The Relationship Between Perfectionism and Achievement Goals in

High Achieving College Students

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ABSTRACT

Previous research has discovered a trend between perfectionism styles and achievement goal types in High Achieving students. Individuals who have self-oriented perfectionism tend to have more mastery based or performance approach goals, while individuals who have socially prescribed perfectionism tend to have more avoidance based goals. The goal of the current study was to investigate the relationship between perfectionism styles and achievement goal types in not only High Achieving college students, but in comparison to Non-High Achieving college students as well. Using a correlational between-groups design, 67 participants were administered the MPS, AGQ-R, AMS-C, CSW-A, and the ITIS. It was hypothesized that the High Achieving participants would have higher scores on self-oriented perfectionism as well as on mastery based goals or performance approach goals, while Non-High Achieving participants would have higher scores on socially prescribed perfectionism and avoidance based goals. Results indicated that there were no significant differences between the two achievement groups when it came to perfectionism styles and achievement goal types.

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CHAPTER I

INTRODUCTION

Students with gifted abilities often complete tasks successfully in their early academic careers due to a lack of challenging course work which required little effort from them in order to achieve high standards (Speirs Neumister et al., 2009; Speirs Neumister, 2004a; Speirs Neumister, 2004b). By accomplishing a multitude of academic goals early in their lives, students with gifted abilities receive positive feedback from others which can result in positive self-image (Speirs Neumister et al., 2009). This positive feedback from others can cause these students to begin basing their self-worth on how well they do academically (Wang et al., 2012), and can potentially lead to them feeling less worthy if they experience academic failures in life because these failures may be perceived as a reflection of themselves not being as smart as they thought they were (Corson et al., 2018, Speirs Neumister et al., 2009). Additionally, being labeled as gifted can create high expectations from others, including their peers, parents, or even their teachers (Coleman et al., 2015; Gates, 2010). These expectations often focus on the child performing well academically, and their teachers and parents can sometimes set standards for the child that are too high compared to what they can actually achieve academically (Coleman et al., 2015; Gates 2010; Speirs Neumister et al., 2009). The Pygmalion effect states that teachers' perceptions of students can influence how well or poorly they will perform in class (Gates, 2010). For students with gifted abilities, this expectation to have

high academic achievement can lead to them experiencing high levels of stress (Corson et al., 2018; Gomez-Arizaga & Conejeros-Solar, 2013; Peterson & Canady, 2009). The gifted label also can encourage students to form an entity view of intelligence, meaning they believe their cognitive abilities are fixed (Mofield & Peters, 2018; Speirs Neumister, 2004b). As academia becomes more challenging, such as when entering college, this entity view of their intelligence can lead students with gifted abilities to exhibit learned helplessness when faced with challenges or failures because they may believe that any extra effort on their end will not change their capabilities nor make it more likely that they will successfully complete the challenging tasks. These experiences of feeling like they need to perform well and meet expectations may also lead to perfectionism in students with gifted abilities (Speirs Neumister et al., 2009; Stornelli et al., 2009). For these students, having perfectionism can lead to an increased risk for experiencing stress and anxiety in relation to their perfectionism when entering college if their competence is primarily evaluated based on comparison to other students (Fletcher & Neumister, 2012). When a student has a combination of having gifted abilities, an entity view of intelligence, and perfectionism, this can create a tough situation for them in college. The following literature review will summarize the research about perfectionism, achievement goals, and academic self-worth among individuals with gifted abilities and those how are high achieving. A project studying the integration of these variables among high achieving college students then will be proposed.

Perfectionism and Individuals with Gifted or High Achieving Abilities

Perfectionism is the tendency to think that anything short of perfect is unacceptable or is an indication of personal failure. Perfectionists may focus on the evaluative feedback that they receive from others, and may react strongly to the outcomes (Speirs Neumister, 2004b). This can be related to the experiences of students with gifted abilities because studies have shown that they tend to be more self-critical (Peterson & Canady, 2009; Speirs Neumister, 2004b; Speirs Neumister & Finch, 2006). Perfectionism also has been linked to fears of failure and low self-esteem (Hewitt & Flett, 1991; Stornelli et al., 2009). As mentioned previously, students with gifted abilities can experience fears of failure from the high expectations that are placed upon them or that they place on themselves, which can also be tied to how they view their self-worth if they do not meet the expectations (Mofield & Peters, 2018). This phenomenon is known as contingent self-worth, which is when someone bases their self-esteem on the outcomes in specific areas (Wang, et al., 2012). Speirs Neumister et al. (2009) found that students with gifted abilities believed if they were not perfect, harsh consequences would occur.

Regarding perfectionism, Hewitt and Flett (1991) have proposed three types: self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism. Someone with self-oriented perfectionism tends to set high standards/goals for themselves, they evaluate their own behavior critically, they strive to avoid failure, and they have an intrinsic need to be perfect (e.g., Corson et al., 2018; Fletcher &

Neumister, 2012; Hewitt & Flett, 1991; Speirs Neumister, 2004c). Socially prescribed perfectionists see others as setting high, unrealistic expectations upon them which they must achieve, they believe other people in their lives evaluate them and pressure them to be perfect, and they exhibit a fear of negative evaluation which can lead to learned helplessness (Hewitt & Flett, 1991; Speirs Neumister, 2004c). Corson et al. (2018) and Fletcher and Neumister (2012) also state that someone with this maladaptive type of perfectionism uses perfectionism to avoid failure, is never satisfied with their completed work, are hypercritical of their mistakes, experience no pleasure from success, and create more stress for themselves. For other-oriented perfectionists, they set beliefs and unrealistic expectations upon others and they place an importance on other people in their lives to be perfect (Hewitt & Flett, 1991). When comparing the three types of perfectionism, self-oriented and socially prescribed perfectionism are more about seeking perfection within themselves, whereas other-oriented perfectionists are more concerned about others being perfect (Speirs Neumister, 2004b). Self-oriented perfectionism is seen as more healthy or adaptive, whereas socially prescribed perfectionism is more maladaptive or unhealthy (Corson et al., 2018; Plominski & Burns, 2017).

Another popular form of categorization for perfectionism has come from Frost et al., (1990), which is that perfectionism appears in the form of evaluative concerns or positive strivings. Evaluative concerns perfectionism comes from striving for perfectionism due to fear of failure, to maintain a sense of self-worth, and avoiding

challenging tasks. If striving for perfectionism comes from a hope of success and the need to fulfill internal needs dealing with mastery and personal growth, then this can be labeled as positive strivings perfectionism. Frost and their colleagues created six dimensions to measure these two types of perfectionism: concern over mistakes, personal standards, parental criticism, doubt of action, organization, and parental expectations. High scores on concern over mistakes and doubt of action are associated with the evaluative concerns perfectionism type. For positive strivings perfectionism type, high scores on personal standards and organization are associated. When compared to the scale created by Hewitt and Flett (1991), self-oriented perfectionism has been correlated with Frost's personal standards subscale, and socially prescribed perfectionism has been correlated with Frost's concern over mistakes, parental criticism, and parental expectations subscales (Speirs Neumister et al., 2015). Two factors have been confirmed by these correlations: (a) Maladaptive Evaluative Concerns; and (b) Positive Achievement Strivings.

When it comes to studying perfectionism within the gifted population, Speirs Neumister and her colleagues have been at the forefront. One area researched by her and her team is what influences lead to perfectionism in a gifted population (e.g., Speirs Neumister, 2004a; Speirs Neumister et al., 2009). Speirs Neumister (2004a) selected 290 first year college students in the honors program and administered to them the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991) to determine who the

socially prescribed and self-oriented perfectionists were; from this sample, 12 college students (6 socially prescribed, 6 self-oriented) with either of the two types of perfectionism were further interviewed by the researcher. Based on these data, Speirs Neumister (2004a) reported that for both types of perfectionism, the majority of the students claimed that their perfectionism may have stemmed from not failing as a child and from the lack of academic challenges which lead to easy, early successes. Both groups of students also stated that their early successes in life increased expectations, but the socially prescribed perfectionists said that it increased expectations set by others whereas the self-oriented perfectionists said it increased expectations set by themselves. Another common factor the researcher found between the two groups was that the students stated that any grade less than an A was equivalent to failure. Speirs Neumister et al. (2009) replicated this same study a few years later with 15 high school students and found similar results.

In another similar study, Speirs Neumister (2004b) assessed how each type of perfectionism was related to views of success and failure of students with gifted abilities. The same 12 students from her previous studies were also used for this one and again were split into socially prescribed perfectionists and self-oriented perfectionists. This study showed that the students who were socially prescribed perfectionists tended to minimize their successes and saw them as routine. They also had a lack of pride when it came to succeeding at a task; they believed it was due to luck. When it came to failures,

these same students maximized their failures, had a fear of disappointing others, and exaggerated the outcomes from their failures. Many students in this group mentioned that failure was always on their mind and described internal causes for their failures. For the other group, students who were self-oriented perfectionists tended to express personal pride towards their successes and said that the hard work was rewarding. They mainly gave internal attributes for why they succeeded at a certain task. When it came to how they viewed failures, these same students saw them as motivators to work harder, did not over-emphasize the outcomes from failures, and attributed failures to situational aspects. Although they had a more positive view of failures than those who were socially prescribed perfectionists, they still experienced frustration whenever they failed at something because they felt they lacked control over the situation. From this study, Speirs Neumister stated that socially prescribed perfectionism is related to learned helplessness, which is what might lead students with gifted abilities with this type of perfectionism to avoid or withdraw from failure situations.

Outside of the work completed by Speirs Neumister, Mofield and Peters (2019) have recently investigated how perfectionism, mindset beliefs, and achievement attitudes differ among students with gifted abilities. What was unique about their study was that they compared students with gifted abilities who were underachievers to students with gifted abilities who were achievers with the previously mentioned predictors. To help understand the difference between these groups, the researchers explained how students

with gifted abilities and are underachievers are those students who avoid learning new things and challenges that could increase their level of mastery and understanding. The underachievement occurs when the student's performance academically is not well aligned with their measured potential. In simpler terms, underachievement can be identified by their discrepancy between expected and actual performance. Instead of using college students, the researchers studied 264 middle school students between the 6th and 8th grades in the southeastern United States. Underachievers were identified as students with gifted abilities with GPAs below 2.80, and 15 of the 264 were identified as so.

Results showed that the students with gifted abilities who were underachievers had statistically significant higher scores on fixed mindset beliefs and on doubt of action (an aspect of negative perfectionism) than those who were students with gifted abilities and achievers (Mofield & Peters, 2019). Students with gifted abilities who were underachievers also had statistically significant lower scores on organization (an aspect of positive perfectionism), academic self-perception, and motivation/self-regulation compared to students with gifted abilities who were achievers. The variable of motivation/self-regulation was one of three predictors that was statistically significant when related to achievement group status, meaning that as scores on this scale increase, so do the odds of being classified as an achiever. Having a fixed mindset was also a statistically significant predictor, meaning that as fixed mindset beliefs increase, so do the

odds of being classified as a non-achiever. The last predictor was organization, meaning the more scores increase on this scale the more likely someone is to be classified as an achiever. Lastly, the researchers found that having a fixed mindset was a statistically significant predictor of both aspects that form negative perfectionism (concern over mistakes and doubtful action), whereas having a growth mindset was a statistically significant predictor of both aspects that form positive perfectionism (personal standards and organization).

Additional researchers have focused on perfectionism within a gifted student population. For instance, Peterson and Canady (2009) studied 121 students with gifted abilities over an 11-year period, with the youngest starting participant being 7 years old, and continued until they were 18 years old and graduating from high school. From this sample, 63 students continued until their high school graduation. Many aspects were researched in this study, but when it came to perfectionism within the students with gifted abilities, the researchers found that the gifted students believed their perfectionism hindered their success as school became more difficult academically, and that these same students became sensitive to criticism over time. Comparing over 1000 college students with and without gifted abilities on several personality and academic variables, Plominski and Burns (2017) reported that having gifted abilities as an undergraduate student is often associated with being in an honors college program at their university. Although perfectionism was not the main focus of this study, Plominski and Burns (2017) did

include measures to assess aspects of perfectionism between these groups. Results showed that the students with gifted abilities who had socially prescribed perfectionism had lower mean values of negative perfectionism compared to the students without gifted abilities who were also socially prescribed perfectionists. When it came to self-oriented perfectionism, the sample of students with gifted abilities had more positive perfectionism compared to the sample of students without gifted abilities. The researchers also found that the sample of students with gifted abilities reported higher needs for achievement compared to the sample of students without gifted abilities.

When looking into perfectionism, there are three main types that can occur: socially prescribed perfectionism, self-oriented perfectionism, and other-oriented perfectionism (Hewitt & Flett, 1991). Each of these types of perfectionism can have an effect on students with and without gifted abilities. Studies have shown that within a population of students with gifted abilities, having socially prescribed perfectionism is related to learned helplessness due to their fears of failure, blaming outside sources for their failures, and exaggerating their failures (Speirs Neumister, 2004b). Having self-oriented perfectionism is related to students with gifted abilities seeing failure as motivators and attributing their own failures to situational factors. Being a student with gifted abilities but also labeled as an underachiever has been correlated with having a fixed mindset and less motivation compared to students with gifted abilities who are achievers (Mofield & Peters, 2019). Lastly, when comparing students with gifted abilities

and students without, those with gifted abilities who have self-oriented perfectionism have more positive perfectionism than students without gifted abilities, and students with gifted abilities who have socially prescribed perfectionism have less negative perfectionism than students without gifted abilities (Plominksi & Burns, 2017).

Perfectionism and Achievement Goals

Achievement goals have been described by Elliot (1999) as being either mastery-based goals, performance-avoidance based goals, or performance-approach based goals. Mastery goals focus on gaining competency and proficiency in a task and are guided by a need for achievement motive that will lead to success. Performance-avoidance goals focus on avoiding looking incompetent compared to one's peers and develop as a result of a fear of failure which may be related to an individual focusing on the possibility of failing. Performance-approach goals focus on gaining competence as compared to their peers and can be formed from a fear of failure or a need for achievement. Upon further investigation into the types of achievement goals, Elliot and Murayama (2008) proposed a four-factor approach. In the four-factor approach, mastery is no longer a single concept and instead is broken into mastery-approach and mastery-avoidance. Mastery-approach goals are focused on attaining task-based or intrapersonal competence, whereas mastery-avoidance goals focus on avoiding incompetence. Fletcher and Neumister (2012) stressed how important it is to include this new concept of mastery goals being avoidance based

as well into perfectionism research because this goal type could potentially be significantly relevant to expressions of perfectionism.

The relationship between types of perfectionism and types of achievement goals have been of interest to psychology researchers, and previous studies have shown that perfectionism is related to achievement motivation in students with gifted abilities (e.g., Fletcher & Neumister, 2012; Speirs Neumister, 2004c; Speirs Neumister & Finch, 2006; Speirs Neumister et al., 2015). Those with high socially prescribed perfectionism tend to have a fear of failure, which sounds similar to performance-avoidance and performance-approach goals. If a student fears failure, then they might create goals that avoid failing. For people with high self-oriented perfectionism, they tend have a positive need for achievement and are more focused on successes, which sounds similar to mastery or performance-approach goals. Someone who is motivated to learn new things may create goals that lead them towards gaining proficiency in something new. One measurement scale, the achievement goal questionnaire revised (AGQ-R; Elliot & Muyarama, 2008), has shown that a need for achievement positively predicts mastery and performance approach goals and that a fear of failure positively predicts mastery and performance avoidance goals (Elliot & Muyarama, 2008). Speirs Neumister et al. (2015) studied the relationship between perfectionism types from Hewitt and Flett's (1991) MPS and the AGQ-R (Elliot & Muyarama, 2008) within 393 honors college undergraduate students. Results showed that self-oriented perfectionism was related to higher levels of mastery

and performance approach goals, as well as higher levels of mastery avoidance based goals, compared to socially prescribed perfectionism and non-perfectionists. Having socially prescribed perfectionism was related to having higher levels of avoidance based goals compared to non-perfectionists.

A major theory that exists when discussing achievement goals is the self-determination theory (SDT), which focuses on how intrinsic and extrinsic motivations relate to perfectionism and goal types (Fletcher & Neumister, 2012). According to this theory, students with intrinsic motivation engage in academic tasks due to curiosity, interest, challenge, and/or enjoyment. Students with extrinsic motivations engage in said tasks because of deadlines, punishment avoidance, and/or experiencing pressure from others. These same students might also apply pressure internally to avoid self-criticism or keep a sense of positive self-esteem. Self-oriented perfectionism has been positively related to intrinsic motivations, and extrinsic motivations have been positively associated with socially prescribed perfectionism (Fletcher & Neumister, 2012).

A handful of studies have delved deeper into this relationship between perfectionism and achievement goals. For example, Speirs Neumister (2004c) used her same, previously mentioned sample of 12 college aged students with gifted abilities to see how their types of perfectionism were related to their achievement goals. The results showed that for the group of socially prescribed students with gifted abilities, they had a fear of failure motive which influenced their goals about academic achievement. This led

to them expressing more performance-avoidance and performance-approach goals. Some of these students even mentioned that they would purposely procrastinate if they believed they could not avoid failing an assignment, which would allow them to blame external reasons for failing instead of blaming themselves. For the group of students who were self-oriented perfectionists, they had an underlying motive to achieve which influenced them to set mastery and performance-approach goals. These students also had a desire to learn new things, they would seek out new challenges, had a strong work ethic, and prepared for assignments far in advance. The students also stated that competition with peers was their motivation to achieve. From this study, the researchers stated that students who set performance-approach goals that focused on outperforming others might lead them to avoiding challenging tasks in the future due to their fear of failure.

Speirs Neumister and Finch (2006) studied the relationship between parental style, perfectionism style, and achievement goals among 265 college students with gifted abilities. Results indicated that the students with gifted abilities with high socially prescribed perfectionism tended to adopt more performance-avoidance or performance-approach goals, whereas the high self-oriented perfectionism was more strongly correlated with expressing mastery or performance-approach goals. The researchers believe that because the self-oriented perfectionists place such high standards on themselves, they may be motivated by the need to achieve which would lead towards mastery or performance-approach goals, and because those who are socially prescribed

perfectionists think others set high standards for them, they may be motivated by fear of failure which would lead to performance-avoidance or approach goals.

When it comes to maladaptive perfectionism, having contingent self-worth has been strongly associated (Wang et al., 2012). Studies have shown that contingent self-worth relates to perfectionism by predicting how perfectionists will react to personal failures and negative life events. In one study, Wang et al. (2012) investigated how levels of contingent self-worth (CSW) mediated the relationship between perfectionism and achievement goals, mainly mastery-based goals. An online survey measuring perfectionism, goal orientation, academic self-efficacy, contingent self-worth on academics, and satisfaction with life was completed by 144 students with gifted abilities anywhere from the 6th to 12th grades in a suburban Midwestern school district in the US. The students were aged anywhere from 10-18 years old and had been in a gifted program for an average of almost five years. Having high discrepancy between your perceived standards and your actual performance has been a key negative aspect of perfectionism, so the researchers investigated this aspect as well.

Results indicated that high mastery goals within students with gifted abilities acted as a buffer to the negative effects of experiencing discrepancy if they had low levels of CSW-A (Wang et al., 2012). This same group of students also reported higher academic self-efficacy compared to the others. If the students had high levels of CSW-A, discrepancy was not significantly associated with their perceived academic self-efficacy.

Results did show however that students who had a combination of low CSW-A, high discrepancy, and low mastery goals reported more maladaptive well-being. When looking at just goal types, having mastery goals was negatively related to discrepancy, and having either type of performance goals was significantly positively related to discrepancy. It also appeared that students with low CSW-A combined with high mastery goals alone predicted that they did not link their self-worth to their academic achievement. In their review study of stress and perfectionism in individuals with gifted abilities, Corson et al. (2018) discuss how individuals with gifted abilities who are socially prescribed perfectionists may create more stress for themselves due to their need to avoid failure, hyper criticalness of their mistakes, and basing their self-worth on their performance. They state how those experiencing more stress due to this type of maladaptive perfectionism can lead to cardiovascular disease as they age, stressing the importance of teaching students with gifted abilities how to handle failures and regulate their emotions in order to help them keep calm when experiencing these types of situations. These maladaptive patterns of perfectionism and goal orientation can not only lead to challenges academically and socially, but also can negatively impact one's health.

Although it is important to study the relationship between perfectionism and achievement goal types within the population of students with gifted abilities, comparing how both aspects differ in students who are labeled gifted versus those who are not contributes to our understanding of these relationships as well. In their review of

perfectionism and achievement goals, Fletcher and Neumeister (2012) noted that a general trend exists when comparing perfectionism and achievement goals: the self-oriented, or adaptive, perfectionism style leads students to have more intrinsic motivation and to set more approach based goals (both mastery and performance). For socially prescribed, or maladaptive, perfectionism, the researchers found the trend of students having more extrinsic motivation and setting more performance approach and performance avoidance goals. As stated earlier, this same pattern has been identified within the gifted population as well.

Other variables can play a role in the relationship between perfectionism and achievement goal types, such as mindsets. Mindsets can be one of two types: (a) fixed; or (b) growth. Dweck (2006), who initiated interest in mindset theories, indicates that someone with a fixed mindset believes that their basic qualities are set and unchangeable, whereas someone with a growth mindset views their abilities to be malleable with effort and hard work. Based on these beliefs, having a growth mindset can lead to an individual valuing learning, challenges, and failures. Having a fixed mindset, though, can lead an individual to want to avoid challenges or changes because they believe that only talent creates success. To delve further into this idea of mindsets, Mofield and Peters (2018) added in the variable of mindset beliefs about intelligence to investigate its relationship with perfectionism and achievement attitudes among gifted, advanced, and typical middle school students.

In their study, Mofield and Peters (2018) hypothesized that having a growth mindset would be positively associated with adaptive perfectionism and all attitudes of achievement (attitude toward school and teacher, academic self-perception, motivation regulation, and goal valuation), and that fixed mindsets would be positively associated with maladaptive perfectionism and negatively associated with the attitudes of achievement. Of the 416 students who participated in their study, 264 were considered to have gifted abilities, 66 were considered advanced, and 86 were typical students. Within their study, the researchers also assessed concern over mistakes, doubt of action, personal standards, and organization. These were chosen because high scores on concern over mistakes and doubt of action have been associated with evaluative concerns perfectionism, and high scores on personal standards and organization have been associated with personal strivings perfectionism. Their results showed that the students with gifted abilities and the advanced students had higher personal standard and academic self-perception scores compared to the typical students (Mofield & Peters, 2018). Regarding organization, advanced students had higher scores compared to both the students with gifted abilities and the typical students. Results also showed that having a fixed mindset was positively related to maladaptive perfectionism, whereas growth mindsets were positively related to adaptive perfectionism, regardless of achievement group. Having a growth mindset was also positively correlated to all achievement attitudes. For perfectionism, students with gifted abilities did have higher adaptive styles

than typical students did. Finally, comparing mindset beliefs across groups, no statistically significant differences were found between fixed and growth.

In another study, Stornelli et al. (2009) added the variable of affect into the relationship between perfectionism and achievement. The group of students studied for this relationship included 162 students without gifted abilities, 86 students with gifted abilities, and 33 students from fine arts programs. All children were recruited from either the 4th or 7th grade from public schools in the York Region District School Board. Results from their study showed that female students in arts programs had substantially raised levels of self-oriented perfectionism compared to the male arts program students and all students in the gifted and regular programs (Stornelli et al., 2009). Contrary to other studies, no evidence was found showing that perfectionism levels were higher among the students with gifted abilities. For students with gifted abilities though, a significant positive relationship was found between self-oriented perfectionism and their self-reported academic competence. Having either self-oriented or socially prescribed perfectionism was associated with reduced happiness for the students with gifted abilities as well. Considering the relationship between sadness and perfectionism, a significant positive relationship was found for both types of perfectionism for all participants, no matter the program they were in. Both types of perfectionism also had a significant positive relationship with fear for the overall sample, and socially prescribed perfectionism was associated with more fear within all three groups (regular, gifted, and

arts). Within the regular program students, having self-oriented perfectionism was related with fear. The researchers state how the relationships between fear and both types of perfectionism provide more evidence that students with these types of perfectionism are linked to a fear of failure. They also state how overall, being a student with gifted abilities with perfectionism had more negative influences than positive ones. Although this was the case, they also concluded that their results did not support the idea that being a student with gifted abilities leads to being more perfectionistic due to pressures from their environment to achieve at higher levels.

Finally, Altun and Yazici (2013) investigated how certain predictor variables could distinguish students with gifted abilities from students without gifted abilities in middle schools in Turkey. Specifically, they assessed how perfectionism, school motivation, learning styles, and academic achievement might differentiate students with gifted abilities from students without gifted abilities. Their sample consisted of 386 students with gifted abilities and 410 students without gifted abilities in the 6th, 7th, or 8th grade. The results from this study showed that scores on school motivation, positive perfectionism, and negative perfectionism were higher for the students without gifted abilities compared to the students with gifted abilities. The researchers believe that motivation for the students with gifted abilities may have been lower since they were measuring school motivation; they state that students with gifted abilities can often be

unmotivated in learning environments where they are not challenged, which could have affected their low scores on motivation.

Numerous research studies have shown that a relationship between perfectionism styles and achievement goal types does exist, whether you are a student with gifted abilities (Altun & Yazici, 2013; Mofield & Peters, 2018; Speirs Neumister, 2004c; Stornelli et al., 2009; Wang et al., 2012) a student who is advanced (Mofield & Peters, 2018; Speirs Neumister et al., 2015), a student in an arts program (Stornelli et al., 2009), or a typical student (Altun & Yazici, 2013; Fletcher & Neumister, 2012; Mofield & Peters, 2018; Stornelli et al., 2009). Honors college undergraduate students who have self-oriented perfectionism have been shown to have higher levels of approach based goals and mastery avoidance goals, while honors college undergraduates who have socially prescribed perfectionism have higher avoidance based goals compared to honors college students without perfectionism (Speirs Neumister et al., 2015). Students with gifted abilities also tend to show the same pattern for goal types as honors college students for each perfectionism style (Speirs Neumister, 2004c). Fletcher and Neumister (2012) noted how a general trend exists between perfectionism and achievement goals for typical students as well; those who have self-oriented perfectionism have higher intrinsic motivation and set more approach based goals while those who have socially prescribed perfectionism have higher extrinsic motivation and set more performance based goals. Other mediating variables between perfectionism and goal types have been investigated

as well, such as mindsets and contingent self-worth. For advanced students, students with gifted abilities, and typical students, having a fixed mindset has been shown to be positively correlated with maladaptive perfectionism while having a growth mindset has been positively correlated with adaptive perfectionism (Mofield & Peters, 2018). Lastly, students with gifted abilities who have low contingent self-worth and set mastery based goals tend to not link their self-worth to their academic achievement (Wang et al., 2012).

Summary and Purpose of the Current Study

Previous studies indicate that perfectionism is common within the gifted population (e.g., Mofield & Peters, 2018; Peterson & Canady, 2009; Plominski & Burns, 2017; Speirs Neumister, 2004a; Speirs Neumister, 2004b; Speirs Neumister et al., 2009; Stornelli et al., 2009), and depending on their type of perfectionism, it can influence how these students experience success and failure as well as what types of achievement goals they set for themselves (e.g., Fletcher & Neumister, 2012; Speirs Neumister, 2004c; Speirs Neumister & Finch, 2006; Speirs Neumister et al., 2015). This relationship between perfectionism and achievement goals may be similar among students who do not have gifted abilities (Fletcher & Neumeister, 2012). Studies have found that having self-oriented perfectionism is related to having more mastery and performance approach goals and having socially prescribed perfectionism is related to having more avoidance-based goals (Speirs Neumister, 2004c; Speirs Neumister & Finch, 2006; Speirs Neumister et al., 2015). Having self-oriented perfectionism has also been shown to be related to having

more intrinsic motivation (Fletcher & Neumeister, 2012), as well as to having a growth mindset (Mofield & Peters, 2018). For socially prescribed perfectionism, studies have shown that having this type of perfectionism is also related to having more extrinsic motivation (Fletcher & Neumeister, 2012) as well as having a fixed mindset (Mofield & Peters, 2018). Many of the previous studies that combined high achieving students and non-high achieving students were only conducted on children, which is a limitation that should be addressed. By using a sample of college aged students, the relationship between perfectionism and goal types can be applied to an environment where course work becomes harder and potentially has a stronger effect for students with certain types of perfectionism styles. Perfectionism style, goal orientation, motivation, mindset, and self-worth have not all been assessed within the same sample by any of the previous studies, nor have they done so with both high achieving and non-high achieving participants. Based on these limitations in the current literature, the current study investigated the potential relationship among each of these factors in one sample including both high achieving students and non-high achieving college students.

The proposed study tested the following hypotheses. First, it was hypothesized that students who are considered High Achievers within the sample would have higher scores on the self-oriented subscale on the MPS (Hewitt & Flett, 1991), whereas students within the sample who are considered Non-High Achievers would have higher scores on the socially prescribed subscale on the MPS (Hewitt & Flett, 1991) than on the other

scales. The second hypothesis was that the High-Achieving participants would have higher scores for mastery based goals or performance approach goals, while the Non-High Achieving participants will have higher scores for avoidance based goals compared to the other goal types on the AGQ-R (Elliot & Muyarama, 2008). The third hypothesis was exploratory, assessing the correlations between motivation type, mindset, and academic self-worth with perfectionism styles and achievement goal types for all participants, regardless of high achievement or gifted abilities.

CHAPTER II

METHOD

Participants

Participants were recruited from the MTSU Department of Psychology Research Pool to participate in this online study and received course credit upon completion. Participants were also recruited through lower division specific honors courses through the Honors College to ensure the sample included high achieving students; those participants received course credit as well upon completion. There were originally 74 participants, but five of those were not included in the analyses because they did not answer any questions after giving their consent, and two participants were excluded because they did not give consent to participate. Therefore, 67 undergraduate students were included in the data analysis for this study. Participants included females ($n = 40$), males ($n = 26$), and 1 participant who identified as nonbinary/other. The sample ranged in age from $18 - 29$ years ($M = 20.03$, $SD = 2.11$). Most of the participants were Caucasian (67%) and were freshmen or sophomores. Table 1 provides a summary of the demographic data for the sample.

Measures

Demographic Questionnaire

Demographic variables including age, race/ethnicity, year in college, and gender were reported by each participant. These variables allowed for a description of the

sample. Additionally, to allow for grouping of participants, questions were asked regarding whether or not the participant has been identified as *gifted* prior to college and one asking if the participant is currently enrolled in the Honors program at MTSU. For this study, high achieving students were those who were currently enrolled in the honors program and those who self-identified as gifted on the demographic item, "Were you identified as gifted through testing and evaluation in elementary, middle, or high school?" Of the sample, 36 (54%) were identified as high achieving and 31 (46%) were non-high achieving.

Multidimensional Perfectionism Scale (MPS)

The Multidimensional Perfectionism Scale was completed to measure perfectionism styles. Developed by Hewitt and Flett (1991), the MPS is a 45-item Likert scale measuring three types of perfectionism: socially prescribed, self-oriented, and other oriented. Total scores on the MPS range from 45-315, with subscale scores ranging from 15 to 105 for each type of perfectionism. The MPS utilizes a 7-point Likert-scale ranging from 1 *(Disagree)* to 7 *(Agree)*. A total of 18 items are reverse scored: 2, 3, 4, 8, 9, 10, 12, 19, 21, 24, 30, 34, 36, 37, 38, 43, 44, and 45. High scores on the self-oriented scale indicate that perfectionistic behavior relates to the self and that one has high and often unrealistic expectations for themselves. High scores on the socially prescribed scale indicate that the individual believes others set high expectations for them and expect them to be perfect. Their perfectionism is focused on meeting others' expectations. These

two subscales will be used in the current study to indicate type of perfectionistic

tendencies.

The MPS has demonstrated adequate reliability, internal consistency, construct

validity, and concurrent validity. When creating the MPS, Hewitt and Flett (1991)

conducted five different studies evaluating its psychometrics. Initially they evaluated 156

undergraduate students using the MPS with reported internal consistency values of .86

for self-oriented perfectionism, .82 for other-oriented perfectionism, and .87 for socially

prescribed perfectionism. This first study also helped show that each type of

perfectionism represented its own category and none of them were measuring the same

concept. For their second study, validity was evaluated for the three types of

perfectionism. The underlying structure of the MPS was investigated as well as how well

observers' ratings matched those of the participants. In this study, 1,106 undergraduates

and 142 psychiatric patients completed the MPS, and then the students' significant others

and the psych patients' doctors were asked to rate them as well. Factor analysis supported

the three-factor structure for both clinical and non-clinical samples. The ratings by others

showed that their perfectionistic traits were observable by others, with correlations of .35

for self-oriented perfectionism, .47 for other-oriented perfectionism, and .49 for socially

prescribed perfectionism.

In their third study Hewitt and Flett (1991) assessed convergent and divergent

validity of the MPS. The 242 participants in this study completed multiple scales

measuring self and socially related behavior. To assess test-retest consistency, some participants also completed the MPS again three months later. Results showed that each of the three types of perfectionism matched with several of their related concepts (self, social, etc). For discriminant validity, there were mixed results showing that there may be a problem with this type of validity for the MPS. For instance, the dimension of self-oriented perfectionism was the only subscale correlated with the importance of goal attainment and performance. On the other hand, other measures, such as self-criticism, were correlated with more than one perfectionism dimension. To further confirm that their measurement scale has concurrent validity, in their fourth study participants were given the MPS and other scales measuring the same three types of perfectionism. When compared to the Burns Perfectionism Scale (BPS; Burns, 1980), a 10-item measure of irrational beliefs related to self-oriented perfectionism, the MPS correlated significantly (.57 for self-oriented perfectionism dimension) supporting the tool's concurrent validity (Stairs et al., 2012).

Achievement Goal Questionnaire Revised (AGQ-R)

The Achievement Goal Questionnaire Revised was used in this study to measure achievement goal type (i.e., mastery vs performance; approach vs avoidant) of the participants. Developed by Elliot and Murayama (2008), the AGQ-R is a 12-item scale that measures patterns of achievement goals. The AGQ-R utilizes a Likert-scale ranging from 1 *(Strongly Disagree)* to 5 *(Strongly Agree)*. Scores on the AGQ-R range from 3 to

15 for each goal type and total scores range from 12-60. Four goal subtypes are assessed: (a) mastery approach; (b) mastery avoidant; (c) performance approach; and (d) performance avoidance. High scores for the mastery approach goal types indicate that the individual's goals focus on gaining competency in a task and are guided by a need for achievement that will lead to success. High scores on mastery avoidance indicate that the individual's goals focus on avoiding intrapersonal competence due to a fear of failure. High scores on performance avoidance indicate that the individual's goals focus on avoiding looking incompetent compared to one's peers due to a fear of failure. Lastly, high scores on performance approach goals indicates that an individual's goals focus on gaining competence as compared to their peers and can be formed from either a fear of failure or a need for achievement.

The AGQ-R is an updated version of the original tool, the AGQ, and reflects stronger structural validity and predictive utility (Elliot & Murayama, 2008). Elliot and Murayama (2008) compared the four-factor model of the AGQ-R to different three and two factors models to see which best measures and defines goal achievement types. To evaluate the psychometrics of the AGQ-R, 229 college students completed the tool. Results showed that all of the subscales on the AGQ-R (mastery approach/avoidance and performance approach/avoidance) have high levels of internal consistency, with Cronbach's alphas ranging from .84 - .94. When compared to alternative models of

measuring achievement goals, the AGQ-R's four factor model was a better fit than any of the three or two factor models (Elliot & Murayama, 2008).

Apostolou (2013) also investigated the structural validity and reliability of the AGQ-R with Greek students to see assess the utility with a culturally diverse sample. The AGQ-R was administered to 105 Greek students whose mean age was 19.7 years old. It was administered in two different ways, one to ask about course specific contexts and another about more general contexts, like school in general. Results showed that Cronbach's alpha for each subscale on the AGQ-R ranged from .51 - .84 for the course specific context, and for the general context the scores ranged from .50 - .87. The confirmatory factor analysis (CFA) reliability scores for the course specific context ranged from .90 - .98, and for the general context the scores ranged from .86 - .97 which shows high reliabilities. Results also showed that the AGQ-R is less psychometrically sound when applied to a general academic context, which supports the goals of the AGQ-R as created to measure achievement goals when thinking about a specific class or academic context.

Academic Motivation Scale-College (AMS-C)

The AMS-C was used in this study to measure the participants' academic motivation in education. Developed by Vallerand et al. (1992), this scale measures three types of motivation based upon the self-determination theory: (a) intrinsic; (b) extrinsic; and (c) amotivation. Three subscales with four items each measure intrinsic motivation:

(a) to know; (b) towards accomplishment; and (c) experienced stimulation. Three additional subscales with four items each measure extrinsic motivation: (a) identified; (b) introjected; and (c) external regulation. One subscale with four items measures amotivation. There are 28 items on the AMS-C, rated on a 7-point Likert-scale where 1 represents *does not correspond at all*, and 7 represents *corresponds exactly*. All subscales have Cronbach's alphas ranging from 0.75 to 0.82 (Vallerand et al., 1992).

The psychometrics of the AMS-C have recently been investigated (Kapp, 2020) in a sample of 611 South African first year college students. The AMS-C showed cronbach's alphas for each of the types of motivation between .86 - .92. Results also showed that the three-factor (i.e., intrinsic, extrinsic, and amotive) model to the AMS-C was a better fit to the data than a seven-factor model due to high intercorrelations.. Amotivation was negatively correlated with both intrinsic and extrinsic motivation, and intrinsic and extrensic motivation were both positvely correlated with each other. Concurrent validity was invesitagted by assessing the relationship between the AMS-C, the participant's satisifaction with their studies and their academic performance. Results showed that the AMS-C was a significant and positive predictor of students' satisfaction as well as their academic averages.

Contingencies of Self-Worth Scale-Academic Competence (CSW-A)

The Contingencies of Self-Worth Scale – Academic Competence (CSW-A) was used in this study to measure the participants' self-esteem related to their academic

competence. The CSW assesses two domains of self-worth: intrapersonal and interpersonal. The Academic Competence subscale is a part of the interpersonal domain and has a total of five items which are measured on a 7-point Likert-scale with 1 representing *strongly disagree*, and 7 representing *strongly agree*. Of the five items, only one is reverse scored. Cronbach's alpha for this subscale is .82 and has test-retest reliabilities of .51 - .71 over 3 to 8-month periods (Crocker et al., 2003).

A recent two-part study was conducted to assess the current psychometrics of the CSW (Perinelli et al., 2020). In the first study, 453 Italian sophomore students in college completed the CSW to evaluate its structural validity compared to alternative models. Results showed that the proposed seven-factor model by Crocker and his colleagues was a good fit to the data. The second study was conducted to investigate the external validity of the CSW and was completed by 293 Italian undergraduates. Relative to the CSW-A, depression was positively and significantly correlated, as was the students' academic GPA and the personality type of extraversion. Emotional stability showed a significantly negative relationship with academic competence.

Implicit Theories of Intelligence Scale (ITIS)

The Implicit Theories of Intelligence Scale (ITIS) was used to measure if the participants have a fixed or growth mindset when it comes to their own intelligence. Developed by Dweck et al. (1995), the ITIS is a three-item scale assessing mindset relative to intelligence. Items are measured on a 6-point Likert-scale where 1 represents

strongly agree and 6 represents *strongly disagree*. The final score is the mean response to all of the items. Higher scores correspond to more of a growth mindset, reflecting the belief that intelligence is malleable. Lower scores correspond to more of a fixed mindset, reflecting the belief that intelligence is stable. The ITIS has a Cronbach's alpha of .94 (Burgoyne & Macnamara, 2020).

In a recent study, the psychometrics of both the eight-item version and the six-item version of the ITIS were investigated within a sample of 239 gifted students form Virginia in grades 5-11, while also investigating the association between the gifted students' mindset types and their goal orientations (Park & Ryoo, 2016). The students were separated into two groups those in grades 5-7 and those in grades 8-11. In this sample of students, the researchers found that the six-item measure was a better fit to the data than the eight-item measure. Considering grade level, it positively predicted the performance avoidance goal orientation, meaning that as the students increased in grade levels, their levels of having a fixed mindset also increased which lowered their tendency towards learning goals. Results also showed that younger students who had a growth mindset saw achievement situations as an opportunity to improve their competence and believed that working hard could extend their mastery.

Procedure

Participants were recruited from psychology undergraduate classes, both honors courses and non-honors courses, at Middle Tennessee State University. Each participant

participated in an online study through Qualtrics (Qualtrics, Provo, UT). Once they followed the survey link, each participant completed the informed consent (see Appendix F). Once consent was provided, they were given access to the survey which included demographic items, MPS, AMS-C, AGQ-R, CWS-A, and ITIS. These scales were randomized on Qualtrics to control for potential order effects. Finally, each participant saw the debriefing screen, describing the purpose of the project and thanking them for participation.

CHAPTER III

RESULTS

Initial Analyses

All analyses were conducted using SPSS version 23. Participants were included in the analyses if they completed any of the measures in addition to the demographics. Of the 67 participants who completed the survey, 36 were coded as High Achievers and 31 were Non-High Achievers based on responses to the questions relating to honor's program participation or gifted identification. A Chi-square analysis was conducted to test for potential achievement group differences by gender. This chi-square test of independence showed that there was no significant association between gender and achievement group, X^2 (2, $N = 67$) = 1.03, $p = .60$, therefore gender was not a covariate in any subsequent analyses.

Hypothesis Testing

Group Comparisons

Table 2 provides descriptive statistics for each dependent variable by Achievement group. The means and ranges of scores for each variable were interpretable compared to available normative data.

First, it was hypothesized that students who were High Achievers would have higher scores than non-High Achievers on the Self-Oriented subscale on the MPS, whereas students who were Non-High Achievers were predicted to have higher scores on

the Socially Prescribed subscale on the MPS compared to High Achievers. A one-way ANOVA ($\alpha = .05$) was performed to examine if a significant difference existed between achievement groups on both scales of perfectionism. There was no significant difference in Self-Oriented scores on the MPS between achievement groups, $F(1, 63) = 1.12$, $p = .295$, and there was also no significant difference on the Socially Prescribed scale between the achievement groups, $F(1, 60) = 2.51$, $p = .119$.

The second hypothesis predicted that participants who were High Achievers would report higher mastery performance and mastery approach goals on the AGQ-R compared to Non-High Achievers. Participants who were Non-High Achievers were hypothesized to have higher performance avoidance goals on the AGQ-R compared to High Achievers. The groups were predicted to be similar on the performance approach scale. A one-way ANOVA ($\alpha = .05$) was used to test this hypothesis. Results indicated that there was no significant difference between the achievement groups on any of the AGR-Q scales, including mastery approach goals, $F(1, 62) = 1.67$, $p = .201$, mastery avoidance goals, $F(1, 62) = .58$, $p = .450$, performance approach goals, $F(1, 61) = 2.57$, $p = .114$, performance avoidance goals, $F(1, 62) = .62$, $p = .436$.

Correlational Analyses

Although no specific hypotheses were proposed regarding relationships among the dependent variables for High Achievers, exploratory correlational analyses were conducted between all dependent variables for participants who were High Achievers.

Table 3 provides the correlation coefficients and significance values for these variables. Among the High Achieving participants, self-oriented perfectionism was significantly moderately to strongly correlated with mastery, r = .64, n = 33, $p = < .001$, 95% CI [.38, .81], and performance approach goals, r = .61, n = 33, $p = < .001$, 95% CI [.34, .79], performance avoidance goals, r = .49, n = 33, $p = .003$, 95% CI [.18, .71], and contingent self-worth based on academic competence, r = .43, n = 33, $p = .011$, 95% CI [.10, .67]. A stronger relationship existed between self-oriented perfectionism and the approach based goals (mastery and performance) than it did for the avoidance based goals. Socially prescribed perfectionism was not significantly correlated with any of the other correlational measures for these High Achieving participants. Significant positive correlations also were found between mastery approach goals and performance approach goals, r = .48, n = 33, $p = .004$, 95% CI [.16, .71], and contingent self-worth based on academic competence, r = .53, n − 33, $p = .001$, 95% CI [.23, .74].

CHAPTER IV

DISCUSSION

The purpose of this study was to continue research on whether students who are high achievers or are considered to have gifted abilities have different perfectionism styles and achievement goal types when compared to students of similar age who are non-high achievers. A trend in the research shows that individuals who have self-oriented perfectionism tend to set more approach based goals, whereas individuals who have socially prescribed perfectionism tend to set more avoidance based goals (Fletcher & Neumister, 2012). First, it was hypothesized that high achieving college students would have higher scores on self-oriented perfectionism than non-high achieving college students compared to the non-high achievers. However, there were no significant differences between the two achievement groups, which is not consistent with previous studies who did find a difference (e.g., Altun & Yazici, 2013; Mofield & Peters, 2018). These inconsistent findings may be due to the difference in age of the participants for this study and for previous studies, both of which assessed students who were younger than 18 years of age and not college students. The current study's findings are consistent, though, with those of Stornelli et al. (2009), who also did not find a significant difference between high achieving students and non-high achieving students when it came to perfectionism styles. However, those students were only between the ages of 9 and 14. Stornelli et al. (2009) did find a significant positive relationship though between self-

oriented perfectionism and self-reported academic competence for students who were high achievers, as did the results of this study.

The second hypothesis was that participants who were High Achievers would have higher mastery performance and mastery approach goals compared to Non-High Achievers, but similar scores on the performance approach goals scale. Participants who were Non-High Achievers were predicted to have higher performance avoidance goals. As with the first hypothesis, analyses did not indicate any differences between the achievement groups for any of the four types of achievement goals. When reviewing the literature on perfectionism styles and goal types, previous studies have only compared High Achieving students or students with gifted abilities to each other, and not with students who are Non-High Achieving (e.g., Speirs Neumister, 2004c; Speirs Neumister & Finch, 2006; Speirs Neumister et al., 2015). It was hypothesized that the participants who were considered High Achievers in this study would have more mastery based goals and/or performance approach goals due to their hypothesized perfectionism style, which was self-oriented perfectionism. Multiple studies have shown that a relationship exists between having self-oriented perfectionism and having either of the goal types mentioned above (e.g., Speirs Neumister, 2004c; Speirs Neumister & Finch, 2006; Speirs Neumister et al., 2015). The current study also found a significant positive correlation between self-oriented perfectionism styles and performance avoidance, mastery approach, and performance approach goals for the students who were considered High Achievers.

Finally, although specific hypothesizes were not made about possible correlations, we did conduct correlational analyses between all dependent variables for participants who were considered High Achievers to identify some potential relationships between these factors for the group with higher achievement status. Significant positive relationships were found between the High Achiever's scores on self-oriented perfectionism and their scores on measures of mastery and performance approach goals and contingent self-worth based on academic competence. These findings are consistent with those of Wang et al. (2012) who reported that for students with gifted abilities, having high mastery goals acted as a buffer if they experienced low levels of contingent self-worth, and that they also reported higher academic competence when compared to others. An additional significant correlation found in the current study was that of a moderately positive relationship between self-oriented perfectionism scores and performance avoidance scores. This finding is inconsistent with previous literature indicating that socially prescribed perfectionism (not self-oriented perfectionism) is associated with performance avoidance goals (e.g., Speirs Neumister, 2004c; Speirs Neumister & Finch, 2006; Speirs Neumister et al., 2015). It could be that the current sample of High Achieving participants differ from those in previous samples when it comes to what motivates them to get their schoolwork done. The current sample may be different from others in that these high achieving students tend to focus more on avoiding failure and looking incompetent compared to others, hence the correlation with

performance avoidance goal setting. These students could potentially be the high achieving children who growing up were praised for how smart they were, therefore leading these students to feel less worthy if they failed at tasks during school because they feared they might be seen as less smart than others thought they were.

A final significant correlational finding that might help explain the high achievers in the current study is the strong significant correlation between mastery approach goals and contingent self-worth based on academic competence. According to Elliot (1999), mastery based goals focus on gaining competency and proficiency in a task and are guided by a need for achievement motive that will lead to success, which relates to academic competence. This correlation suggests that these high achieving students might set mastery based goals due to their need to achieve academically in order to feel worthy.

Limitations and Future Directions

Previous researchers have found significant differences between High Achieving students and Non-High Achieving students relative to perfectionism styles and goal types. The current study, however, did not find these same group differences. The lack of significance found in the current study could be related to methodological limitations. First, the current study utilized a small sample of participants ($N = 67$) and therefore likely was underpowered. Having such a small sample could hinder the analysis process because there are not enough people to compare to in order to be able to find a true significance or not. Another limitation is that the students who said they were labeled as

gifted before college self-identified themselves as gifted. There is a possibility that some students may not have actually been labeled as gifted, which could have impacted the results of this study by potentially mixing Non-High Achievers into the High Achievers group. Another limitation dealing with the gifted sample of students is how we defined gifted in the current study. A gifted label could be related to cognitive capabilities, leadership skills, excelling in fine arts, or excelling academically. It is possible that individuals who are gifted in these different areas may, in fact, differ in their perfectionistic tendencies, goal types, and achievement orientations. Clarity in these relationships across these different groups of gifted individuals could be the focus of future research in this area.

Regarding the procedures, all measures in this study were self-report measures and everything was conducted online, which is another potential limitation. When using all self-report measures, participants may not be completely honest and may randomly respond, etc. Being conducted online is another potential issue because it can be hard to keep the participants engaged for a long period of time, which could impact their motivation and how truthfully they respond to each question. Another limitation is that participants were given course credit for participating in this study. This might have increased the participants' motivation to take part in this study and may also have influenced them to randomly respond or not complete the study in full by skipping to the end in order to receive their class credit. Lastly, some scales have limited variability in

scoring (i.e., ITIS), which may have affected analyses. Future researchers could employ other methods in addition to self-report measures to enhance the reliability and the validity of the findings. In particular, identifying groups of high and non-high achievers could be accomplished with a brief standardized cognitive or achievement assessment or record review of previous standardized testing to ensure the groups are different in cognitive or achievement abilities.

Future research should include a much larger sample size to increase the power of the analyses, and could include participants from a variety of universities in order to sample a more diverse population, thereby improving the generalizability of the results. Studying a wider variety of college students can give a better picture of how differences might look for High Achieving students from different environments. It might be that environmental factors, such as university prestige, course offerings, SES and other sociocultural factors could impact the participant's experience of perfectionism and goal focus in their college settings. Lastly, future studies should define more clearly which definition of gifted they are using when choosing the high-achieving sample. Potential differences could exist between those who are cognitively gifted, academically gifted, gifted in the fine arts, or gifted with leadership qualities when it comes to the types of perfectionism styles they have, as well as the achievement goals that they set.

Although the current study indicated few significant findings, it still contributes to the literature on perfectionism styles and achievement goal types within a high achieving

population of college students. First, it offers evidence that maybe the difference in perfectionism styles found by previous studies is not as evident in college students as it is in middle and high school students. Also, it suggests that maybe the pattern for high achieving students between self-oriented perfectionism and certain goal types is not always consistent across different samples of students. The current study was also the first to compare college aged students who were not only high achievers, but non-high achievers as well and the first to assess all of these factors in one sample; previous researchers had focused on only one or two factors in each per study. This project provides the basis for future studies focusing on perfectionism and their related factors among college students.

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APPENDICES

APPENDIX A

Achievement Goal Questionnaire-Revised (AGQ-R)

Please indicate the degree to which you agree with each of the statements by circling the response:

1: Strongly Disagree 2: Disagree 3: Undecided 4: Agree 5: Strongly Agree

My aim is to completely master the material presented in this class.

Strongly Disagree				Strongly Agree
1	2	3	4	5

I am striving to do well compared to other students.

Strongly Disagree				Strongly Agree
1	2	3	4	5

My goal is to learn as much as possible.

Strongly Disagree				Strongly Agree
1	2	3	4	5

My aim is to perform well relative to other students.

Strongly Disagree				Strongly Agree
1	2	3	4	5

My aim is to avoid learning less than I possibly could.

Strongly Disagree				Strongly Agree
1	2	3	4	5

My goal is to avoid performing poorly compared to others.

Strongly Disagree				Strongly Agree
1	2	3	4	5

I am striving to understand the content as thoroughly as possible.

Strongly Disagree				Strongly Agree
1	2	3	4	5

My goal is to perform better than the other students.

Strongly Disagree				Strongly Agree
1	2	3	4	5

My goal is to avoid learning less than it is possible to learn.

Strongly Disagree				Strongly Agree
1	2	3	4	5

I am striving to avoid performing worse than others.

Strongly Disagree				Strongly Agree
1	2	3	4	5

I am striving to avoid an incomplete understanding of the course material.

Strongly Disagree				Strongly Agree
1	2	3	4	5

My aim is to avoid doing worse than other students.

Strongly Disagree				Strongly Agree
1	2	3	4	5

APPENDIX B

Multidimensional Perfectionism Scale

INSTRUCTIONS: Listed below are a number of statements concerning personal

characteristics and traits. Read each item and decide whether you agree or disagree & to

what extent.

		Disagree						**Agree**
1.	When I am working on something, I cannot relax until it is perfect	1	2	3	4	5	6	7
2.	I am not likely to criticize someone for giving up too easily	1	2	3	4	5	6	7
3.	It is not important that people I am close to are successful	1	2	3	4	5	6	7
4.	I seldom criticize my friends for accepting second best	1	2	3	4	5	6	7
5.	I find it difficult to meet others' expectations of me	1	2	3	4	5	6	7
6.	One of my goals is to be perfect in everything I do	1	2	3	4	5	6	7
7.	Everything that others do must be of top-notch quality	1	2	3	4	5	6	7
8.	I never aim for perfection on my work	1	2	3	4	5	6	7
9.	Those around me readily accept that I can make mistakes too	1	2	3	4	5	6	7
10.	It doesn't matter when someone close to me does not do	1	2	3	4	5	6	7

	their absolute best							
11.	The better I do, the better I am expected to do	1	2	3	4	5	6	7
12.	I seldom feel the need to be perfect	1	2	3	4	5	6	7
13.	Anything that I do that is less than excellent will be seen as poor work by those around me	1	2	3	4	5	6	7
14.	I strive to be as perfect as I can be	1	2	3	4	5	6	7
15.	It is very important that I am perfect in everything I attempt	1	2	3	4	5	6	7
16.	I have high expectations for the people who are important to me	1	2	3	4	5	6	7
17.	I strive to be the best at everything I do	1	2	3	4	5	6	7
18.	The people around me expect me to succeed at everything I do	1	2	3	4	5	6	7
19.	I do not have very high standards for those around me	1	2	3	4	5	6	7
20.	I demand nothing less than perfection of myself	1	2	3	4	5	6	7
21.	Others will like me even if I don't excel at everything	1	2	3	4	5	6	7
22.	I can't be bothered with people who won't strive to better themselves	1	2	3	4	5	6	7
23.	It makes me uneasy to see an error in my work	1	2	3	4	5	6	7
24.	I do not expect a lot from my friends	1	2	3	4	5	6	7
25.	Success means that I must work even harder to please others	1	2	3	4	5	6	7

26.	If I ask someone to do something, I expect it to be done flawlessly	1	2	3	4	5	6	7
27.	I cannot stand to see people close to me make mistakes	1	2	3	4	5	6	7
28.	I am perfectionistic in setting my goals	1	2	3	4	5	6	7
29.	The people who matter to me should never let me down	1	2	3	4	5	6	7
30.	Others think I am okay, even when I do not succeed	1	2	3	4	5	6	7
31.	I feel that people are too demanding of me	1	2	3	4	5	6	7
32.	I must work to my full potential at all times	1	2	3	4	5	6	7
33.	Although they may not say it, other people get very upset with me when I slip up	1	2	3	4	5	6	7
34.	I do not have to be the best at whatever I am doing	1	2	3	4	5	6	7
35.	My family expects me to be perfect	1	2	3	4	5	6	7
36.	I do not have very high goals for myself	1	2	3	4	5	6	7
37.	My parent rarely expected me to excel in all aspects of my life	1	2	3	4	5	6	7
38.	I respect people who are average	1	2	3	4	5	6	7
39.	People expect nothing less than perfection from me	1	2	3	4	5	6	7
40.	I set very high standards for myself	1	2	3	4	5	6	7
41.	People expect more from me than I am capable of giving	1	2	3	4	5	6	7

42.	I must always be successful at school or work	1	2	3	4	5	6	7
43.	It does not matter to me when a close friend does not try their hardest	1	2	3	4	5	6	7
44.	People around me think I am still competent even if I make a mistake	1	2	3	4	5	6	7
45.	I seldom expect others to excel at whatever they do.	1	2	3	4	5	6	7

APPENDIX C

Academic Motivation Scale-College Version (AMS-C)

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to college.

WHY DO YOU GO TO COLLEGE?

Because with only a high-school degree I would not find a high-paying job later on.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

Because I experience pleasure and satisfaction while learning new things.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

Because I think that a college education will help me better prepare for the career I have chosen.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

For the intense feelings I experience when I am communicating my own ideas to others.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

Honestly, I don't know; I really feel that I am wasting my time in school.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

For the pleasure I experience while surpassing myself in my studies.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

To prove to myself that I am capable of completing my college degree.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

In order to obtain a more prestigious job later on.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

For the pleasure I experience when I discover new things never seen before.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

Because eventually it will enable me to enter the job market in a field that I like.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

For the pleasure that I experience when I read interesting authors.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

 I once had good reasons for going to college; however, now I wonder whether I should continue.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

Because of the fact that when I succeed in college I feel important.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

Because I want to have "the good life" later on.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

Because this will help me make a better choice regarding my career orientation.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

For the pleasure that I experience when I feel completely absorbed by what certain authors have written.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

I can't see why I go to college and frankly, I couldn't care less.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

To show myself that I am an intelligent person.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

In order to have a better salary later on.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

Because my studies allow me to continue to learn about many things that interest me.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

Because I believe that a few additional years of education will improve my competence as a worker.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

For the "high" feeling that I experience while reading about various interesting subjects. I don't know; I can't understand what I am doing in school.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

Because college allows me to experience a personal satisfaction in my quest for excellence in my studies.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

Because I want to show myself that I can succeed in my studies.

Does Not Correspond	Corresponds a little		Corresponds Moderately	Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

APPENDIX D

Contingencies of Self-Worth-Academic Competence

INSTRUCTIONS: Please respond to each of the following statements by circling your answer using the scale from "1 = Strongly disagree" to "7 = Strongly agree." If you haven't experienced the situation described in a particular statement, please answer how you think you would feel if that situation occurred.

My opinion about myself isn't tied to how well I do in school. (Reversed)

Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1	2	3	4	5	6	7

Doing well in school gives me a sense of self- respect.

Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1	2	3	4	5	6	7

I feel better about myself when I know I'm doing well academically.

Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1	2	3	4	5	6	7

My self-esteem is influenced by my academic performance.

Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1	2	3	4	5	6	7

I feel bad about myself whenever my academic performance is lacking.

Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1	2	3	4	5	6	7

APPENDIX E

Implicit Theories of Intelligence Scale

Instructions: Read each sentence below and then circle the *one* number that shows how much you agree with it. There are no right or wrong answers.

1. You have a certain amount of intelligence, and you can't really do much to change it.

| Strongly agree | Agree | Mostly agree | Mostly disagree | Disagree | Strongly disagree |

2. Your intelligence is something about you that you can't change very much.

| Strongly agree | Agree | Mostly agree | Mostly disagree | Disagree | Strongly disagree |

3. You can learn new things, but you can't really change your basic intelligence.

| Strongly agree | Agree | Mostly agree | Mostly disagree | Disagree | Strongly disagree |

Appendix F

Consent Form

Information and Disclosure Section

The following information is provided to inform you about the research project in which you have been invited to participate. Please read this disclosure and feel free to ask any questions. The investigators must answer all of your questions and please save this page as a PDF for future reference.

·　　　Your participation in this research study is voluntary.

·　　　You are also free to withdraw from this study at any time without loss of any benefits.

For additional information on your rights as a participant in this study, please contact the Middle Tennessee State University (MTSU) Office of Compliance (Tel 615-494-8918 or send your emails to irb_information@mtsu.edu. (URL: http://www.mtsu.edu/irb).

Please read the following and respond to the consent questions in the bottom if you wish to enroll in this study.

1.　　　**Purpose**: This research project is designed to help us evaluate _This study is designed to help us evaluate college students' perspectives of intelligence and how those views might be related to your college experience.

2.　　　**Description**: There are several parts to this project. Participants will be asked to complete and online survey that includes brief demographic information as well as questions about your perspective and experiences with academic performance, perfectionism, and intelligence. This online survey is anonymous and will not include any identifying information. Your honest responding will help us to better understand the relationship between academics, perfectionism, and one's view of intelligence

3.　　　**IRB Approval Details**

o　Protocol Title: **The Relationship Between Perfectionism and Achievement Goals in High Achieving College Students**

o　Primary Investigator: Heather Wood

o　PI Department & College: Psychology, College of Behavioral and Health Sciences

o　Faculty Advisor (if PI is a student): Dr. Kimberly Ujcich Ward

o　Protocol ID: 21-1146 2q　　Approval Date: 04/08/2021　　Expiration Date: 04/30/2022

4.　　　**Duration**: The whole activity should take about 40-45minutes/hours. The subjects must take at least 30 minutes/hours to complete the study.

5.　　　**Here are your rights as a participant:**

- Your participation in this research is voluntary.
- You may skip any item that you don't want to answer, and you may stop the experiment at any time (but see the note below).
- If you leave an item blank by either not clicking or entering response, you may be warned that you missed on, just in case it was an accident. But you can

continue the study without entering a response if you didn't want to answer that question.

- Some items may require a response to accurately present the survey.

6. **Risks & Discomforts:** We do not expect any discomforts for participants in this study beyond what you might experience in everyday life when thinking about or talking about perfectionism and academics. Some people may feel bothered thinking about some of their personal experiences with perfectionism or how well they do in school, but these potential feelings are not expected to be more than you would feel whenever you think about or talk about your perfectionism and your academic life.

7. **Benefits:**

a.   Benefits to you:There are no direct benefits to participants of this study.

b.   Benefits to the field of science or the community: Your response will help us to better understand the relationship between perfectionism and goal types for college students and may give a better idea as to what other factors might help or harm someone academically with a specific perfectionism style and goal type. The results may also help us prepare resources for students who are struggling with perfectionism to such an extent that it impacts their academic life.

8. **Identifiable Information**: You will NOT be asked to provide identifiable personal information/You may provide contact information for follow-up / We may request your contact information for compensation purposes.

9. **Compensation: There is no cash compensation for participating in this study.** Students enrolled in the MTSU SONA system will receive TWO (2) class credits if they meet the following requirements.

The qualifications to participate in this research are: to complete the questionnaire to the best of your ability and to be honest in your responses. If you do not meet these qualifications, you will not be included in the research and you will not be compensated. Please do not participate in this research more than once. Attention checks are embedded in the research. If you fail to complete the questionnaire or do not answer honestly, then you will not be compensated. To be compensated, you must get to the end of the survey to receive the completion code.

10. **Confidentiality.** All efforts, within reason, will be made to keep your personal information private but total privacy cannot be promised. Your information may be shared with MTSU or the government, such as the Middle Tennessee State University Institutional Review Board, Federal Government Office for Human Research Protections, if you or someone else is in danger or if we are required to do so by law.

11. **Contact Information.**   If you should have any questions about this research study or possibly injury, please feel free to contact **Heather Wood** by email **hnw3a@mtmail.mtsu.edu** OR my faculty advisor, Dr. Kimberly Ujcich Ward, at Kimberly.ward@mtsu.edu. You can also contact the MTSU Office of

compliance via telephone (615 494 8918) or by email (compliance@mtsu.edu). This contact information will be presented again at the end of the experiment.

You are not required to do anything further if you decide not to enroll in this study. Just quit your browser. Please complete the response section below if you wish to learn more or you wish to part take in this study.

Appendix G

MTSU IRB Approval Letter

IRBN007 – EXEMPTION DETERMINATION NOTICE

Thursday, April 08, 2021

Protocol Title | ***The Relationship Between Perfectionism and Achievement Goals in High Achieving College Students***
Protocol ID | **21-1146 2q**

Principal Investigator | **Heather Wood** (Student)
Faculty Advisor | Kimberly Ujcich Ward
Co-Investigators | NONE
Investigator Email(s) | *hnw3a@mtmail.mtsu.edu; kimberly.ward@mtsu.edu*
Department/Affiliation | Psychology

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXEMPT** review mechanism under 45 CFR 46.101(b)(2) within the research category ***(2) Educational Tests, surveys, interviews or observations of public behavior (Qualtrics Survey).*** A summary of the IRB action and other particulars of this protocol are shown below:

IRB Action	**EXEMPT from further IRB Review** Exempt from further continuing review but other oversight requirements apply		
Date of Expiration	**4/30/2022**	*Date of Approval:* **4/8/21**	*Recent Amendment:* NONE
Sample Size	TWO HUNDRED (200)		
Participant Pool	**Healthy adults (18 or older) - MTSU SONA Students**		
Exceptions	Online consent followed by internet-based survey using Qualtrics is permitted (Qualtrics links on file).		
Type of Interaction	Non-interventional or Data Analysis Virtual/Remote/Online Interview/survey In person or physical– Mandatory COVID-19 Management (refer next page)		

Mandatory Restrictions	1. All restrictions for exemption apply. 2. The participants must be 18 years or older. 3. Mandatory ACTIVE informed consent. Identifiable information including,names, addresses, voice/video data, must not be obtained. 4. NOT approved for in-person data collection.
Approved IRB Templates	*IRB Templates:* Informed Consent and SONA Recruitment Script *Non-MTSU Templates:* NONE
Research Inducement	Course Credit (2)
Comments	NONE

APPENDIX H

Tables

Table 1

Demographic Characteristics of Sample

Characteristic	N	%
Gender		
Male	26	38.8
Female	40	59.7
Nonbinary/Other	1	1.5
Ethnicity		
African American	12	17.9
Caucasian	45	67.2
Latino/Hispanic	6	9.0
Other/Unknown	3	4.5
Prefer not to say	1	1.5
Education		
Freshman	27	40.3
Sophomore	26	38.8
Junior	7	10.4
Senior	7	10.4
High Achiever		
Yes	36	53.7
No	31	46.3

Table 2

Descriptive Statistics for High Achieving and Non-High Achieving College Students

Dependent Variable:	High Achieving		Non-High Achieving	
	$\underline{N}$	$\underline{M(SD)}$	$\underline{N}$	$\underline{M(SD)}$
MPS				
Self-Oriented Perfectionism	35	76.69(14.69)	29	73.14(11.56)
Socially Prescribed Perfectionism	36	61.75(14.99)	25	55.88(13.05)
AGQ-R				
Mastery Approach	35	12.49(2.28)	28	11.75(2.20)
Mastery Avoidance	36	10.78(3.09)	27	10.22(2.55)
Performance Approach	35	12.09(2.42)	27	11.19(1.86)
Performance Avoidance	35	11.71(2.60)	28	11.21(2.41)
AMS-C				
Intrinsic Motivation	31	48.45(15.93)	31	46.77(17.85)
Extrinsic Motivation	34	59.82(16.85)	29	57.76(16.44)
CSW-4 - Academic Competence	36	26.86(5.37)	29	25.21(5.45)
ITIS - Growth Mindset	36	4.46(1.07)	30	4.33(1.10)

Table 3

Correlations Between Dependent Variables for High Achieving College Students (n = 33).

	SPP	MAp	MAv	PAp	PAv	AC	GM
MPS – SOP	.28	.64***	.16	.61***	.49**	.43*	-.15
MPS - SPP		.17	.05	.29	.20	.15	.05
AGQ-R – MAp			.27	.48**	.27	.53***	-.08
AGQ-R - MAv				.13	.43**	.08	.06
AGQ-R – PAp					.69***	.33	-.11
AGQ-R - PAv						.25	.03
CSW-4 – AC							-.14
ITIS - GM							

Note. MPS-SOP = Self-Oriented Perfectionism. MPS-SPP = Socially-Prescribed Perfectionism. AGR-Q – MAp = Mastery Approach. AGQ-R – Mav = Mastery Avoidance. AGQ-R - PAp = Performance Approach. AGQ-R – Pav = Performance Avoidance. CSW-4 – AC = Academic Competence. IT IS – GM = Growth Mindset. *p ≤ .05. **p ≤ .01. ***p ≤ .001.