like to tell her things because she'll freak out and not be able to understand.

Alex also noted how the lack of warmth in his home resulted in uncertainty about his mother's love for him when he added, "I'm pretty sure she loves me, but she does not know how to show it very well, so we are still working on that."

Justice described experiencing harsh consequences as a result of not meeting her aunt's expectations. She described having a very close relationship with her aunt as a child, but currently, Justice explained that her aunt now dismissed her after she did not meet her expectations. She said,

> We used to be really close, but she just recently decided that I'm not what she thought I should be. She is one who definitely thinks I should always be perfect. She always wanted me to go to Julliard for singing, and I don't want a career in singing, so I think that she kind of thinks I am a waste now. . . . I basically think that I'm not worth her time anymore. I'm not really what she expected. She said to me, 'I expected so much more.'

Consistent with the other participants, Linda also described experiencing threats from her parents as a result of not measuring up to their standards. When Linda was struggling in her physics class, she said that her parents threatened to remove her from the academy. She said that her parents also used guilt as a motivator. She said,

> Sometimes it is a guilt thing. I played piano, and I quit for a year, and my dad got really upset about it because he's like, 'You've had all of these opportunities.' And when I quit, he was really upset because he was like, this is something I've always wanted to do, and he cried, and I was like 'Oh, my gosh.' So, I started playing piano again.

Similarly, Justice also commented on her mother's tendency to make her feel guilty. Describing a time when she did not meet her mother's expectations, Justice said it was "just awful, absolutely awful. It was complete drama. My mom made the situation about her. She said, I can't believe you did this to me, you hurt me so much, I feel as if I've failed as a mother."

Social Learning Model

The social learning model identified by Flett and colleagues (2002) highlighted the tendency for children to model perfectionistic behaviors that are displayed by their parents. Robert described the perfectionism that he witnessed of his father when he said, "My dad expects a lot from himself. He just gets irritated very easily for people not doing their best or what he expects out of them." Darren's comments on his mother's perfectionism were reflective of Robert's when he offered, "My mother is the perfectionist queen. She's non-stop cleaning our house. Perfect. Perfection. She wants nothing less than perfection."

Some participants suggested that they believed that their relationships with their parents influenced the modeling of their perfectionistic behaviors. Kaitlyn stated, "Being closer to my mom, it's kind of made me more of a perfectionist." Jamie supported this idea when she discussed her relationship with her father. She said,

[Dad] is the person I look up to with perfectionism. He's the type of person that if you write something, and the letter does not look just right, he will rewrite the whole thing. . . . So, most of my perfectionism influences have come from him.

Likewise, Katie's comments are also reflective of the social learning model: "I've seen the achievements that my parents have, and they're very high, and I've always wanted to be like them."

Anxious Rearing Model

The fourth model described by Flett and colleagues (2002) was the anxious rearing model, where perfectionism may be related to an exposure to anxious parents who excessively worry about the negative implications of making mistakes and project that anxiety onto their children. Only one participant's responses were reflective of the anxious rearing model. Katrina described her feelings on her own reaction to the pressure she felt from her parents about a less than perfect academic performance. She recalled,

They are still bugging me about it. They push me. This should never happen again. If you miss one more class, you're going to end up failing. I was upset about it, but I had learned to relax a lot because I was at the academy. I've learned to deal with failure sometimes.

Additional Influences on the Development of Perfectionism

In addition to the family factors noted above, two other themes emerged as influences: lack of challenge in their early academic careers and expectations due to early successes indicative of ability. Many of the participants felt that their early academic experiences were unchallenging, and as a result, they were quite bored. They tried to create a challenge for themselves by striving for perfection. As Jamie described,

I was just simply bored. There was nothing else to do. . . . I saw perfectionism in my math. . . . I was very good at math, I wouldn't accept anything below an A, so I obsessed over my grade—the perfect grade. I became dependent upon that.

Katrina also commented that the lack of challenge led her to get perfect grades. She maintained that mentality even when academics were more challenging in high school. She explained:

When I was little, I tried to be the best. There wasn't much to do in school. It was, everything is easy. I got perfect grades. And then as I got to high school, and there were some challenges, I had to try harder and had to go above and beyond. I did extra assignments. I would always add that extra PowerPoint. I always wanted to challenge myself.

Many of the participants commented that the origins of their perfectionism stemmed from early experiences of success in academics. They felt that their parents and peers eventually began to expect perfection out of them as a result of their previous performances. Juliette summed up this theme by saying, "I've gotten As in everything since I was little, so I know they expect it of me." Likewise, Justice explained that after repeatedly doing well academically, people formed expectations for her future performance:

After awhile everyone just expects you to be first. And suddenly when you have a hard day, or when you roll out of bed without make up on, everyone automatically thinks that there's something wrong with you. And that's difficult, that's very difficult, and then all of a sudden it seems like you're in a cycle or you're stuck in a trap of just having to be what you've always been.

Trevor said, "Initially, I began to do well in school, as my peers started to expect it, it becomes necessary to save face, to continue to do well in school. I'm the smart kid in the class. I'm the person with all As who does everything just right."

DISCUSSION

Models of Perfectionism

The themes of this study regarding family influences on perfectionism are consistent with three of the familial theoretical models outlined by Flett and his colleagues (2002): social expectation, social reaction, and social learning. It is interesting to note the types of perfectionism that were present in the participants who described influences falling under each theoretical model. Those providing descriptions that were indicative of the social expectations model varied in the types of perfectionism in which they scored high on, including self-oriented, socially prescribed, other-oriented, and combinations of the three. In contrast, although those whose descriptions reflected the social reaction model also had different combinations of perfectionism, each combination included socially prescribed perfectionism.

This pattern of results is theoretically consistent when considering parenting styles and previous research on perfectionism and parenting styles. Parenting styles can be broken down into two dimensions: responsiveness and demandingness (Baumrind, 1991; Maccoby & Martin, 1983). Responsiveness is the degree to which parents demonstrate love and affection for their children, whereas demandingness is the degree to which parents have high expectations for their children. Both authoritarian and authoritative parenting styles are characterized as high in demandingness, and both have been linked to different types of perfectionism, self-oriented with authoritative parents and socially prescribed with authoritarian parents, respectively (Speirs Neumeister,

2004; Other-oriented perfectionists were not included in the study.) Therefore, it follows that the social expectations model, which is based on the notion that parents have high expectations for their children, holds explanatory power in accounting for the experiences of different types of perfectionists growing up with either authoritarian or authoritative parents.

In contrast, the social reaction model differs from the social expectations model in the degree to which participants experience a harsh environment physically or psychologically, including withdrawal of love and affection when high expectations are not met (Flett et al., 2002). This description is consistent with the definition of authoritarian parenting as parents exhibiting a high degree of expectations coupled with a low level of responsiveness (Maccoby & Martin, 1983). All the participants in the present study whose responses reflected the social reaction model scored highly on socially prescribed perfectionism alone or in combination with the other two types of perfectionism. Socially prescribed perfectionism has been associated with experiencing authoritarian parenting (Flett, Hewitt, & Singer, 1995; Speirs Neumeister, 2004). Future empirical studies are warranted examining the relationship between parenting styles and socially prescribed perfectionism within the gifted population.

The findings of this study offer little support for the anxiety rearing model. One limitation of the study was that the interview questions were open-ended, and the researchers did not ask a follow-up prompt specifically addressing this model. The interview questions may have been sensitive enough to elicit responses that would be indicative of this model. However, it may also be that within a high-ability sample, the other models may be more salient and thus more likely to be influential. Intuitively, it follows that when a child is identified and recognized by his or her parents as being gifted, as was the case for each of the participants in the study, the expectations those parents hold for the child's academic achievement are likely going to be higher than if the child was not identified. Therefore, the two models emphasizing parental expectations, social expectations, and social reaction, may be more readily applicable within the family systems of these high ability students. Future studies are needed that examine to what extent the salience of each of the four models may differ within a gifted sample compared with a nonidentified sample.

Additional Influences on the Development of Perfectionism

In addition to the family models proposed by Flett and his colleagues (2002), the other primary influences on the development of perfectionism were a lack of challenge and early academic successes that were indicative of high ability. The participants indicated that their early successes led them, as well as others, to expect perfection as the norm. The lack of challenge in their early grades contributed to

these expectations because achieving perfection required little or no effort. Other studies and theoretical articles on perfectionism and gifted students have also noted that a history of academic successes achieved without challenge may lead to the development of perfectionism (Schuler, 2002; Silverman, 1999; Speirs Neumeister, 2004). No studies were found, however, that have empirically examined the effect that a rigorous early curriculum may have on the incidence of perfectionism in gifted students. Flett and colleagues speculated that a competitive school environment may increase perfectionism; however, a challenging environment may exist independent of competition, and such an environment may prove to thwart the development of perfectionism. Empirical studies are in critical need before generalizations regarding implications for gifted students and programming can be recommended. Such studies are needed at the elementary-, middle-, and high-school levels to determine whether the effect of challenge on perfectionism changes over time.

The findings of this study are consistent with three of the family history models outlined by Flett and his colleagues (2002). In their theoretical article on the development of perfectionism, the scholars also highlighted child and environment factors, in addition to family factors, that may influence perfectionism. The findings of the current study suggest that one environmental factor—a lack of a challenging curriculum—was associated with the development of perfectionism within this sample of gifted students. Many more empirical studies are needed, however, that continue to examine the influence of challenge on perfectionism as well as other environmental and child factors, including the school and classroom environment and the child's attachment style, personality, temperament, and ability level. As more research studies are conducted that test theoretical models, a more comprehensive understanding of how different types of perfectionism develop within gifted students will be reached.

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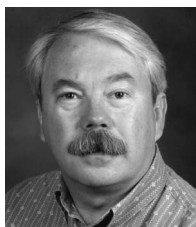
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