

GUIDANCE AND GOALS: THE COMPLEXITY OF  
THE ADVISOR-GRADUATE STUDENT  
RELATIONSHIP

By

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GUIDANCE AND GOALS: THE COMPLEXITY OF  
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RELATIONSHIP

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Abstract: The present study sought to determine if there is an association between the type of advisement graduate students experience and their adoption of specific achievement goals. Three hundred seven graduate students at a large, public University in the Midwestern region of the United States from a number of academic programs completed a survey in which perceived advising style, achievement goal orientations in conjunction with the respective reasons for pursuing those goals, and various demographic information was reported. Correlational analyses revealed weak to moderate associations between perceived authoritative advising and autonomous goal complexes as well as between perceived authoritarian advising and controlled goal complexes. Implications for advisors, implications for graduate students, and recommendations for future work are discussed.

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## CHAPTER I

### INTRODUCTION

The relationship between a graduate student and their faculty advisor shows similarities to that of parent and student. A parent acts as a key authority figure in a student's life who provides a supportive, structured environment in which their child can flourish into a mature, productive individual who thrives independently of parental direction (Paulson, Marchant, & Rothlisberg, 1998). Parenting style has shown to play a role in shaping a student's motivation, self-efficacy, academic engagement, and achievement goal orientations (Chen, 2015; Miller & Speirs Neumeister, 2017; Rivers et al., 2012).

Similarly, a graduate student's advisor serves as a knowledgeable expert and role model who guides their student through developing skills and acquiring knowledge needed for success beyond the classroom (Jaegar, Sandmann, & Kim, 2011). It has been demonstrated that faculty advisors can play a role in shaping their graduate student advisees' psychosocial development much like parents nurture their children through the stages of growth (Wagner, Temple, Dankert, & Napper, 2016; Beres & Dixon, 2016). The quality of the working advisor-student relationship also has a significant influence on a graduate student's academic outcomes, including persistence through thesis or dissertation work, perception of abilities, and achievement goal orientations (Lee & Deale, 2016; Jaegar, Sandmann, & Kim, 2011). While previous literature has examined how the advisor-advisee relationship affects graduate students' achievement goal orientations, few have offered insight into the influence of this relationship on achievement goal complexes—the combination of a goal and the motivation for pursuit of that goal. Given the parallels between

the parent-student and advisor-graduate student relationships, the present study posits that there is a relationship between graduate students' achievement goal complexes and aspects of advisement that reflect specific parenting styles.

### **Statement of the Problem**

A thorough understanding of the relationship between graduate students and their advisors may give rise to insights that could decrease program attrition, improve academic outcomes, and maximize future career success among graduate students (Lee & Deale, 2016; Wagner et al., 2016). As graduate students work closely with their advisors throughout the duration of their academic program, the intimacy and influential nature of this mentoring relationship begins to parallel the close, guiding relationship between students and their parents. Previous research shows that elements of advising style that provide a balance of autonomy-granting, transparent expectations, responsiveness, and flexibility are associated with a plethora of adaptive academic outcomes, including mastery learning goals (Jaegar et al, 2011; Lee & Deale, 2016; Mansson & Myers, 2012). The similarities between these characteristics of advisement and an authoritative style of parenting (which is characterized by high levels of support with firm rules and expectations) provides an example of insight that could help improve our understanding of the advisor-graduate student dynamic. The goal of the present study is to explore whether or not there is an association between perceived advising style and the types of achievement goals that graduate students choose to pursue.

The following sections will delve deeper into the connection between the dynamics of parenting and graduate student advisement. Four styles of parenting are defined and the association of each with students' learning goals is explored. Components of parenting style that correlate with adaptive orientations towards learning are compared to aspects of advising style that have been shown to be conducive to the development of adaptive academic outcomes for graduate students. Achievement goal orientations are discussed in more detail as well as the significance of the reasoning behind one's choice of learning goals. Lastly, the importance of



achievement goal orientations for graduate school-related tasks and the environmental conditions in which adaptive goal complexes may emerge among graduate students are outlined, noting the influence of the motivating style employed by faculty advisors.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### **The Advisor-Advisee Relationship**

##### *Parallel with Parenting*

Children form an emotional attachment to their parents, relying on them to help navigate the developmental changes that transpire throughout their early life. Such guidance allows children to prosper into self-sufficient adults who are able to independently maneuver life's constant fluctuations. The four styles of parenting outlined by Baumrind, Maccoby, and Martin (1983) employ different strategies for governing a child's development that each result in adaptive or maladaptive outcomes, including academic achievement and orientations toward learning. To a degree, graduate students rely on their faculty advisors to provide similar direction that influences their personal and professional development in distinct ways. Success in graduate school is heavily dependent on academic self-regulation, and a graduate student's advisor assumes an important role in the facilitation of such academic self-reliance among their advisees (Jaegar et al, 2011; Lee & Deale, 2016; Mansson & Myers, 2012). As both relationships are comprised of close mentorship that shapes various aspects of one's growth, adaptive components of parenting style can shed light on what graduate student advisement conducive to adaptive achievement goal complexes looks like.

##### *Parenting Style*

Responsiveness and demandingness comprise the essential characteristics of parenting style with the former referring to levels of warmth and support, and the latter corresponding to the

degree of control and scrutiny (Miller & Speirs Neumeister, 2017). In the 1960's, Diana Baumrind identified three categories of parenting based on these components: authoritative, authoritarian, and permissive (Miller & Speirs Neumeister, 2017). *Authoritative* parenting consists of high demandingness and high responsiveness (Miller & Speirs Neumeister, 2017). Parents who assume this style of parenting set explicit guidelines for their children's behavior while keeping lines of communication open for their children to exercise autonomy when appropriate (Chen, 2015). *Authoritarian* parenting employs high demandingness with low responsiveness (Miller & Speirs Neumeister, 2017). Such parents expect their children to adhere to rigid rules and expectations without questioning their authority (Kim, Schallert, & Kim, 2010). With *permissive* parenting, there is high responsiveness and low demandingness, which might look like excessive leniency in which expectations and rules are scarce and parents bend to their children's desires (Rivers et al., 2012). Maccoby and Martin (1983) elaborated on Baumrind's research bringing to light a fourth style of parenting: *neglectful* (Miller & Speirs Neumeister, 2017). In contrast to the extreme acquiescence of permissive parenting, this style provides both low demandingness and low responsiveness (Miller & Speirs Neumeister, 2017). With neglectful parenting, there is an absence of behavioral guidelines or expectations in the sense of cold indifference (Miller & Speirs Neumeister, 2017).

Several parallels emerge when comparing the elements of parenting style with characteristics of advisors that are both valued by graduate students and have been shown to be favorable for their growth as young professionals. Lee and Deale (2016) have outlined specific advising traits that have a significant impact on the quality of the advisor-student relationship, with the most paramount being supervisory style. The key components of supervisory style—supportiveness, flexibility, consistency, approachability, and granting autonomy in the decision-making processes of graduate work—correspond with an authoritative style of parenting (Lee & Deale, 2016; Miller & Speirs Neumeister, 2017; Rivers et al., 2012). Mansson and Myers (2012) further support this idea by citing clear direction, encouragement, and responsiveness as

characteristics of mentors most revered by graduate students.

### **Achievement Goals**

Achievement Goal Theory describes motivation in terms of the goals one chooses for tasks that engage one's competence (Elliot & Harackiewicz, 1996; Elliot, Murayama, & Pekrun, 2011). The theory began from the work of Lewin and McClelland as a simple dichotomy of evading failure or gaining accomplishment (Elliot & Harackiewicz, 1996). Carol Dweck and her colleague's extension of this concept brought to light three specific achievement goals: mastery, performance-approach, and performance-avoidance (Elliot & Harackiewicz, 1996; Elliot et al., 2011).

*Mastery* achievement goals indicate a striving to derive intrinsic benefits from a task, such as increasing understanding or refining and developing abilities, while *performance* achievement goals are concerned with the external reward of asserting competence over others (Elliot & Harackiewicz, 1996; Elliot et al., 2011). For example, a graduate student with a mastery learning orientation might be motivated to seek out research projects in addition to their thesis or dissertation work with the intended goal of improving his or her research skills or becoming more knowledgeable in his or her field of study.

With *performance-approach* goals, task mastery is sought for the objective of demonstrating ability exceeding that of one's peers (Elliot & Harackiewicz, 1996; Elliot et al., 2011). An example of performance-approach orientated goals among graduate students might emerge as a student taking on extra research and academic tasks to distinguish themselves as more hard-working than other students in their program. For *performance-avoidance* goals, there is an inclination to avoid appearing less competent than others (Elliot & Harackiewicz, 1996; Elliot et al., 2011). In this instance, a graduate student might neglect to participate in additional research projects to evade the potential of producing lower quality work than their peers or having to drop out of the research project due to not being able to keep up with the extra work, thus avoiding demonstrating that they cannot perform on the same level as their classmates. The

structure of Achievement Goal Theory has been expanded to include a similar construct of mastery goals: mastery-avoidance, which signals the evasion of tasks that would procure intrinsic rewards (Senko, Hulleman, & Harackiewicz, 2011). The present study will focus on the mastery, performance-approach, performance-avoidance framework of achievement goal theory as past research has established clear associations between these goals and various academic outcomes.

Previous studies have consistently shown mastery goals to be the most adaptive of the achievement goals (Deemer et al., 2010; Deemer et al., 2018; Jagacinski, 2013; Vassen, Prins, & Jeurig, 2014; Senko, Belmonte, & Yahkind, 2012). Intrinsic motivation serves as the driving force behind mastery goals and manifests itself as a multitude of adaptive academic outcomes: enhanced academic task interest and engagement, greater self-regulation and metacognitive skills, deep-processing of material, and experiencing more positive emotions in the face of academic challenges (Deemer et al., 2010; Deemer et al., 2018; Jagacinski, 2013; Vassen et al., 2014). Mastery goals have also been shown to influence help-seeking behaviors in that students with this learning orientation seem to seek help in an incremental fashion, using it as a supplement to their autonomy for the purpose of maximizing understanding (Vassen et al., 2014). Additionally, Senko et al. (2011) posit that mastery goals correspond to students' valuing knowledgeable instructors who provide a rigorous curriculum.

In contrast, performance goals have been linked to less adaptive outcomes. Being grounded in the fear of failure, performance-avoidance goals correlate with anxiety, decreased self-efficacy, lower academic achievement, and self-handicapping behaviors (Deemer et al., 2010; Deemer et al., 2018; Vassen et al., 2014). Identified outcomes of performance-approach goals are more complex. A performance-approach orientation has been linked to a lack of meaningful intrinsic motivation, surface-learning strategies, and procrastination, but has also been associated with higher academic achievement in some cases (Deemer et al., 2010; Deemer et al., 2018). According to Senko et al. (2011), students with both types of performance goals are likely to hold in high regard instructors who explain concepts well and are transparent about ways to

achieve success in their class.

Past research has demonstrated that parenting style bears an influence on students' achievement goal orientations (Chen, 2015; Kim et al., 2010; Miller & Speirs Neumeister, 2017; Rivers et al., 2012). Students' perceptions of the values emphasized and manner in which structure is established in his or her household contribute to an inclination towards a specific achievement goal orientation (Chen, 2015). For example, authoritative parents are likely to endorse independence and create stability for their children. In such an environment, a child might be prone to self-sufficiency that could translate into a learning orientation in which achievement serves the purpose of fulfilling intrinsic needs (i.e. mastery goals). It is also possible for an authoritative style of parenting to drive a student's motivation to demonstrate appreciation for the loving, supportive relationship provided by his or her parents through achieving on a higher level than others (i.e. performance-approach goals).

According to Kim and colleagues (2010), students often mirror the achievement goals promoted by their parents. In their study, an association was established between an autonomy-supportive motivating style of parents and students' mastery goals (Kim et al., 2010). Such an autonomy supportive style of motivation from parents strongly coincides with the key aspect of authoritative parenting—striking a balance between adherence to structure and allowance for flexibility. This sets up a dynamic in which there is an appropriate level of parental control while children have an adequate amount of freedom to exercise autonomy. Previous literature has also consistently pointed to a connection between mastery goals and an authoritative style of parenting (Chen, 2015; Miller & Speirs Neumeister, 2017; Rivers et al., 2012). Chen (2015) credits the supportive nature, strong guidance, and advocacy of curiosity provided by authoritative parenting as being conducive to a mastery learning orientation. It is also noted in this study that authoritative parenting correlated with greater academic achievement and motivation among the sample of students (Chen, 2015).

A connection between authoritarian and permissive styles of parenting and performance

achievement goals has also been illuminated by past research (Chen, 2015; Miller & Speirs Neumeister, 2017). Chen (2015) posits that the autonomy squelching, inflexible, punitive nature of authoritarian parenting plays a large role in orienting students towards performance goals. Miller and Speirs Neumeister (2017) additionally indicate that among intellectually advanced students, authoritarian parenting can be associated with the development of perfectionism which often has a negative influence on academic achievement.

As students enter graduate school, they are expected to be self-reliant to a greater extent than they were as undergraduates (Jaegar et al., 2011; Jagacinski, 2013; Mansson & Myers, 2012). While the primary focus of undergraduate studies lies in systematically completing classes, graduate students are tasked with many other responsibilities in addition to their didactic coursework (Jaegar et al., 2011; Jagacinski, 2013; Mansson & Myers, 2012). Examples of such responsibilities include developing a thesis or dissertation, assisting with or independently conducting research projects, attending and presenting research at conferences, teaching or supervising undergraduate classes, and fulfilling other requirements necessitated by his or her program. Being able to independently employ adaptive learning strategies becomes increasingly more important with these new expectations (Jaegar et al, 2011; Lee & Deale, 2016; Mansson & Myers, 2012).

Motivation and self-regulation are vital components of exercising such autonomy in a way that leads to adaptive academic outcomes (Jaegar et al, 2011; Lee & Deale, 2016; Mansson & Myers, 2012). For example, thesis or dissertation work in some graduate programs is structured in a way that it is a student's responsibility to set up regularly scheduled meetings with his or her advisor to review progress and coordinate additional feedback as needed. Failure to take this initiative may result in missed deadlines, poorly developed work, delayed graduation, or in extreme cases, dismissal from a program. As noted by previous literature, there is an established association between mastery learning goals and intrinsically motivated academic behaviors (Deemer et al., 2010; Deemer et al., 2018; Jagacinski, 2013; Vassen, Prins, & Jeurig, 2014;

Senko, Belmonte, & Yahkind, 2012). Past research has also demonstrated that autonomy supportive environments set up by influential figures of authority in a student's life can be conducive to the adoption of mastery learning goals (Chen, 2015; Kim et al., 2010; Miller & Speirs Neumeister, 2017; Rivers et al., 2012). These connections highlight the significance of the advisor-graduate student relationship in the development of learning goals.

### ***Achievement Goal Complexes***

According to Sommet and Elliot (2017), achievement goals do not exist in a vacuum, rather, their selection is motivated by different *reasons*. The combination of an achievement goal and the reasoning behind one's goal choice creates what is known as a goal complex (Sommet & Elliot, 2017). Goal complexes are not black and white. One will not always have mastery learning goals for autonomous reasons or performance goals for controlled reasons. For example, a graduate student might want to improve their public speaking skills by presenting their research at a conference (a mastery goal) with the motivation of receiving praise from their advisor for such improvement (a controlled reason with external regulation). However, research points to autonomous mastery goals as the most adaptive of goal complexes (Sommet & Elliot, 2017; Ryan & Deci, 2017).

According to Self-Determination Theory, there are two reasons in which goals are pursued: *autonomous* and *controlled* (Sommet & Elliot, 2017). While *autonomous* reasons are derived from internal motivators, *controlled* reasons are driven by external factors (Sommet & Elliot, 2017). Each type of reasoning for goal pursuit is motivated by different types of regulation: *intrinsic*, *identified*, *introjected*, *external*, or *integrated* (Sommet & Elliot, 2017). One who adopts goals for autonomous reasons will do so as a result of *intrinsic* regulation in which he or she finds the goal pleasurable and internally gratifying, or as a result of *identified* regulation in which they orient themselves toward a goal because they view that goal as having some sort of meaningful importance (Sommet & Elliot, 2017). An intrinsically regulated graduate student might adopt the goal of improving their research skills by participating in an outside research



project due to the fact that they genuinely enjoy the process of identifying a problem and proposing a solution. Identified regulation among graduate students might look like a graduate student participating in additional research to improve their research skills because they feel that it is important for all graduate students to become proficient in conducting research.

With controlled reasons, there is *introjected* regulation, *external* regulation, and *integrated* regulation (Sommet & Elliot, 2017). When goals are selected as a means of avoiding shame or enhancing one's ego, this motivation is considered to be *introjected* regulation, seeking out goals for the external rewards they might provide denotes *external* regulation, and *integrated* regulation indicates pursuing goals to satisfy one's personal needs (Sommet & Elliot, 2017). A graduate student using introjected regulation might have the goal of refining their public speaking skills by presenting their research at a conference because they want to avoid the shame of stumbling through their speeches in front of peers and superiors. External regulation might emerge as a graduate student with the same goal of developing their public speaking abilities through presenting at conferences, but as a result of being motivated to eventually win awards for their presentations. An example of integrated regulation for a graduate student might be involvement in a research group to fulfill a student's personal need to have their name on a research publication during their time as a graduate student.

Another tenant of Self-Determination Theory posits that motivation can progress along a spectrum from controlled to more autonomous forms in conducive environments (Ryan & Deci, 2017). It is possible for one to originally be extrinsically motivated to pursue a goal, but, as time goes on, that extrinsic motivation can develop into introjected motivation. Eventually, the newly cultivated introjected motivation can become integrated regulation in which completing the tasks associated with one's introjected motivation becomes internalized as a part of his or her identity (Ryan & Deci, 2017). For example, a graduate student might be externally motivated to improve their teaching skills by working as a graduate teaching assistant for the reward of adding this experience to their Curriculum Vitae. As time progresses throughout teaching undergraduate

courses, the graduate student's motivation might evolve from adding a line to their CV to bolstering their ego as they excel in instructing students. The final progression of the student's motivation could be that being a good teacher has integrated into their global identity, thus doing exceptional work as a TA satisfies their perception of their self and abilities. An adaptive transition of a goal complex such as this is most likely to occur in an autonomy supportive environment (Sommet & Elliot, 2017; Ryan & Deci, 2017).

The goals and values one internalizes is influenced by their social world and role models. This, in turn, affects how autonomously (or willingly) one carries out behaviors (Ryan & Deci, 2017). Many tasks do not inherently invoke autonomous motivation for all students. In graduate school, there is a plethora of daunting work such as writing long papers and reading copious pages of complex research articles. This is where social and environmental influences come into play. In autonomy supportive environments, figures of authority are more likely motivate behaviors for intrinsic benefits (Ryan & Deci, 2017). The promotion of intrinsic gains is conducive to the cultivation of autonomous motivation for completing tasks in that one is more likely to see the personal significance in engaging with their work (Ryan & Deci, 2017). A graduate student's advisor might set up such an environment by assuming a mentoring approach similar to that of authoritative parenting. As mentioned before, with this style of parenting, there is a balance of control and support that allows one to develop competence and a sense of autonomy with the right amount of guidance. Within autonomy supportive environments, the intrinsic motivation that drives task engagement might orient students towards adaptive learning goals that are sought for autonomous reasons (Sommet & Elliot, 2017; Ryan & Deci, 2017). Thus, the present study hypothesizes that there will be a strong, positive correlation between perceived authoritative advising and a mastery-autonomous goal complex (H1) and a strong, positive correlation between perceived authoritative advising and a performance-approach-autonomous goal complex (H3) among the sample of graduate students. Given the extent of past literature that connects authoritative parenting to mastery achievement goals and the concept that

controlling reasons can progress along a spectrum from less to more adaptive, it is also hypothesized that there will be a strong, positive association between a perceived authoritative advising and mastery-controlled goal complex within the sample of students (H2).

Conversely, activities in controlling environments have a tendency to be extrinsically motivated (Ryan & Deci, 2017). For constituents of such environments, this can translate into an inclination to complete tasks for external reinforcement which may lead to the adoption of performance learning goals and controlling reasons for pursuing these goals (Sommet & Elliot, 2017; Ryan & Deci, 2017). This idea forms the basis for the present study's fourth and fifth hypotheses: there will be a strong, positive association between perceived authoritarian advising and a performance-approach-controlled goal complex among the sample of graduate students (H4), and there will be a strong, positive association between perceived authoritarian advising and a performance-avoidant-controlled goal complex among the sample of students (H5).

## **The Present Study**

### ***Perceived Advising Style and Achievement Goal Complexes***

This study aims to explore the relationship between the advising style a student experiences during their graduate work and the achievement goals they adopt. A plethora of past research studies has demonstrated that the relationship between graduate students and their advisors impacts students' learning orientations in graduate school (Jaegar et al., 2011; Jagacinski, 2013; Lee & Deale, 2016; Mansson & Myers, 2012; Wagner et al., 2016). Previous studies have also suggested that this mentoring relationship affects other aspects of graduate student growth, such as psychosocial and professional development (Beres & Dixon, 2016; Wagner et al., 2016). Strengthening our understanding of the graduate student-faculty advisor relationship could lead to improved academic outcomes as well as a more positive overall graduate school experience for graduate students. The current study will employ survey data to evaluate the correlation between perceived advising style and graduate students' achievement goal complexes. The following research question will be explored:

R1: Is there an association between perceived advising style and achievement goal complexes among graduate students?

Based on the review of the literature, the following hypotheses have been formulated:

H1: There will be a strong, positive correlation between perceived authoritative advising and a mastery-autonomous goal complex for graduate students.

H2: There will be a strong, positive correlation between perceived authoritative advising and a mastery-controlled goal complex for graduate students.

H3: There will be a strong, positive correlation between perceived authoritative advising and a performance-approach-autonomous goal complex for graduate students.

H4: There will be a strong, positive correlation between perceived authoritarian advising and a performance-approach-controlled goal complex for graduate students.

H5: There will be a strong, positive correlation between perceived authoritarian advising and a performance-avoidant-controlled goal complex for graduate students.

### ***Permissive and Neglectful Styles***

Permissive and neglectful styles of parenting have been primarily associated with negative outcomes in past studies (Hibbard & Walton, 2014; Kauser & Piquart, 2016; Keshavarz & Mounts, 2017; Miller & Speirs Neumeister, 2017; Tavassolie et al., 2016). Children who experience permissive parenting may be prone to breaking rules and being negatively influenced by their peers, antisocial behavior, lower self-regulatory skills, lower self-efficacy, lack of self-control, and lower academic performance (Hibbard & Walton, 2014; Kauser & Piquart, 2016; Keshavarz & Mounts, 2017; Tavassolie et al., 2016). Neglectful parenting can incline children towards issues with authority figures, a lack of confidence in their abilities, lower self-regulation, and being wary of criticism (Hibbard & Walton, 2014; Kauser & Piquart, 2016; Keshavarz & Mounts, 2017). Although an abundance of previous research has found significant associations with authoritative and authoritarian parenting styles and achievement goal orientations, few studies have illuminated a clear relationship of permissive parenting with achievement goals, and

no existing literature seems to examine achievement goal connections with neglectful parenting. Obi and Okeke (2014) did not find any significant associations between permissive parenting and achievement goals while Kosterelioglu (2018) notes a positive correlation with mastery-avoidance goals. This void in research exploring the relationship between permissive and neglectful parenting styles and achievement goals compels the present study to conduct an exploratory correlational analysis for perceived permissive and neglectful advising styles with achievement goal complexes among the sample of graduate students.

### ***Gender***

Previous literature has indicated interesting trends in parenting style with respect to gender (Kauser & Pinquart, 2016; Keshavarz & Mounts, 2017; Litalien, Morin, & McInerney, 2017; McKinney, Brown, & Malkin, 2017; Tavassolie et al., 2016). Tavassolie and colleagues (2016) note that maternal and paternal parenting styles may influence children in different ways. For example, greater self-esteem and life satisfaction have been identified as outcomes of paternal authoritative parenting (Tavassolie et al., 2016). It has also been demonstrated that specific combinations of maternal and paternal parenting lead to distinct outcomes for children (Kauser & Pinquart, 2016; Tavassolie et al., 2016). Tavassolie and others (2016) found that low support from mothers in conjunction with high support from fathers correlates with greater school readiness, and maternal permissiveness combined with paternal authoritarianism may lead to an inclination towards externalizing behaviors among children. Additionally, studies have pointed to gender dyads as a mediating factor in the parent-child relationship (Kauser & Pinquart, 2016; McKinney et al., 2017). Compared to father-daughter dyads, paternal support has shown to associate with a greater decrease in maladaptive behavioral outcomes for father-son dyads (Kauser & Pinquart, 2016). Among mother-daughter and father-son dyads, the negative outcomes associated with permissive and authoritarian parenting can be more prominent (McKinney et al., 2017).

Another compelling gender trend regarding parenting style is that males and females are prone to perceive styles of parenting differently and experience contrasting outcomes in response to certain parenting styles (Kauser & Piquart, 2016; Keshavarz & Mounts, 2017; McKinney et al., 2017). In general, girls are more likely to perceive their parents' style of parenting as authoritative while boys are more likely to perceive authoritarian parenting (Kauser & Piquart, 2016). Compared to girls, boys tend to perceive fathers as authoritarian and mothers as permissive (McKinney et al., 2017). Keshavarz and Mounts (2017) note that adolescent girls may be influenced more negatively by maladaptive styles of parenting than their male counterparts, and boys who perceive authoritative parenting may exhibit greater levels of self-efficacy than girls who report experiencing this style of parenting. According to Hibbard and Walton (2014), a possible reason for these differences in perceptions and influences of parenting style between males and females could be that males have a tendency to value independence while females are more concerned with interdependence.

Gender differences also exist in the adoption of achievement goals (Litalien et al., 2017; Peterson & Kaplan, 2016; Theis & Fischer, 2017; Wirthwein et al, 2019). Generally speaking, females are more likely to pursue mastery goals while males are more likely to orient themselves towards performance-approach and performance-avoidance goals (Litalien et al., 2017; Peterson & Kaplan, 2016; Theis & Fischer, 2017; Wirthwein et al, 2019). Litalien and colleagues (2017) posit that these tendencies may vary in different academic contexts. For example, low-achieving males have been shown to display a mastery orientation towards science concepts (Litalien et al., 2017). Another explanation for males' and females' affinity for specific achievement goals could lie in social norms derived from gender role stereotypes (Theis & Fischer; Wirthwein et al., 2019). Girls may be inclined to adopt mastery and performance-approach goals in their language classes due to such subjects being stereotyped as areas in which females excel (Wirthwein et al., 2019). Similarly, males could be prone to pursue mastery and performance-approach goals in STEM (science, technology, engineering, and math) courses as related fields are often attributed

to male success (Wirthwein et al., 2019). The gender trends in parenting style and achievement goals highlighted by past research inform the present study's exploratory correlational analyses with sub-samples of participants comprised of male and female advisor-graduate student gender dyads.

### ***Race***

A scarcity of existing literature has examined racial differences in parenting style. In collectivistic cultures, girls seem to be parented with greater support and control to cultivate skills for the gender role of caring for the home and family (Kauser & Pinguart, 2016). As a result, controlling and authoritarian parenting styles are more prominent in Asian families (Keshavarz & Mounts, 2017). Among different races, children's outcomes vary in response to specific parenting styles (Keshavarz & Mounts, 2017; Wicklow & Fuligni, 2007). For example, Chinese students have been shown to experience positive outcomes from authoritarian parenting, such as greater academic achievement (Keshavarz & Mounts, 2017). Specifically, maternal authoritarianism has correlated negatively to depression among adolescents in China (Keshavarz & Mounts, 2017). According to Wicklow and Fuligni (2007), African American students are not as prone to the negative outcomes of authoritarian parenting compared to Caucasian students as this style of parenting is used more prominently in African American households. In Iran, fathers play a more influential role in their sons' lives as they enter adolescence, which may contribute to Iranian male adolescents experiencing positive outcomes as a result of paternal parenting styles (Keshavarz & Mounts, 2017).

Few racial differences have emerged in literature exploring achievement goals. Litalien and colleagues (2017) posit that in Eastern cultures, there may be more pressure from authority figures to succeed and produce tangible evidence of success. This could create an inclination towards performance goals among races from such cultures (Litalien et al., 2017). Several studies have tentatively noted specific achievement goal trends among certain races (Alrakaf, Sanisbury, Rose, & Smith, 2014; Theis & Fischer, 2017; Witkow & Fuligni, 2007; Wirthwein et al., 2019).

African American girls seem to be more oriented towards mastery goals than African American males (Theis & Fischer, 2017; Wirthwein et al., 2019). Among Latino students, performance-avoidance goals appear to be less prominent (Witkow & Fuligni, 2007). According to Alrakaf and colleagues (2014), Vietnamese students display less adaptive mastery goals than their Korean peers. To attempt to begin filling these gaps in previous research, the present study will perform exploratory correlational analyses among sub-samples of participants consisting of advisor-graduate student race matches.

### ***Sex Orientation***

A few studies note the influence of sex orientation on the parent-child relationship (Farr, Forssell, & Patterson, 2010; Feinstein et al., 2018; Tasker, 2010). Feinstein and colleagues (2018) indicate that among homosexual and bisexual adolescents, coming out to their parents either strengthened or impaired their relationship with their parents. It is also highlighted in this study that a supportive relationship with a parental authority figure is associated with specific positive outcomes for homosexual and bisexual adolescents, including more secure attachment in relationships, adaptive emotional coping skills, and improved sexual health (Feinstein et al., 2018). With regard to the sex orientation of parents, Farr and others (2010) posit that parenting from homosexual mothers and fathers does not have more of a significant impact on children's outcomes than that of heterosexual parents. Additionally, the parenting styles employed by homosexual parents were not found to differ significantly from the methods of parenting used by parents of a heterosexual orientation (Farr et al., 2010). However, Tasker (2010) surmises that homosexual parents may apply more warmth in their parenting style than heterosexual parents to reduce the impact of homophobic bigotry their children might experience in their social environment. The work of Feinstein and colleagues (2018), Farr and others (2010), and Tasker (2010) have all reached a similar conclusion that the levels of warmth and support employed by parents seem to be more impactful for the quality of the parent-child relationship than the



dynamics of sexual orientation. Research examining sex orientation outcomes has neglected to examine differences in students' achievement goals across sexual orientations. This review of sex orientation literature as it applies to purpose of the present study demonstrates that more research is needed to mend the identified gaps. As such, the current study will perform exploratory correlational analyses among sub-samples of graduate students who report matching with their faculty advisors in terms of sex orientation.

### ***Semester Meetings***

Adaptive academic outcomes (e.g. achievement goals) in graduate school are more prominent among intrinsically motivated and self-regulated students (Jaeger et al., 2011; Lee & Deale, 2016; Mansson & Myers, 2012). The structure of some graduate programs necessitates students to assume an active role in their academic work and other responsibilities to maintain progress towards their degree (Jaeger et al., 2011; Jagacinski, 2013; Mansson & Myers, 2012). For example, scheduling meetings with one's faculty advisor to evaluate and discuss projects as they develop. From the perspective of graduate students' advisors, employing an authoritative approach to guidance consisting of high demandingness and high responsiveness may create an autonomy supportive environment which plays a role in cultivating a mastery learning orientation among students (Chen, 2015; Kim et al., 2010; Miller & Speirs Neumeister, 2017; Rivers et al., 2012). Past research has identified consistency, clear-cut expectations, and supportiveness as being aspects of faculty advising that promote positive academic outcomes and professional development for graduate students (Lee & Deale, 2016; Mansson & Myers, 2012; Rivers et al., 2012). The consistency of meeting with students on a regular basis might create an opportunity for advisors to provide their student advisees with transparent guidelines for their work and additional support as needed. Based on these illuminations from previous literature, the present study will use an exploratory correlational analysis to explore the role of the frequency of semester meetings between graduate students and their advisors in the association between

perceived advising style and students' achievement goal complexes.

## CHAPTER III

### METHODOLOGY

#### **Participants**

The sample for this study was comprised of 307 doctoral and Master's students across various academic disciplines attending a large, public university located in the Midwest region of the United States.

#### **Procedure**

Based on an a priori power analysis ( $\alpha = 0.05$ ,  $r = 0.3$ ) for a bivariate normal model correlation, it was determined that 115 participants would be needed (Faul, Erdfelder, Lang, & Buchner, 2007). The principal investigator requested a list of e-mail addresses corresponding to all graduate students currently enrolled at the university via the school's online IRB request form. Once this request was approved, the principal investigator was sent a list of 3,467 graduate student e-mail addresses generated by a university administrator. This list was kept on a password protected computer to safeguard the privacy of the students. Each student included on the list was sent a scripted recruitment e-mail (included in Appendix A) which provided a concise rationale and description of the study as well as an explanation of what was to be asked of participants throughout the duration of their participation in this research exploration. As an incentive for participation in this study, all participants were given the opportunity to provide their e-mail address to enter into a drawing for a chance to win one of six \$25 Amazon gift cards. Students interested in participating were instructed to follow the link to a Qualtrics survey at the end of the recruitment e-mail. The first page of the survey included informed consent information that

offered a more detailed explanation of the risks and benefits of this study. Those who proceeded to the following page of the survey indicated that they had provided their consent to participate in this research investigation.

Once participation in the study began, participants were prompted to respond to two screening questions, 'Are you a graduate student?' and, 'Do you have an assigned advisor?'. Only answering 'yes' to both of these questions allowed participants to continue on to the next part of the survey. In the next phase of the survey, participants were asked to respond to three measures. The first contained three sub-scales adapted from the Achievement Goal Questionnaire (Elliot, 1999) paired with items from the Autonomous and Controlled Reasons Scale (Michou et al., 2014) to evaluate participants' achievement goal complexes. The following measure was a modified Parental Authority Questionnaire (Buri, 1991). This survey was used to assess the advising style experienced by each participant in terms of Diana Baumrind (1971) and Maccoby and Martin's (1983) four parenting styles. A final section, denoted the Demographics Sub-Survey collected various demographic data from participants and their advisors, such as age, gender, race, and graduate program. The survey remained open for two weeks. During this time, one reminder e-mail was sent to the sample of participants.

A prompt was included at the end of the survey allowing participants to provide their e-mail address for an entry into the gift card drawing. To maintain the privacy of participants, the online survey was programmed so that opting to provide an e-mail instigated a re-direction to a new webpage. Two hundred eighty-six students opted to supply their e-mail address for the drawing. These e-mails were compiled into a Microsoft Excel file and kept on a password protected computer. Once the survey was closed, six numbers between one and 286 were generated at random via Random.org. The six winners were notified by the principal investigator via e-mail with a \$25 Amazon gift card attached. At the conclusion of the data collection phase of the study, statistical analyses were employed to determine if a significant correlation exists between perceived advising style and graduate students' achievement goal complexes.

## Measures

### *Perceived Advising Style*

The nature of the relationship between graduate students and their advisors was assessed by means of a modified version of the Parental Authority Questionnaire (Buri, 1991). The Parental Authority Questionnaire contains 30 items that evaluate the degree to which a child has experienced each of Diana Baumrind (1971) and Maccoby and Martin's (1983) four styles of parenting: authoritarian, authoritative, permissive, and neglectful. Ten scale items characterize the authoritative subscale (e.g. "My advisor always encourages verbal give-and-take whenever I have felt that rules and regulations of a process were unreasonable"), and ten items make up the authoritarian subscale (e.g. "Even if I don't agree with him/her, my advisor feels that it is for my own good if I was forced to conform to what he/she thinks is right"). Five items originally comprised the permissive and neglectful subscales, however, one item was removed from each to improve both subscales' reliability. Removing the item, "My advisor does not feel that I need to obey rules and regulations of a process simply because someone in authority has established them" from the permissive subscale increased the *alpha* score from 0.72 to 0.75. The item, "My advisor allows me to decide most things for myself without a lot of direction from him/her" was removed from the neglectful subscale to change the *alpha* score from 0.67 to 0.73. As a result, the permissive subscale consists of four items (e.g. "My advisor feels that in a well-run process, the student should have their way as often as the advisor does"), and four items are contained within the neglectful subscale (e.g. "My advisor seldom gives me guidelines or expectations for my work").

The Parental Authority Questionnaire (Buri, 1991) prompts participants to respond to each item on a five-point Likert scale with one as "strongly disagree" and five as "strongly agree". This scale has established reliability and validity. According to Buri (1991), *alpha* coefficients for the different parenting style evaluations range from 0.77 to 0.92. It has been noted by previous research that the Parental Authority Questionnaire is most effective when used

among a sample of participants in emerging adulthood (Buri, 1991). To reflect the specific relationship of graduate students and their faculty advisors, the items of this scale were modified. For example, “As I was growing up” was re-phrased to, “As I work towards my graduate studies” and “my mother” was replaced with “my advisor” so that each item is relevant to a setting in which a graduate student works closely with a faculty advisor.

### ***Achievement Goal Complexes***

To measure participants’ achievement goal complexes, items from the Achievement Goal Questionnaire (Elliot, 1999) were adapted and paired with items from Sommet and Elliot’s (2017) modified version of the Autonomous and Controlled Reasons Scale (Michou et al, 2014). The resulting combination of these scales, the Autonomous and Controlled Achievement Goal Complex Scale (Sommet & Elliot, 2017) contains 20 items with six corresponding to a mastery-autonomous goal complex (e.g. “I aim to completely master the material presented throughout my graduate work because I find this a personally valuable goal”), four corresponding to a mastery-controlled goal complex (e.g. “I aim to completely master the material presented throughout my graduate work because I would feel bad, anxious, or guilty if I did not master everything”), two corresponding to a performance-approach-autonomous goal complex (e.g. “I aim to perform better than other students in my program because I find this a highly stimulating or challenging goal”), three corresponding to a performance-approach-controlled goal complex (e.g. “I aim to perform better than other students in my program because I feel obligated to maintain my advisor’s esteemed reputation”), two corresponding to a performance-avoidant-autonomous goal complex (e.g. “I aim to avoid performing worse than other students in my program because I find this a personally valuable goal”), and three corresponding to a performance-avoidant-controlled goal complex (e.g. “I aim to avoid performing worse than other students in my program because I can only be proud of myself if I do not appear to be less competent than my peers”).

The Achievement Goal Questionnaire (Elliot, 1999) assesses achievement goals in terms of mastery, performance-approach, and performance-avoidance through survey questions

reflecting aspects of students' learning goals and attitudes towards their school work. Participants respond on a five-point Likert scale with one indicating "strongly disagree" and five corresponding with "strongly agree" (Elliot, 1999). The mastery, performance-approach, and performance-avoidance subscales have established reliability and validity with *alpha* coefficients of 0.89, 0.91, and 0.77 respectively (Elliot, 1999). Past research studies have employed these scales in elementary, middle, high school, and college settings to assess the achievement goals of students (Guan, McBride, & Xiang, 2007). For the purposes of the present study, items from each subscale have been modified to more accurately convey the achievement goal orientations of graduate students. For example, the phrase "in this class" was changed to "throughout my graduate work" to provide a stronger global indication of graduate students' achievement goals throughout the didactic and research tasks of a graduate program. Additionally, items worded similarly to other items evaluating the same achievement goal were removed to alleviate redundancy and maintain the overall brevity of the survey. For example, "My goal is to avoid performing poorly compared to other students" and, "My goal is to avoid doing worse than other students" measure performance-avoidance goals in an almost identical manner, so only one of these items was kept.

The Autonomous and Controlled Reasons Scale (Michou, 2014) evaluates the reasoning behind one's motivation for pursuing goals in terms of autonomous and controlled reasons (Sommet & Elliot, 2017). Each item calls for participants to respond on a five-point Likert scale with one indicating "strongly disagree" and five corresponding with "strongly agree" (Sommet & Elliot, 2017). The *alpha* scores for the autonomous and controlled items from this scale have been determined to be 0.64 and 0.61, respectively (Oz, Lane, & Michou, 2016). For the present study, items from each scale were further adapted to be more appropriate for the context of a graduate student working closely with an advisor. For example, "...because others will only reward me if I achieve these goals" was changed to "...because my advisor will only reward me if I achieve these goals". Each pairing of an Achievement Goal Questionnaire (Elliot, 1999) item and an

Autonomous and Controlled Reasons Scale (Michou et al., 2014) item will provide an assessment of participants' goals in conjunction with their reason for pursuing those goals.

### **Data Analysis**

A correlation analysis was used to determine if there is an association between perceived advising styles and achievement goal complexes among graduate students. A score for each advising style was calculated from the modified Parental Authority Questionnaire (Buri, 1991) measure by averaging participants' Likert responses to the questions that correspond each type of advising style. Higher numbers indicate a higher level of the respective advising style experienced by each participant. A score for each achievement goal complex was computed from the Autonomous and Controlled Achievement Goal Complex Scale (Sommet & Elliot, 2017) by averaging participants' Likert responses to questions that correspond with each goal complex. Again, higher numbers indicate a stronger type of achievement goal complex for each participant. The relationship between perceived advising style scores and goal complex scores was analyzed by calculating a correlation coefficient to determine the strength and direction of the association between each variable grouping informed by our hypotheses:

H1: There will be a strong, positive correlation between perceived authoritative advising and a mastery-autonomous goal complex for graduate students.

H2: There will be a strong, positive correlation between perceived authoritative advising and a mastery-controlled goal complex for graduate students.

H3: There will be a strong, positive correlation between perceived authoritative advising and a performance-approach-autonomous goal complex for graduate students.

H4: There will be a strong, positive correlation between perceived authoritarian advising and a performance-approach-controlled goal complex for graduate students.

H5: There will be a strong, positive correlation between perceived authoritarian advising and a performance-avoidant-controlled goal complex for graduate students.



## CHAPTER IV

### FINDINGS

The present study sought an answer to the question of whether or not there is a significant relationship between perceived advising style and achievement goal complexes among graduate students. The participants consisted of a sample of 307 graduate students who completed a survey comprised of three measures: perceived advising style, achievement goal complexes, and demographics. A summary of the sample's demographic information is provided in Table 4.1.

**Table 4.1**

*Participant Demographics*

Race		Sex Orientation		Gender		Student Type		Attendance	
White	211	Heterosexual	270	Male	114	Doctoral	170	In Person	281
Hispanic, Spanish, or Latino	12	Homosexual	14	Female	193	Master's	157	Online	27
Black or African American	8	Bisexual	21						
Asian Indian	31	Other	3						
American Indian or Alaska Native	8								
Chinese	2								
Filipino	2								
Vietnamese	1								
Korean	5								
Other Asian	14								
Other (Not Listed)	14								

An adaptation of the 30-item Parental Authority Questionnaire (Buri, 1991) was used to evaluate perceived advising style. This survey contains four subscales corresponding to each of the four styles of parenting: authoritative (10 items), authoritarian (10 items), permissive (four items), and neglectful (four items). For each subscale, a reliability analysis in addition to

participants' average score was computed using SPSS. The results of these analyses are summarized in Table 4.2. An identical approach was taken to evaluate goal complexes. The modified 20-item Autonomous and Controlled Achievement Goal Complex Scale (Sommet & Elliot, 2017) is comprised of six subscales corresponding to the six achievement goal complexes: mastery-autonomous (six items), mastery-controlled (four items), performance-approach-autonomous (two items), performance-approach-controlled (three items), performance-avoidant-autonomous (two items), and performance-avoidant-controlled (three items). Means and Cronbach's *alpha* scores for these items are also provided in Table 4.2. Pearson's *r* correlations for pairings of perceived advising style and goal complexes were calculated in SPSS based on this study's five hypotheses. These data are outlined in Table 4.3.

**Table 4.2**  
*Descriptive Statistics*

	<i>M</i>	<i>SD</i>	<i>α</i>	<i>N</i>
Authoritative	3.69	0.82	0.90	307
Authoritarian	2.17	0.81	0.88	307
Permissive	3.02	0.75	0.75	307
Neglectful	2.73	0.86	0.73	307
Mastery-Autonomous	4.23	0.65	0.82	307
Mastery-Controlled	3.33	0.78	0.74	307
Performance-Approach-Autonomous	3.66	1.09	0.82	307
Performance-Approach-Controlled	2.55	0.90	0.60	307
Performance-Avoidant-Autonomous	3.63	1.20	0.61	307
Performance-Avoidant-Controlled	2.76	0.84	0.64	307

### Hypothesis 1

The first hypothesis posited that there would be a strong, positive association between an authoritative style of advising and a mastery-autonomous goal complex. Among the sample of graduate students,  $r(307) = 0.32, p < 0.05$ . This indicates that there is a weak, positive relationship between perceived authoritative advisement and a mastery-autonomous goal complex (Nolan & Henizen, 2015).

### Hypothesis 2

The second hypothesis conceived that there would be a strong, positive correlation between an authoritative style of advising and a mastery-controlled goal complex. The correlation

coefficient calculated for this association denotes a very weak, positive relationship between perceived authoritative advising and a mastery-controlled goal complex,  $r(307) = 0.20, p < 0.05$  (Nolan & Henizen, 2015).

### **Hypothesis 3**

The third hypothesis proposed that there would be a strong, positive correlation between an authoritative style of advising and a performance-approach-autonomous goal complex. Among this sample of students, the correlation coefficient demonstrated a very weak, positive relationship between perceived authoritative advisement and a performance-approach-autonomous goal complex,  $r(307) = 0.14, p < 0.05$  (Nolan & Henizen, 2015).

### **Hypothesis 4**

The fourth hypothesis surmised that there would be a strong, positive correlation between an authoritarian style of advising and a performance-approach-controlled goal complex. The correlation analysis points to a moderate, positive relationship between perceived authoritarian advising and a performance-approach-controlled goal complex,  $r(307) = 0.42, p < 0.05$  (Nolan & Henizen, 2015).

### **Hypothesis 5**

The final hypothesis speculated that there would be a strong, positive correlation between an authoritarian style advising and a performance-avoidant-controlled goal complex. The calculated association signifies a weak, positive relationship between perceived authoritarian advisement and a performance-avoidant-controlled goal complex,  $r(307) = 0.37, p < 0.05$  (Nolan & Henizen, 2015).

### **Permissive and Neglectful Advising**

Perceived permissive advising style correlated positively with mastery-controlled ( $r(307) = 0.19, p < 0.05$ ), performance-approach-autonomous ( $r(307) = 0.12, p < 0.05$ ), and performance-avoidant-autonomous complexes to a very weak degree ( $r(307) = 0.15, p < 0.05$ ), and with a mastery-autonomous complex on a weak level,  $r(307) = 0.27, p < 0.05$  (Nolan & Henizen, 2015).

A very weak positive association was found for perceived neglectful advisement and a performance-avoidant-controlled complex,  $r(307) = 0.11, p < 0.05$  (Nolan & Henizen, 2015).

**Table 4.3**  
*Correlation Coefficients for All Participants*

	ATRN	PERM	NEGL	MA	MC	PAPa	PAPc	PAvA	PAvC
ATTV	-0.36	0.61*	-0.36*	<b>0.32*</b>	<b>0.20*</b>	<b>0.14*</b>	0.01	0.12*	-0.05
ATRN		-0.27*	0.11	-0.10	0.24*	0.03	<b>0.42*</b>	-0.00	<b>0.37*</b>
PERM			0.05	0.27*	0.19*	0.12*	0.04	0.15*	0.08
NEGL				-0.04	0.06	0.05	0.00	0.02	0.11*
MA					0.44*	0.41*	0.12*	0.23*	0.11
MC						0.34*	0.63*	0.27*	0.64*
PAPa							0.42*	0.61*	0.30*
PAPc								0.34*	0.76*
PAvA									0.41*

\* $p < 0.05$ .

*Note.* Correlations highlighted in bold reflect the five proposed hypotheses. Perceived Advising Style: ATTV=Authoritative, ATRN=Authoritarian, PERM=Permissive, NEGL=Neglectful. Achievement Goal Complexes: MA=Mastery-Autonomous, MC=Mastery-Controlled, PAPa=Performance-Approach-Autonomous, PAPc=Performance-Approach-Controlled, PAvA=Performance-Avoidant-Autonomous, PAvC=Performance-Avoidant-Controlled.

### Additional Analyses

Exploratory correlational analyses were performed for specific demographic matches among the sample. In SPSS, certain cases were selected and filtered into a new data file. For each case, a correlational analysis was used to determine the association between perceived advising style and achievement goal complexes. The results of these analyses are summarized in Tables 4.5 through 4.9.

### Gender

In addition to the correlational analyses, means for perceived advising style and achievement goal complexes among male and female advisor-graduate student matches were compared using an exploratory independent samples *t*-test. A summary of these analyses is provided in Table 4.4. No significant mean differences were found for perceived authoritative, permissive, and neglectful advising styles between male and female advisor-advisee matches. Male students with male advisors perceived a significantly higher degree of authoritarian advising than female students with female advisors,  $t(185) = 3.66, p < 0.05$ . Mean comparisons among

achievement goal complexes did not indicate significant differences for mastery-autonomous, mastery-controlled, performance-approach-autonomous, performance-avoidant-autonomous, and performance-avoidant-controlled goal complexes. Male students at the advisement of male advisors reported a greater performance-approach-controlled goal complex than female students advised by female advisors,  $t(185) = 2.49, p = 0.01$ .

**Table 4.4**  
*Male vs Female Advisor-Advisee Match t-Test*

	Male Match		Female Match		<i>t</i> (185)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
ATTV	3.66	0.87	3.64	0.85	0.16
ATRN	2.41	0.81	1.97	0.81	3.66*
PERM	2.98	0.87	2.94	0.71	0.35
NEGL	2.59	0.80	2.79	0.94	1.52
MA	4.20	0.69	4.31	0.68	1.08
MC	3.31	0.75	3.30	0.79	0.09
PAPa	3.62	1.07	3.65	1.01	0.20
PAPc	2.70	0.89	2.38	0.85	2.49*
PAvA	3.57	1.22	3.59	1.25	0.11
PAvC	2.76	0.82	2.70	0.78	0.51

\* $p < 0.05$ .

*Note.* Perceived Advising Style: ATTV=Authoritative, ATRN=Authoritarian, PERM=Permissive, NEGL=Neglectful. Achievement Goal Complexes: MA=Mastery-Autonomous, MC=Mastery-Controlled, PAPa=Performance-Approach-Autonomous, PAPc=Performance-Approach-Controlled, PAvA=Performance-Avoidant-Autonomous, PAvC=Performance-Avoidant-Controlled.

Seventy-seven participants reported that they matched with their advisors in terms of male gender. Among this sample, perceived authoritative advising correlated significantly with each type of autonomous goal complex. This was to a weak degree for a performance-avoidant complex and a moderate degree for mastery and performance-approach complexes (Nolan & Henizen, 2015). Perceived authoritative advisement was also found to correlate weakly with a mastery-controlled goal complex (Nolan & Henizen, 2015). A weak positive association was found between perceived authoritarian advisement and performance-approach and performance-avoidant controlled goal complexes (Nolan & Henizen, 2015). A significantly weak negative correlation was found for perceived authoritarian advising and mastery-autonomous and performance-avoidant-autonomous goal complex (Nolan & Henizen, 2015). For perceived permissive advisement, correlational analysis determined a weak positive association with

mastery-autonomous, mastery-controlled, performance-approach-autonomous, and performance-avoidant-autonomous goal complexes (Nolan & Denizen, 2015). No significant correlations were indicated between perceived neglectful advising and achievement goal complexes.

**Table 4.5**  
*Correlation Coefficients for Advisor-Advisee Gender Match (Male)*

	ATRN	PERM	NEGL	MA	MC	PAPa	PAPc	PAVA	PAVc
ATTV	-0.47*	0.63*	-0.26*	<b>0.43*</b>	<b>0.30*</b>	<b>0.40*</b>	0.09	0.32*	-0.04
ATRN		-0.42*	0.13	-0.25*	0.12	-0.22	<b>0.30*</b>	-0.30*	<b>0.24*</b>
PERM			0.06	0.33*	0.31*	0.25*	0.12	0.23*	0.20
NEGL				-0.12	0.04	0.10	0.00	-0.09	0.15
MA					0.51*	0.57*	0.27*	0.43*	0.16
MC						0.37*	0.66*	0.31*	0.60*
PAPa							0.30*	0.62*	0.22
PAPc								0.24*	0.77*
PAVA									0.28*

\* $p < 0.05$ .

*Note.* Correlations highlighted in bold reflect the five proposed hypotheses. Perceived Advising Style: ATTV=Authoritative, ATRN=Authoritarian, PERM=Permissive, NEGL=Neglectful. Achievement Goal Complexes: MA=Mastery-Autonomous, MC=Mastery-Controlled, PAPa=Performance-Approach-Autonomous, PAPc=Performance-Approach-Controlled, PAVA=Performance-Avoidant-Autonomous, PAVc=Performance-Avoidant-Controlled.

One hundred ten participants reported a match with their advisor in terms of female gender. Within this sample, no significant associations were found between perceived authoritative advising and achievement goal complexes. Perceived authoritarian advisement correlated positively with a mastery-controlled complex to a weak degree, and performance-approach-controlled and performance-avoidant-controlled complexes to a moderate degree (Nolan & Henizen, 2015). A weak positive association was found between perceived permissive advising and a mastery-autonomous goal complex (Nolan & Henizen, 2015). Perceived neglectful advisement did not correlate significantly with any of the six achievement goal complexes.

**Table 4.6**  
*Correlation Coefficients for Advisor-Advisee Gender Match (Female)*

	ATRN	PERM	NEGL	MA	MC	PAPa	PAPc	PAvA	PAvC
ATTV	-0.50*	0.61*	-0.45*	<b>0.17</b>	<b>0.05</b>	<b>-0.03</b>	-0.17	0.02	-0.18
ATRN		-0.47*	-0.09	-0.07	0.24*	0.04	<b>0.47*</b>	0.05	<b>0.44*</b>
PERM			0.05	0.20*	-0.00	0.27	-0.10	0.05	-0.12
NEGL				0.12	0.01	0.13	-0.06	0.03	0.06
MA					0.50*	0.37*	0.19	0.22*	0.12
MC						0.23*	0.60*	0.21*	0.62*
PAPa							0.41*	0.65*	0.27*
PAPc								0.38*	0.76*
PAvA									0.44*

\* $p < 0.05$ .

*Note.* Correlations highlighted in bold reflect the five proposed hypotheses. Perceived Advising Style: ATTV=Authoritative, ATRN=Authoritarian, PERM=Permissive, NEGL=Neglectful. Achievement Goal Complexes: MA=Mastery-Autonomous, MC=Mastery-Controlled, PAPa=Performance-Approach-Autonomous, PAPc=Performance-Approach-Controlled, PAvA=Performance-Avoidant-Autonomous, PAvC=Performance-Avoidant-Controlled.

### **Race**

One hundred eighty-eight participants reported that they matched with their advisor in terms of white race. Analyses indicated that perceived authoritative advising correlated positively with mastery-autonomous and mastery-controlled goal complexes on a weak level (Nolan & Henizen, 2015). Perceived authoritarian advisement was found to correlate positively with mastery-controlled and performance-avoidant-controlled goal complexes to a weak degree, and with a performance-approach-controlled complex on a moderate level (Nolan & Henizen, 2015). A weak and very weak positive association was found between perceived permissive advising and mastery-autonomous and performance-avoidant-autonomous goal complexes, respectively (Nolan & Henizen, 2015). No significant correlations were found between perceived neglectful advisement and achievement goal complexes.

**Table 4.7**  
*Correlation Coefficients for Advisor-Advisee Race Match (White)*

	ATRN	PERM	NEGL	MA	MC	PAPa	PAPc	PAvA	PAvC
ATTV	-0.46*	0.60*	-0.43	<b>0.28*</b>	<b>0.22*</b>	<b>0.08</b>	0.04	0.14	0.03
ATRN		-0.41*	-0.06	-0.03	0.20*	0.07	<b>0.40*</b>	-0.05	<b>0.30*</b>
PERM			-0.03	0.25*	0.12	0.08	-0.04	0.15*	0.03
NEGL				-0.07	-0.05	0.08	-0.07	0.00	0.03
MA					0.43*	0.40*	0.18*	0.28*	0.14
MC						0.36*	0.61*	0.31*	0.65*
PAPa							0.40*	0.63*	0.37*
PAPc								0.32*	0.71*
PAvA									0.46*

\* $p < 0.05$ .

*Note.* Correlations highlighted in bold reflect the five proposed hypotheses. Perceived Advising Style: ATTV=Authoritative, ATRN=Authoritarian, PERM=Permissive, NEGL=Neglectful. Achievement Goal Complexes: MA=Mastery-Autonomous, MC=Mastery-Controlled, PAPa=Performance-Approach-Autonomous, PAPc=Performance-Approach-Controlled, PAvA=Performance-Avoidant-Autonomous, PAvC=Performance-Avoidant-Controlled.

### **Sex Orientation**

One hundred eighty-nine participants reported a match with their advisor in terms of heterosexual sex orientation. Among this sample, perceived authoritative advisement was found to correlate positively with mastery-autonomous, performance-approach-autonomous, and performance-avoidant-autonomous goal complexes on a weak level, and with a mastery-controlled complex to a very weak degree (Nolan & Henizen, 2015). A weak positive association was found between perceived authoritarian advising and a mastery-controlled goal complex, and a moderate positive association was found for performance-approach-controlled and performance-avoidant-controlled complexes (Nolan & Henizen, 2015). Perceived permissive advising correlated positively with mastery-autonomous and performance-avoidant-autonomous goal complexes to a weak degree, and with mastery-controlled and performance-approach-autonomous complexes on a very weak level (Nolan & Henizen, 2015). Additionally, a weak positive correlation was found for perceived neglectful advisement and a performance-avoidant-controlled goal complex (Nolan & Henizen, 2015).



**Table 4.8***Correlation Coefficients for Advisor-Advisee Sex Orientation Match (Heterosexual)*

	ATRN	PERM	NEGL	MA	MC	PAPa	PAPc	PAvA	PAvC
ATTV	-0.36*	0.62*	-0.37*	<b>0.38*</b>	<b>0.15*</b>	<b>0.22*</b>	-0.02	0.20*	-0.07
ATRN		-0.29*	0.21*	-0.02	0.31*	0.05	<b>0.44*</b>	-0.02	<b>0.41*</b>
PERM			0.06	0.27*	0.16*	0.19*	0.04	0.25*	0.08
NEGL				-0.10	0.14	-0.01	0.08	-0.01	0.21*
MA					0.44*	0.34*	0.19*	0.25*	0.11
MC						0.29*	0.62*	0.26*	0.67*
PAPa							0.46*	0.62*	0.31*
PAPc								0.40*	0.76*
PAvA									0.40*

\* $p < 0.05$ .

*Note.* Correlations highlighted in bold reflect the five proposed hypotheses. Perceived Advising Style: ATTV=Authoritative, ATRN=Authoritarian, PERM=Permissive, NEGL=Neglectful. Achievement Goal Complexes: MA=Mastery-Autonomous, MC=Mastery-Controlled, PAPa=Performance-Approach-Autonomous, PAPc=Performance-Approach-Controlled, PAvA=Performance-Avoidant-Autonomous, PAvC=Performance-Avoidant-Controlled.

### ***Weekly Semester Meetings***

One hundred fifty-seven participants reported that they met with their advisor on a weekly basis throughout the semester. Analyses revealed a significantly moderate positive correlation between perceived authoritative advisement and a mastery-autonomous goal complex, a weak positive association with a performance-approach-autonomous complex, and a very weak positive association with mastery-controlled and performance-avoidant-autonomous complexes (Nolan & Henizen, 2015). Perceived authoritarian advising correlated positively with mastery-controlled, performance-approach-controlled, and performance-avoidant-controlled goal complexes on a weak level (Nolan & Henizen, 2015). For perceived permissive advisement, there was a weak positive correlation with mastery-autonomous and performance-avoidant-autonomous complexes, and a very weak positive correlation with a performance-approach-autonomous complex (Nolan & Henizen, 2015). A very weak negative correlation was found for perceived neglectful advising and a performance-avoidant-controlled complex (Nolan & Henizen, 2015).

**Table 4.9***Correlation Coefficients for Advisor-Advisee Weekly Semester Meetings*

	ATRN	PERM	NEGL	MA	MC	PAPa	PAPc	PAvA	PAvC
ATTV	-0.34*	0.61*	-0.15	<b>0.43*</b>	<b>0.17*</b>	<b>0.26*</b>	-0.03	0.19*	-0.10
ATRN		-0.30*	0.20*	-0.08	0.26*	0.01	<b>0.38*</b>	-0.01	<b>0.34*</b>
PERM			0.05	0.31*	0.15	0.18*	-0.02	0.21*	0.04
NEGL				-0.11	0.14	-0.10	0.10	0.18	-0.15*
MA					0.49*	0.42*	0.18*	0.31*	0.11
MC						0.31*	0.59*	0.31*	0.64*
PAPa							0.47*	0.64*	0.31*
PAPc								0.38*	0.76*
PAvA									0.40*

\* $p < 0.05$ .

*Note.* Correlations highlighted in bold reflect the five proposed hypotheses. Perceived Advising Style:

ATTV=Authoritative, ATRN=Authoritarian, PERM=Permissive, NEGL=Neglectful. Achievement Goal Complexes:

MA=Mastery-Autonomous, MC=Mastery-Controlled, PAPa=Performance-Approach-Autonomous,

PAPc=Performance-Approach-Controlled, PAvA=Performance-Avoidant-Autonomous, PAvC=Performance-Avoidant-Controlled.

## CHAPTER V

### CONCLUSION

#### **Summary of Findings**

The significant positive correlations of perceived authoritative advising style with autonomous goal complexes and perceived authoritarian advising style with controlled goal complexes among all participants in the sample indicate that these styles of advising may bear some influence on graduate students' achievement goal complexes. Similar patterns of correlations were found for perceived authoritative and authoritarian advising styles among participants who matched with their advisors in terms of male and female gender, white race, and heterosexual sex orientation, as well as among participants who reported that they met with their advisor on a weekly basis each semester. These relationships might demonstrate that congruence between advisors' and graduate students' gender, race, and sexual orientation in addition to the frequency of semester advisor-advisee meetings could also play a role in shaping graduate students' achievement goal complexes. For perceived permissive advising, there was a consistent but weak positive correlation with a mastery-autonomous goal complex among all demographic matches. No significant correlational patterns were found for perceived neglectful advisement. It is clear that more research is needed to understand the relationship of perceived permissive and neglectful advising with achievement goal complexes among graduate students.

#### **Implications for Advisors**

The positive correlation between perceived authoritarian advising and every type of controlled goal complex coincides with what the ideas of Self-Determination Theory would

anticipate—authoritarian direction sets up a controlling environment that leads to the adoption of goals for controlling reasons (Lee & Deale, 2016; Miller & Speirs Neumeister, 2017; Rivers et al., 2012; Sommet & Elliot, 2017; Ryan & Deci, 2017). A possible inference may be that advisors who develop a relationship with their advisees that is comprised of high demandingness and low responsiveness create a controlling environment for graduate students in which learning goals are motivated for extrinsic rewards (Lee & Deale, 2016; Miller & Speirs Neumeister, 2017; Rivers et al., 2012; Sommet & Elliot, 2017; Ryan & Deci, 2017). The positive correlation between perceived authoritative advising and both forms of mastery goal complexes also aligns with Self-Determination Theory in supporting the notion that authoritative guidance builds an autonomy-supportive setting (Lee & Deale, 2016; Miller & Speirs Neumeister, 2017; Rivers et al., 2012; Sommet & Elliot, 2017; Ryan & Deci, 2017). A tentative application of this result could be that employing a style of advising that consists of high responsiveness and high demandingness constructs an environment that is conducive to advisees pursuing adaptive achievement goals (Lee & Deale, 2016; Miller & Speirs Neumeister, 2017; Rivers et al., 2012; Sommet & Elliot, 2017; Ryan & Deci, 2017). It might be possible for advisors to establish such a setting for their students by providing guidance encompassing specific characteristics of authoritative mentoring—transparent expectations, granting autonomy, maintaining consistency, and being supportive and flexible (Miller & Speirs Neumeister, 2017; Mansson & Myers, 2012). As noted in past research, building an authoritative dynamic between advisor and graduate student may also allow for students with controlling reasons for goal pursuit to develop a more adaptive type of motivation (Ryan & Deci, 2017; Sommet & Elliot, 2017).

It might benefit advisors to be aware of the potential influence of gender, race, sexual orientation, and regularity of scheduled meetings on their relationship with their advisees. It is known from previous research that psychosocial factors are pertinent for the advisor-advisee dynamic (Jaegar et al., 2011; Jagacinski, 2013; Lee & Deale, 2016; Mansson & Myers, 2012; Beres & Dixon, 2016; Wagner et al., 2016). However, it would not be reasonable or ethical to

assign graduate students to faculty advisors based on matches between gender, race, or sexual orientation. The results of our study help to support the consensus of past literature that advisors who are approachable, supportive, flexible, and consistent will likely have the most positive impacts on their graduate student advisees (Lee & Deale, 2016; Miller & Speirs Neumeister, 2017; Rivers et al., 2012; Mansson & Myers, 2012). A prudent takeaway for advisors would be to focus on these adaptive elements of advising—for example, maintaining a regular schedule of semester meetings with their advisees—to instigate adaptive influences amongst graduate students.

### **Implications for Graduate Students**

Once again, the ideas of Self-Determination Theory are echoed with the positive correlation found between perceived authoritative advising and mastery goal complexes. Previous studies have pointed to an association of mastery goals with greater task interest, metacognition, self-regulation, and help-seeking behaviors (Deemer et al., 2010; Deemer et al., 2018; Jagacinski, 2013; Vassen et al., 2014; Senko et al., 2011). All of these academic inclinations are advantageous for the self-sufficiency necessitated by the student-centered tasks of graduate school, such as independent research projects and constructing a thesis or dissertation. We might apply our findings to the bigger picture by speculating that students who experience an authoritative style of advising might be oriented towards academic tendencies that are better suited for navigating the rigor of graduate level work.

Conversely, it may be reasonable to hypothesize that students who experience an authoritarian style of advising might be prone to less adaptive academic inclinations due to the controlling environment this may create (Sommet & Elliot, 2017; Ryan & Deci, 2017). Past research notes that the extrinsic motivation for tasks that manifests itself within controlling settings plays a hand in aligning students with performance goals (Sommet & Elliot, 2017; Ryan & Deci, 2017; Chen, 2015; Miller & Speirs Neumeister, 2017). Within our sample, perceived authoritarian advising correlated positively with performance-approach-controlled and

performance-avoidant-controlled goal complexes. As indicated by the negative outcomes of performance goals observed in prior studies, this could suggest that authoritarian-advised graduate students may be disposed to procrastination, self-handicapping behaviors, and low levels of self-efficacy (Chen, 2015; Miller & Speirs Neumeister, 2017). It has also been shown in previous research a linkage of authoritarian guidance with perfectionism for exceptionally intelligent students, which is likely to be a characteristic of graduate students (Miller & Speirs Neumeister, 2017).

It would be beneficial for graduate students to be cognizant of the relationship between their achievement goal complexes and type of advisement they experience from their faculty advisor. However, it is understood that correlation does not equal causation. The correlational data from the present study can only support the notion that the type of advising a graduate student experiences is associated with achievement goal complexes. More extensive research is needed to determine the extent of this relationship. A take-home message for graduate students would be that they can be proactive to maximize their graduate school experience. For example, the results from this study suggest that scheduling weekly semester meetings with one's graduate advisor might be pertinent to the association between perceived advising style and achievement goals. Even within controlling environments, motivation can be derived from intrinsic sources. It is important for graduate students to know who they are, who they want to become, and why they have chosen their academic path. Another valuable insight for graduate students would be the impact of race, sexual orientation, and gender in the advisor-advisee relationship. Rather than expecting to be paired with an advisor based on matching demographics, graduate students can understand the unconscious biases that may exist with regard to race, sex orientation, and gender, and use that awareness to attenuate any negative influences this may have on their relationship with their advisor.

## **Future Directions**

The present study focused on associations between perceived advising style and graduate students' achievement goal complexes. With this concentration in mind, only data reflecting the relationship between graduate students and their faculty advisors was evaluated. Correlational analyses were not conducted with data from the questions that prompted participants to report whether they had begun working on their thesis or dissertation, if they attended campus in person or online, and how satisfied they were with the quality of their working relationship with their advisor as these questions provided insight more from a student-centered standpoint than the perspective of interaction between student and advisor.

The results of this study yielded only weak to moderate correlations confirming the hypotheses, which might suggest that there are many other factors influencing the advisor-graduate student relationship that have yet to be examined. Future developments of the present study could look into the degree to which graduate students' level of satisfaction with their relationship with their advisor mediates the association between perceived advising style and achievement goal complexes. Within the sample, participants seemed to be fairly satisfied with the nature of their advisor-advisee relationship with a mean score of 3.95. What would the advising style-achievement goal complex correlations look like among a sample of graduate students who were significantly less satisfied with the working relationship with their advisors?

Additionally, research building from the present data might compare the correlations of perceived advising style with achievement goal complexes between age, gender, sexual orientation, and race differences, such as homosexual versus heterosexual advisor-advisee matches. Previous research has pointed to differences in parenting style across gender, race, and sex orientation. As predicted by the work of Kauser and Pinquart (2016), Litalien and colleagues (2017), Peterson and Kaplan (2016), Theis and Fischer (2017), and Wirthwein and others (2019), there was a significantly higher degree of authoritarian advising perceived by male graduate students among the sub-sample of male participants who reported matching with their faculty

advisors in terms of gender. Authoritarian parenting is thought to be more common in Asian and African American families and more adaptive outcomes are associated with this style of parenting among children of such races (Keshavarz & Mounts, 2017; Witgow & Fuligni, 2007). Tasker (2010) posits that it is possible that homosexual parents may exhibit more warmth in their styles of parenting. Among the present dataset, there was an insufficient number of demographic matches to produce statistically significant comparisons. For example, there were only 22 age matches and 3 homosexual sex orientation matches. Another pertinent expansion of this study may be to compare the association of perceived advising style with achievement goal complexes between Master's and PhD students, and online correspondence versus in person attendance students. Such exploration might bring to light factors that provide barriers to academic success for graduate students.

### **Limitations**

Several limitations emerge when evaluating the scope of this study. The participants were only recruited from a single university in the Midwest region of the United States. Of the nearly 3,500 students invited to participate in this study, almost 500 responded to the survey, and only 307 students finished the survey to completion. Although this is an adequate response rate, the graduate student experience for a fraction of the student population at one university in a specific area of North America may differ significantly from the experiences of students in other regions of the United States and in different countries. Factors such as cultural norms in countries outside of the United States may allow for graduate students to be influenced more favorably by advising styles that have been shown to be conducive to less adaptive achievement goals in the United States, or affected poorly by advising styles that correlate positively with adaptive goals. It may be worthwhile for future developments of this research to delve deeper into how the advisor-graduate student relationship varies across geographic localities. Additionally, if the survey had been left open for longer than two weeks accompanied by more than one reminder e-mail, it may have been possible to acquire a larger and more diverse sample.



Another potential issue is that the participants were from a range of academic disciplines. While diversity among a sample is often a study strength, it is important to note that the structure of graduate programs varies across subjects, and different areas of research necessitate different types of working environments. A graduate student exploring a biological science might interact daily with their advisor through hands-on laboratory work while a student studying a social science might carry out their research project independently and check in with their advisor on a weekly or monthly basis. The former example seems to be a more controlling working relationship when juxtaposed with the latter. In future expansions of this study, it may be more accurate to compare the advising styles experienced by graduate students within similar academic programs.

The measures for advising style and achievement goal complexes were based on self-reports from the participants, allowing for biases. Additionally, the demographic matches were based on the knowledge of graduate students. This creates the possibility of students misperceiving their advisors' gender, race, or sex orientation. Achievement goal complexes and advising styles were reported solely from the perspective of graduate students which provides only one vantage point for a two-sided relationship. Including self-reports of gender, race, sex orientation, advising style, and advisee's achievement goal complexes for advisors in subsequent iterations of the present research might yield a more complete illustration of the intricacies of the advisor-graduate student relationship.

Some of the subscales used to measure perceived advising style and achievement goal complexes had reliability scores below 0.80. Within the adapted Parental Authority Questionnaire (Buri, 1991), Cronbach's *alpha* scores for the permissive and neglectful subscales were 0.75 and 0.73, respectively. An explanation for the lower reliability of these subscales might be that each originally contained five items compared to the 10 items that make up the authoritative and authoritarian subscales, and the five items of both the permissive and neglectful subscales were reduced to four items when one item was removed from each to improve the overall reliability.

Regarding the modified Autonomous and Controlled Achievement Goal Complex Scale (Sommet & Elliot, 2017), *alpha* scores for the mastery-controlled, performance-approach-controlled, performance-avoidant-autonomous, and performance-avoidant-controlled subscales were 0.74, 0.60, 0.61, and 0.64, respectively. Compared to the original scale (which was comprised of an even six items per subscale), each of these adapted subscales contained fewer items after similarly worded items were removed. The mastery-controlled subscale had four items, the performance-approach-controlled and performance-avoidant-controlled subscales three, and the performance-avoidant-autonomous subscale two. Additional reliability was likely lost due to the adaptations of each measure's items to be relevant to the context of graduate school.

A final limitation worth noting is that students who choose to continue their education beyond an undergraduate degree may have a baseline of more adaptive achievement goal complexes as a result of their existing academic motivation and interest. Within the sample, the mean score for a mastery-autonomous goal complex was quite high at 4.23. As mentioned earlier, in addition, the correlations between perceived advising style and achievement goal complexes calculated from the dataset were weak to moderate. These factors make it difficult to conclude for certain the degree to which perceived advising style influences graduate students' achievement goal complexes or vice versa.

## **Conclusion**

The results of the present study's correlational analyses align well with what was predicted based on the ideas of Self-Determination Theory. Due to the correlational nature of the data, hypotheses can only be developed for further examination. Informed speculation could be that authoritative advising may lead to an inclination towards more adaptive achievement goals among graduate students while authoritarian advisement might be conducive to the adoption of less adaptive achievement goals. It would be pertinent for both advisors and graduate students to be aware of their respective influences in this relationship. Advisors may want to focus on supporting autonomy and maintaining consistency and flexibility, while graduate students might

concentrate on assuming a proactive role in the advisor-advisee working relationship. Ideas for future expansions of the present study include investigating the mediating role of student satisfaction with their advisor-advisee relationship and comparing correlations across demographic matches as well as between attendance type and level of graduate work.

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## APPENDICES

### **Appendix A**

#### Recruitment E-Mail

#### Call for Graduate Student Research Participants!

Hello there!

I am reaching out to invite you to participate in my research study: ‘Improving our Understanding of the Advisor-Graduate Student Relationship’.

Participation will entail completing an anonymous online survey consisting of three measures that evaluate graduate students’ motivation for engaging in certain academic behaviors as well as the nature of the relationship with their faculty advisor in terms of control and support. The completion time for the survey will be about 15-20 minutes. Survey responses will remain anonymous and contribute to research that aims to improve academic outcomes for graduate students.

All participants will be given the option of providing their e-mail address to be entered into a drawing for a chance to win one of six \$25 Amazon gift cards! If you’re interested in participating, please follow the survey link below:

[survey link]

Thank you for your time!

## Appendix B

IRB Approval Letter



### Oklahoma State University Institutional Review Board

Date: 02/04/2020  
Application Number: IRB-20-14  
Proposal Title: Improving our Understanding of the Advisor-Graduate  
Student Relationship  
Principal Investigator: Meg Nelson  
Co-Investigator(s):  
Faculty Adviser: Mike Yough  
Project Coordinator:  
Research Assistant(s):  
Processed as: Expedited  
Expedited Category:

**Status Recommended by Reviewer(s): Approved**

**Approval Date: 02/04/2020**

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The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

**This study meets criteria in the Revised Common Rule, as well as, one or more of the circumstances for which continuing review is not required. As Principal Investigator of this research, you will be required to submit a status report to the IRB triennially.**

The final versions of any recruitment, consent, and assent documents bearing the IRB approval stamp are available for download from IRBManager. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research

protocol must be approved by the IRB. Protocol modifications requiring approval may include changes to the title, PI, adviser, other research personnel, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.

2. Submit a status report to the IRB when requested
3. Promptly report to the IRB any harm experienced by a participant that is both unanticipated and related per IRB policy.
4. Maintain accurate and complete study records for evaluation by the OSU IRB and, if applicable, inspection by regulatory agencies and/or the study sponsor.
5. Notify the IRB office when your research project is complete or when you are no longer affiliated with Oklahoma State University.

If you have questions about the IRB procedures or need any assistance from the Board, please contact the IRB Office at 405-744-3377 or [irb@okstate.edu](mailto:irb@okstate.edu).

Sincerely,

Oklahoma State University IRB

### **Appendix C**

#### Demographic Sub-Survey

*Please answer each question below to the best of your knowledge. Information provided on this survey will only be seen by the principal investigator of this study and their faculty advisor.*

Graduate Program: \_\_\_\_\_

I am a:  Doctoral student  Master's student

I attend school:  In person  Online

My advisor is:  Older than me  Younger than me  Approximately the same age as me

Gender:  Male  Female  Other

Gender of Advisor:  Male  Female  Other

Race:  Hispanic, Spanish, or Latino  Black or African American  American Indian or Alaska

Native  Chinese  Filipino  Asian Indian  Vietnamese  Korean  Japanese  Native

Hawaiian  Samoan  Chamorro  Other Asian  Other Pacific Islander  White  Other (Not Listed)

Race of Advisor:  Hispanic, Spanish, or Latino  Black or African American  American Indian or Alaska Native  Chinese  Filipino  Asian Indian  Vietnamese  Korean  Japanese  Native Hawaiian  Samoan  Chamorro  Other Asian  Other Pacific Islander  White  Other (Not Listed)

Sexual Orientation:  Heterosexual  Bisexual  Homosexual  Other

Sexual Orientation of Advisor:  Heterosexual  Bisexual  Homosexual  Other  I don't know

If you would like to provide your e-mail to be entered into a drawing for one of six \$25 Amazon gift cards, please follow this link: [redirect link]

VITA

Margaret Nicole Nelson

Candidate for the Degree of

Master of Science

Thesis: GUIDANCE AND GOALS: THE COMPLEXITY OF THE ADVISOR-GRADUATE STUDENT RELATIONSHIP

Major Field: Educational Psychology

Biographical:

Education:

Completed the requirements for the Master of Science in Educational Psychology at Oklahoma State University, Stillwater, Oklahoma in May, 2020.

Completed the requirements for the Bachelor of Science in Psychology at Northeastern State University, Broken Arrow, OK in 2017.

Experience: Graduate Teaching Associate for EPSY 1003: Learning to Learn and EPSY 4223: Psychological Foundations of Learning & Instruction during the Fall 2019 and Spring 2020 semesters

Professional Memberships: Educational Psychology Student Society Social Chair Fall 2018/Spring 2019, Educational Psychology Student Society Vice President Fall 2019/Spring 2020