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College Students' Perceptions of the Student-Teacher Relationship

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Abstract

Humans, as social creatures, pursue relationships with others to fulfill various needs. As such, when we enter school, we naturally seek to establish relationships with teachers, who act as significant individuals in our lives. In general, research has shown that students with close, warm relationships with their teachers tend to experience more favorable outcomes related to academic achievement, behavior, and social-emotional factors. Students with more negative relationships with their teachers conversely tend to experience poorer outcomes. Though decades of research have consistently shown this correlation, few studies have examined the relationships between college students and their professors. The current study aimed to fill this gap in the literature by evaluating the student-teacher relationship in college students, as well as the factors that contribute to differences in this relationship. College students reported on their relationships with their professors using the Barrett-Lennard Relationship Inventory, Other-to-Self form. It was expected that students who reported higher self-esteem, self-efficacy, academic commitment, and internal locus of control would also report having better quality STRs with their professors. Academic commitment was the single best predictor of STR quality for college students, though it was negatively correlated with STR quality. This indicated that students who were more academically committed were less likely to have close relationships with their professors.

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CHAPTER I

Human relationships have been found to be complex, ongoing, and interactive. According to research, people have been driven by a need to belong, leading us to continually seek out interpersonal attachments with others (Baumeister & Leary, 1995; Hagenauer & Volet, 2014). Researchers have used many models to describe these relationships, from Bronfenbrenner's Ecological Systems Theory to Bowlby's Attachment Theory (Demirkaya & Bakkaloglu, 2015; Gregoriadis & Tsigilis, 2008). These theories posited that changes in one relationship can impact other relationships, and that healthy interactions with caregivers early in life help us continue to establish healthy relationships as we mature (Demirkaya & Bakkaloglu, 2015). When children entered school, then, they began forming new relationships outside of their families, specifically with teachers and peers.

The student-teacher relationship (STR) became a point of focus for researchers beginning in the 1980's, when Minuchin and Shapiro (1983) and Weinstein (1983) posited that teachers were the leaders and driving force of the quality of their relationships with students (Davis, 2003). Teachers were thought to do so through manipulating the physical space of the classroom, setting expectations about students' academic success, providing attention to students, and creating supportive socioemotional classroom climates (Davis, 2003). These researchers also claimed that teachers played significant roles in their students' cognitive and social development (Davis, 2003). Many

researchers believed that this was because the STR could be viewed as an extension of the parent-child relationship through the lens of attachment theory (Davis, 2003). With attachment theory, researchers noted that teachers could act as a safe base from which their students could learn about their academic and social surroundings, thereby improving their cognitive and social development (Davis, 2003). By establishing high-quality STRs, teachers provided the foundation that their students needed to explore their environment and learn in new and exciting ways (Davis, 2003).

Relationships formed early in life have impacted future relationships, as evidenced by research showing that individuals with secure relationships with their mothers during the first years of life tended to also have positive, secure relationships with their teachers upon entering school (Brekelmans et al., 2002; Demirkaya & Bakkaloglu, 2015; Gehlbach et al., 2012; Gregoriadis & Tsigilis, 2008). Further, these positive relationships led to positive outcomes in the skills needed to develop even more positive relationships with others, such as emotional development, self-esteem, and overall adjustment (Baker et al., 2008; Demirkaya & Bakkaloglu, 2015; Fraire et al., 2013). Specifically, through attachment theory, researchers have claimed that a supportive relationship between students and teachers provided security for students and therefore promoted these positive outcomes (Ma et al., 2018). Similarly, researchers utilizing social motivation theory postulated that students who received social support from their teachers were subsequently motivated to engage with others and therefore develop social skills that led to positive outcomes (Ma et al., 2018). It is possible that

students learned these skills using social referencing, through which children used observations of adults' behaviors, such as interactions with other students, to form perceptions of others and develop social skills (Hughes & Im, 2016). It is also possible that support from teachers encouraged students to become more motivated and learn better self-efficacious social behaviors, promoting these social skills and subsequent positive outcomes (Ma et al., 2018). Many studies have examined the relationships students have with their teachers and peers throughout primary and secondary school, but there has been a dearth of research on this relationship for individuals in higher education (Hagenauer & Volet, 2014). As will be discussed, the student-teacher relationship (STR) continues to be impactful for these older students in many areas of success and wellbeing.

Studies have shown that high-quality relationships can promote motivation, social competence, and wellbeing (e.g., Hagenauer & Volet, 2014). For example, Frymier and Houser (2000) found that as individuals matured, they began developing and maintaining meaningful relationships with others. Unlike other relationships, those between students and their teachers posed a unique power dynamic; while relationships between two individuals of similar ages typically involved equality, teachers possessed authoritative power over students within the STR (Frymier & Houser, 2000). Additionally, Frymier and Houser (2000) noted that STRs were often constrained by the barriers of the school environment, in that students and teachers typically only interacted with one another between the start and end of the school day and only on campus, whereas friendships between similarly aged individuals generally allowed the members to interact any time

they pleased. In other words, vast differences existed between typical friendly relationships and STRs (Frymier & Houser, 2000). As in other relationships, though, positive and supportive STRs promoted students' satisfaction, academic achievement, positive behaviors, and responsiveness to distress, for example (Baker et al., 2008; Suldo et al., 2014). Researchers noted that these relationships are intricate microsystems that contain feelings, beliefs, expectations, and judgments about one another, influencing many aspects of everyday life (Settanni et al., 2015). Further, these relationships were described as containing differing levels of closeness, conflict, and dependency, which have historically been the hallmark factors of the STR.

CHAPTER II

Attachment Theory

When examining relationships, one may consider the impact that attachment styles may have. McLeod (2009) stated that attachments are the deep and enduring emotional bonds or psychological connections that form between two people. In the 1950s, John Bowlby and Mary Ainsworth became prominent figures spearheading the development of attachment theory (McLeod, 2009). These researchers identified the importance of the relationship between the child and their mother in shaping the child's social, emotional, and cognitive development (McLeod, 2009). In a later longitudinal study examining the attachments between infants and their mothers, Schaeffer and Emerson (1964) identified a pattern in the development of attachment. By measuring the infant's anxiety with a stranger, anxiety when separated from their mother, and degree to which they looked to their mother to figure out what to do, the researchers noted that the infants generally experienced four stages of attachment development (McLeod, 2009; Schaeffer & Emerson, 1964). The first stage was labeled the asocial stage and took place when the infant was about 0-6 weeks old (McLeod, 2009; Schaeffer & Emerson, 1964). During this stage, the infant reacted similarly to both social and nonsocial stimuli, indicating no preference for social stimulation (McLeod, 2009; Schaeffer & Emerson,

1964). The second stage, wherein the infant formed indiscriminate attachments, generally occurred when the infant was 6 weeks-old to about 7 months-old (McLeod, 2009; Schaeffer & Emerson, 1964). Infants in this stage began to enjoy human interaction, but most responded equally to any caregiver rather than having a preference for one or multiple caregivers (McLeod, 2009; Schaeffer & Emerson, 1964). However, around 3 months of age, the infants began to smile more at faces they recognized and were more easily comforted by regular caregivers when upset (McLeod, 2009; Schaeffer & Emerson, 1964). The third stage lasted from ages 7-9 months and involved the formation of a specific attachment, defined as a preference for one attachment figure (McLeod, 2009; Schaeffer & Emerson, 1964). Infants in this stage looked toward familiar people for security, comfort, and protection, and they showed fear, anxiety, and unhappiness when meeting strangers or experiencing separation from their attachment figure (McLeod, 2009; Schaeffer & Emerson, 1964). Finally, infants who were 10 months-old and older formed multiple attachments and became increasingly independent (McLeod, 2009; Schaeffer & Emerson, 1964). Based on this longitudinal study, it became apparent that attachments were most likely to form between an individual and the person who responded the most accurately to their signals, showing sensitive responsiveness (McLeod, 2009; Schaeffer & Emerson, 1964).

Another well-known study of attachments is that of the Strange Situation, conducted by Mary Ainsworth (Fitton, 2012). In the Strange Situation, a child was introduced to a stressful event that activated their attachment system and allowed them to

use their caregiver as a secure base (Fitton, 2012). Ainsworth was interested in the infants' use of proximity, contact-seeking and maintaining, interaction avoidance, resistance, searching behaviors, exploratory behaviors, and affect displays (McLeod, 2018). There were several phases of the Strange Situation, in which the mother and child entered a playroom (a new, strange place), the child explored the room, a stranger entered the room and attempted to interact with the child, the mother left the child alone in the room with the stranger, the mother returned, the stranger left the room, the mother left the room again, the stranger returned again, and the mother finally returned to interact with the child (Ainsworth & Bell, 1970). By examining the infants' reactions to each of these phases, Ainsworth proposed the existence of various attachment styles ("Mary Ainsworth", 2018). An infant with a secure attachment style with their mother tended to explore and engage with the stranger when the mother was in the room, became agitated when she left the room, avoided contact with the stranger when alone in the room with them, and sought comfort from the mother upon her return ("Mary Ainsworth", 2018). Infants with an anxious-resistant insecure attachment tended to not want to explore their environment, became very agitated and distressed when the mother left the room, appeared resentful and unreceptive to the mother's attempts at comfort upon her return, and displayed elevated levels of anxiety when the stranger was introduced, even when the mother was still in the room ("Mary Ainsworth", 2018). Infants with an anxious-avoidant insecure attachment style often refused to be held by their mother, avoided exploration, displayed ambivalence toward the stranger, treated the stranger virtually the same as they

treated the mother, and generally displayed ambivalence whether the mother was present or not ("Mary Ainsworth", 2018). Finally, an infant with a disorganized or disoriented attachment style appeared distressed when the mother exited and showed relief upon her return, but they often did not want to be held or showed anger towards the mother ("Mary Ainsworth", 2018).

In this research, attachments appeared to consist of multiple components. There was an affective component, which indicated that attachment bonds could be observed through the affectionate gestures two people made towards each other that showed pleasure and enjoyment (Fitton, 2012). In addition, there was a behavioral component, which suggested that increased proximity and physical contact indicated a stronger bond (Fitton, 2012). These behaviors included instinctive behaviors, such as an infant crying to let their parent know they want attention, contact-seeking behaviors, and exploratory behaviors, such as the infant using their parent as secure base from which to explore their environment (Fitton, 2012). A cognitive component of attachment indicated that parent-child attachments could influence the child's cognitive development by promoting the formation of brain structures and organization of the nervous system, language development, and competence through exploration and problem-solving while using the parent as a secure base (Fitton, 2012). The tactile or kinesthetic component suggested that parent-child attachments formed due to skin or bodily contact between the members, such as a parent holding, stroking, rocking, or otherwise touching the infant (Fitton, 2012). The psychic component indicated that attachments were based on the psychological

availability of the caregiver for the child, with the caregiver acting as a source of safety and comfort when the child was distressed (Fitton, 2012). This component emphasized the knowledge about each other as well as trust in each other as important facets of the attachment (Fitton, 2012). The physical security component suggested that attachments were bonds that formed due to a physical and reliable presence between the caregiver and the child, which created a secure base for the child (Fitton, 2012).

Though attachment styles were originally conceptualized in a laboratory setting with infants and their mothers, researchers have since argued that attachment theory could impact practitioners' work with children who have been orphaned, institutionalized, or placed in the foster care system (Fitton, 2012). Further, researchers suggested that knowledge of attachment theory could affect practitioners' therapeutic methods when working with individuals dealing with grief, suicidal ideation, substance use or abuse, child abuse or neglect, parenting issues, and difficulties in adult love relationships (Fitton, 2012). While significant early attachments appeared to form in infancy, more recent evidence suggested that people continued to form multiple attachments throughout their lives (Fitton, 2012; Hazan, 1994). Not all attachments were created equal, as well; for example, an infant's primary attachment figure was typically the mother, who was often the primary caregiver, but research showed that infants tended to form bonds with any individuals who provided consistent care and accurate responses to their distress signals (Fitton, 2012; Hazan, 1994). As children began to mature and enter new settings, they formed new attachments with others (Hazan, 1994). Throughout

childhood, the primary attachment figures tended to be the parent or parents, but children began to form attachments with other significant individuals in their lives (Hazan, 1994). By adulthood, most individuals' primary attachment figure had shifted to their partner (Hazan, 1994). Thus, the research indicated that attachments were malleable throughout the lifespan and continued to impact individuals' lives.

Ecological Systems Theory

Bronfenbrenner (1974, 1977) became another figurehead of models examining relationships by developing the oft-cited ecological systems theory. Ecological systems theory was based upon a scientific approach to examining lifespan development and emphasized the importance of relationships between different contexts (Bronfenbrenner, 1974, 1977; Darling, 2007). The cornerstone image associated with this theory included circles embedded within one another, with the innermost circle representing the microsystem, then the mesosystem, the exosystem, and the macrosystem as the outermost circle (Darling, 2007). These circles were connected by arrows that showed how they influenced one another (Darling, 2007). Bronfenbrenner defined the microsystem as a given individual's immediate context, including significant actors and environmental characteristics that had a direct impact on the individual (Duerden & Witt, 2010). The mesosystem contained all the contexts that an individual was associated with as well as their interrelationships, such as a place of work or school setting (Duerden & Witt, 2010). The exosystem included the contexts that the individual was not a part of but that still impacted their life in some way, such as changes in a parent's career or school rules and

ideals (Duerden & Witt, 2010). Finally, the macrosystem referred to the broad cultural system within which all other systems lay (Duerden & Witt, 2010). This system dictated the features of all other systems; for example, the macrosystem included a nation's laws or a culture's values (Duerden & Witt, 2010). By utilizing interconnecting systems to describe relationships, Bronfenbrenner (1974, 1977) noted that an individual existed within any number of settings at a given time, and that they both influenced and were influenced by their various systems (Duerden & Witt, 2010). In this way, a person developed through a process of interactions between and across systems (Duerden & Witt, 2010). Bronfenbrenner (1974, 1977) emphasized that the individual had an active role in their environment, rather than merely being a passive recipient of changes in their systems (Darling, 2007). In other words, the individual evoked responses from the environment and significant individuals within the environment, as well as responded themselves to these interactions (Darling, 2007).

Facets of the Student-Teacher Relationship

Closeness, Conflict, and Dependency

Researchers have long supported a model of the STR that involved three dimensions: closeness, conflict, and dependency (e.g., Koomen et al., 2012). Closeness in the STR referred to the general positive feelings students and teachers had towards each other in their relationship. This included emotional security, support, warmth, and openness between the members of the relationship. Conflict and dependency, however, reflected the negative aspects of the STR. Conflict referred to the negative and unpleasant

interactions students and teachers had, whereas dependency referred to the developmentally inappropriate degree of overreliance that the student had on the teacher; dependency has often been excluded in studies involving older students (Ang, 2005; Fraire et al., 2013; Tsigilis & Gregoriadis, 2008). Other researchers have identified similar facets of the STR, including satisfaction, instrumental help, and conflict (e.g., Ang, 2005). Researchers generally found that high-quality STRs were built on high levels of closeness and low levels of conflict and dependency, with many studies providing evidence for a negative correlation between conflict and closeness as well as a positive correlation between conflict and dependency (Fraire et al., 2013; Gregoriadis & Tsigilis, 2008).

Fraire and colleagues (2013) found that Closeness in the STR promoted open communication, academic involvement and engagement, and positive attitudes toward the school as a whole (Fraire et al., 2013). Additionally, the researchers provided evidence that closeness provided the student with comfort in approaching the teacher to talk about their feelings, their experiences, to ask for support, or to ask for comfort when upset (Fraire et al., 2013). This positive aspect of the STR allowed students to feel emotionally secure and obtain support from a significant individual in their lives; this support further helped students cope with social, emotional, and academic demands they experienced while in school (Koomen et al., 2012). Similarly, Koomen and colleagues (2012) found correlations between closeness and academic readiness for young learners, school liking, language skills, math skills, prosocial behavior, and popularity among

peers (Koomen et al., 2012). Moreover, these researchers suggested that closeness may have acted as a protective factor against social withdrawal, aggression, antisocial behavior, and hyperactivity (Koomen et al., 2012). However, the causal relationship in social skills and closeness in the STR was unclear. It was possible that students' positive social skills led to their ability to form closer relationships with teachers, or it may have been that a close STR provided students with the tools they needed to establish and maintain other social relationships (Demirkaya & Bakkaloglu, 2015).

Conflict, as previously discussed, included the negative attitudes teachers and students had towards each other in their relationships (Suldo et al., 2014). Teachers were more likely to report higher levels of conflict in relationships with students who also reported more negativity in the STR, as could be expected (Suldo et al., 2014). That is, when students rated their STRs as negative, their teachers tended to rate the same relationship as conflictual (Suldo et al., 2014). Furthermore, students who exhibited more externalizing behaviors, such as aggression, hyperactivity, and other classroom disruptions, were more likely to have more conflictual and less satisfying STRs (Demirkaya & Bakkaloglu, 2015; Hughes & Im, 2016; Suldo et al., 2014). While closeness predicted academic and social-emotional skills, conflict was correlated with lower academic achievement, lower student-perceived school value, and impaired social skills (Demirkaya & Bakkaloglu, 2015; Gehlbach et al., 2012; Hughes & Im, 2016; Koomen et al., 2012; Suldo et al., 2014). Similarly, students with less conflictual STRs were more likely to report lower levels of aggression and anger (Ang, 2005). Researchers

also found that conflict in the STR was correlated with less academic readiness in preschoolers, less classroom participation, negative school attitudes, less school liking, worse work habits, lowered language grades, lowered math grades, less prosocial behavior, peer rejection, aggression, exclusion, disruption, hyperactivity, and general externalizing behaviors that led to disciplinary actions (Koomen et al., 2012). Further, conflict in the STR led to changes in peers' views of a given student; for example, students whose teachers reported negative STRs with them were more likely to be rated by their peers as more aggressive and less popular (Hughes & Im, 2016). Studies often provided evidence for a stable, negative relationship between closeness and conflict in the STR, regardless of cultural context, and evidence that conflict had lasting effects on student outcomes across their academic careers (Blacher et al., 2014; Tsigilis & Gregoriadis, 2008).

The final commonly cited factor of the STR was dependency, which was often correlated with conflict, likely because both were viewed as the negative facets of the STR (Gregoriadis & Tsigilis, 2008; Koomen et al., 2012). Dependency was described as the extent to which students became possessive of their teachers, clingy, or over-reliant on support and guidance from their teachers (Fraire et al., 2013). Researchers noted that students who were overdependent on their teachers tended to be more hesitant in exploring the classroom and school environment, impeding their ability to have healthy social interactions with peers (Fraire et al., 2013). Further, these students were more likely to feel generally lonely and possess negative attitudes about the school

environment (Fraire et al., 2013). High levels of dependency in the STR were correlated to less academic readiness in preschoolers, less self-direction in the classroom, generally negative school attitudes, less prosocial behavior, social withdrawal from peers, loneliness, aggression, hyperactivity, and antisocial behavior (Koomen et al., 2012). Dependency in the STR appeared to be more detrimental for male students than for females, in that boys exhibited worse work habits, language skills, and mathematical skills than girls as they became more dependent on their teachers (Koomen et al., 2012).

Dependency has often been viewed differently in collectivistic versus individualistic cultures; for instance, Gregoriadis and Tsigilis (2008) found in their study of the STR in Italy that teachers did not rate dependent behaviors as negative. Rather, dependency was more positively correlated with closeness in the STR than with conflict (Gregoriadis & Tsigilis, 2008). In the collectivistic society of Italy, it appeared dependency was encouraged for students, whereas dependency in more individualistic societies, such as the United States, was viewed as more correlated with conflict and other negative aspects of the STR (Gregoriadis & Tsigilis, 2008). Dependency in the STR was evidently more imperative for younger students than for older ones, though; researchers have often excluded the dependency subscales on measures of STR quality in studies with older students (e.g., Ang, 2005). As such, researchers claimed that dependency may not be as relevant to student outcomes for older students (Ang, 2005).

Affiliation, Attachment, and Assertion

Another model of the STR that was cited less commonly than the one previously discussed involved three dimensions, as well: affiliation or warmth, attachment or security, and assertion or power and status (Tormey, 2021). Affiliation/warmth was similar to the previously discussed dimension of closeness; this aspect referred to the affection, warmth, and liking present between the two members of a relationship (Tormey, 2021). In examining the STR, Tormey (2021) argued that having an affiliation or having warmth in a relationship provided the foundation for social living, meaning that this was what individuals sought in establishing social relationships with others. Attachment/security appeared to be related to the dependency dimension previously described (Tormey, 2021). Like dependency, attachment or security was likely dependent on one's culture (Tormey, 2021). Whereas non-western cultures tended to prefer close, secure, dependent attachments, western cultures tended to value individualism and independence; therefore, Tormey (2021) argued, this dimension may have been subject to biases. The final aspect outlined by Tormey (2021) was that of assertion, power, and status. This aspect reflected the power dynamic found in social relationships, wherein one individual may have held a higher status than the other and used that power in some way against them (Tormey, 2021). Thus, this aspect was linked to feelings of awe, anger, or shame (Tormey, 2021).

Authority

Related to assertion, power, and status was the consideration of authority within a social relationship (e.g., Macleod et al., 2012). Researchers noted that there were different types of authority: legitimate, competent, coercive, authority by inducement, and personal (Macleod et al., 2012). Legitimate authority was based on group consensus and was utilized when a person who was instructing others was recognized as holding the right to command others (Macleod et al., 2012). When using legitimate authority, those without that authoritative power were expected to obey out of obligation to the social context and social norms, playing out the social roles that had been defined (Macleod et al., 2012). Competent authority, as described by Macleod and colleagues (2012), was utilized "for the good of the governed." Individuals without authority obeyed someone with competent authority because they believed that person was competent to instruct others and make decisions that would best serve everyone's interests and goals (Macleod et al., 2012). This was likely the type of authoritative power held by most teachers (Macleod et al., 2012). Coercive authority referred to authority that relied on obedience based on the threat of force (Macleod et al., 2012). Relatedly, authority by inducement referred to authority that relied on obedience based on the promise of rewards (Macleod et al., 2012). Finally, personal authority was based on the personal characteristics of the individual acting as the authority figure (Macleod et al., 2012). With personal authority, others complied with the authority figure to please them, not because they believed in that person's power or competence (Macleod et al., 2012).

Barrett-Lennard Dimensions

The Barrett-Lennard Relationship Inventory (BLRI), which will be discussed in greater detail in the methods section of the current study, was designed to measure four dimensions of relationships between two people: level of regard, empathic understanding, unconditionality of regard, and congruence (Al-Selah, 2002; Barrett-Lennard, 1962, 2015). Level of regard referred to the positive and negative feelings that existed within a given relationship (Al-Selah, 2002). This included feelings such as respect, liking, appreciation, or affection, as well as disliking, impatience, contempt, or annoyance (Barrett-Lennard, 2015). Empathic understanding referred to the extent to which one member of the relationship understood the other member, including what they meant when communicating, what they were feeling, and changes in their awareness (Al-Selah, 2002; Barrett-Lennard, 2015). Unconditionality of regard referred to the variability in the members' affective responses to one another (Barrett-Lennard, 2015). In other words, this dimension represented the ability of one member to consistently convey regard towards the other (Al-Selah, 2002). Congruence referred to the degree to which one member of a relationship was integrated in the context of their relationship with the other member (Barrett-Lennard, 2015). Congruence indicated that there was a lack of conflict and inconsistency within the relationship, and the relationship was instead based on wholeness and integration with one another (Barrett-Lennard, 2015).

Social-Emotional Skills

Social Skills

Researchers have described social skills as those that are needed for individuals to communicate, interact, and form and maintain relationships with others (Ölçer, 2017). Specifically, Ölçer (2017) provided examples of social skills, such as accepting assistance and assisting others, making conversation with others, asking for and offering help when needed, forming or joining groups, recognizing and understanding peer acceptance and rejection, collaborating with others, and managing conflicts, to name a few. When examining the literature, there existed a multitude of definitions of social skills, such as the ability to behave in compliance within an individual's social environment, which suggested that social skills were those that allowed an individual to blend in with others in their social surroundings (Ölçer, 2017). Social skills were also defined as elements of behavior that aided individuals in beginning and maintaining positive interpersonal reactions with others, placing an emphasis on interactions rather than the establishment of relationships (Ölçer, 2017). Researchers also referred to social skills as those behaviors that differed based on current social context, that were socially appropriate, and that enabled positive reactions and prevented adverse reactions when interacting with others (Ölçer, 2017). This definition took others' perspectives of what was socially appropriate into consideration, as well as placed an emphasis on appropriate interactions within a given social context (Ölçer, 2017).

Other definitions of social skills broke them down into distinct groups, such as interpersonal start-up behaviors, interpersonal reactions, personal social behaviors, and behaviors and skills revealed in certain environments (Ölçer, 2017). Interpersonal start-up behaviors included those involved in initiating social interactions with others, such as conversations or gatherings (Ölçer, 2017). Interpersonal reactions were described as the behaviors exhibited in response to a social situation and that may need to be inhibited to make room for more socially appropriate reactions (Ölçer, 2017). Personal social behaviors were the behaviors used to navigate interpersonal conflicts with others, such as conflict resolution skills (Ölçer, 2017). Finally, behaviors and skills could have been revealed in certain environments, indicating that behaviors that were appropriate in one social situation may not have been appropriate in another, such as social situations with acquaintances versus social interactions with close friends (Ölçer, 2017). Social skills have were also broken down into dimensions, such as self-control, academic skills, adaptation, and assertiveness, or into distinct categories, such as behaviors regarding the self, behaviors regarding one's duties, environmental behaviors, and interpersonal behaviors (Ölçer, 2017).

Emotional Skills

Along with social skills, emotional skills were found to play a vital role in individuals' social-emotional wellbeing. Emotional literacy, a significant emotional skill, was described by Akbag and colleagues (2016) as a skill that enabled individuals to become aware of their own feelings, which led to improvements in personal wellbeing,

quality of life, and quality of life for others in the surrounding social environment. Emotional literacy involved skills such as understanding, controlling, and managing emotions, as well as perceiving and controlling affective processes (Akbag et al., 2016). Emotional intelligence, on the other hand, was defined as the ability to recognize and understand emotions, both in the self and in others, and to use that recognition and understanding in an efficient way (Akbag et al., 2016). Emotional intelligence was shown to improve life outcomes, such as success at work, stress tolerance, group productivity, team effectiveness, leadership skills, and wellbeing, as well as academic outcomes, such as academic achievement and adjustment to higher education (Wang et al., 2011). Additionally, emotional competence involved the skills that enabled individuals to successfully cope with social environmental demands and pressures (Wang et al., 2011).

Social-Emotional Competencies

Researchers have noted that because humans are social creatures, it is essential for us to be socially and emotionally competent so that we can form and maintain relationships with others (Geiger et al., 2021). Such competencies were found to contribute to social, emotional, and cognitive skills that were subsequently used for forming and maintaining future relationships, as well (Jones et al., 2019; Kochanska & Goffin, 2017). Researchers have previously referred to social-emotional skills as "21st-century skills," including interpersonal competencies such as teamwork, collaboration, communication, cooperation, leadership, responsibility, empathy, self-regulation, and social influence (Otgonbaatar, 2021; Restad & Mølstad, 2021). Such skills placed an

emphasis on innovation, critical thinking, and problem-solving, especially when related to social interactions (Otgonbaatar, 2021). Importantly, social-emotional skills were found to correlate to better academic, social, and mental health outcomes for individuals of all ages (e.g., Jones et al., 2019). For instance, Jones and colleagues (2019) found that students with better social-emotional skills tended to be able to better focus their attention, regulate negative emotions, understand and interpret social interactions and relationships with peers and adults, and persist when faced with difficult situations. These students also had better grades and standardized test scores than students with worse social-emotional skills (Jones et al., 2019). Additionally, students with social-emotional skills were better able to make and maintain friendships, initiated positive interactions with teachers, and were more likely to engage in learning in a classroom setting (Jones et al., 2017). Similarly, social-emotional skills prevented problem behaviors, such as substance use or abuse, violence, bullying, and academic underachievement, as well as promoted academic achievement and overall wellbeing (Daunic et al., 2013; Restad & Mølstad, 2021). The researchers noted that children who were able to engage in cognitive aspects of social-emotional skills, such as managing their thoughts, attention, and behaviors, were more likely to have better grades and scores on standardized assessments (Jones et al., 2017).

Social-emotional competence was described as including self-awareness, empathy, self-management or self-regulation, and interpersonal relationship skills (Wang et al., 2011). Self-awareness as related to social-emotional competency was defined as

the ability to observe oneself and be aware of one's own emotional reactions to people and situations in order to determine how those reactions influenced social behaviors (Wang et al., 2011). Empathy referred to one's ability to recognize and understand others' emotional states, and social-emotional self-management referred to one's ability to actively manage their emotions and behaviors, both when alone and when interacting with others (Wang et al., 2011). Additionally, interpersonal relationship skills were described as those that allowed individuals to understand the emotional aspects of interpersonal relationships and to collaborate with others, even when faced with emotionally charged situations such as arguments (Wang et al., 2011).

Researchers also identified the significance of social-emotional comprehension, a related factor to competence (McKown, 2019). Social-emotional comprehension, according to McKown (2019), involved the ability to encode, interpret, and reason about social-emotional information, such nonverbal communication, perspective-taking, social information processing, and self-control related to attention, emotions, and behavior. Social-emotional comprehension was found to be related to positive outcomes, including increased self-esteem, locus of control, peer acceptance, physical health, less substance use or abuse, social-economic status, and fewer instances of criminality (McKown, 2017; 2019). In addition, social-emotional skills involved both mental and behavioral skills that were used in social interactions in order to achieve goals, such as making inferences about others' emotions, initiating positive interactions, and self-regulating one's own emotions (McKown, 2017). Other mental skills associated with social-emotional

functioning included encoding, interpreting, and reasoning about social and emotional information, such as recognizing and understanding others' emotions, understanding others' perspectives, and solving social problems (McKown, 2017). Social-emotional behavior skills also included making and maintaining positive social relationships, being appropriately assertive in interactions, being polite, taking turns, and inhibiting impulsivity and withdrawal behaviors, as well as engaging in self-control skills in order to regulate thoughts, feelings, and behaviors (McKown, 2017). In researching such skills, McKown (2017) argued that social-emotional skills should be evaluated in terms of meaningfulness, measurability, and malleability. Specifically, the researcher suggested that social-emotional skills should be described as meaningful in that they were associated with important outcomes, both in life and in academia; measurable, in that they were able to be assessed and evaluated; and malleable, in that they could be influenced by experiences (McKown, 2017). In other words, social-emotional skills were those that were able to be changed, measured, and impactful (McKown, 2017).

Social-emotional skills appeared to be especially important for development among children ages 5-11 years, as research showed support for significant changes biologically, socially, cognitively, and emotionally during this period (Jones et al., 2017). For instance, during this age, children were found to begin to engage in cognitive regulation, which involved the cognitive skills that were needed to regulate behavior to obtain a goal (Jones et al., 2017). These cognitive skills included executive function skills, such as attention regulation, inhibition, and working memory (Jones et al., 2017).

By engaging in cognitive regulation, children were able to set a goal, prioritize tasks involved in reaching that goal, inhibit maladaptive behaviors, utilize and manipulate relevant information in their working memory, switch between tasks, and appropriately and effectively deal with new problems (Jones et al., 2017). Such cognitive skills, including emotional and behavioral self-regulation, were found to be correlated with academic achievement (Daunic et al., 2013). Also, during this age, children began to understand and engage in emotional processes, such as recognizing, expressing, and regulating their emotions, as well as recognizing and understanding emotions experienced by others (Jones et al., 2017). While in this middle childhood stage, children also developed and utilized social skills, such as recognizing and interpreting others' behaviors, navigating complex social situations, and interacting with peers and adults in a positive manner (Jones et al., 2017). Social-emotional skills, including cognitive skills related to social-emotional functioning, appeared to be especially important for development during middle childhood (Jones et al., 2017).

Social-emotional skills were shown to remain important throughout the lifespan. For example, Jones and colleagues (2019) found that children with good social-emotional skills had better overall outcomes 20-30 years later, including financial success, high school graduation, college graduation, and better health. Further, these children were less likely to use substances or be involved in the criminal justice system 20-30 years later (Jones et al., 2019). Children with social-emotional competencies tended to get along better with other children, had better academic achievement, and, in adulthood, had more

success in their careers as well as better mental and physical health (Jones et al., 2017). Conversely, children who had poor self-control were more likely to have both physical and mental health problems, had more financial trouble (e.g., credit debts, poor money management), and engaged in criminal behavior later in life (Jones et al., 2019). This relationship between self-control and later life outcomes was found regardless of social class and intelligence (Jones et al., 2019). Similarly, social competence in kindergarten, including cooperation with others, conflict resolution skills, and perspective-taking abilities, correlated with positive outcomes by the time the children were 25 years of age (Jones et al., 2019). Specifically, children who were more socially competent were more likely to have graduated from high school and college as well as obtain stable employment, whereas children who were less socially competent were more likely to be arrested, live in public housing, receive public assistance, and use or abuse substances in their adulthood (Jones et al., 2019). Other researchers found that poor social-emotional skills in childhood predicted negative outcomes in adulthood, such as difficulties with self-regulation (Daunic et al., 2013).

Despite the importance of social-emotional skill development, many teachers and school administrators reported finding it difficult to implement social-emotional instruction or intervention into their curriculum (Camilerri & Cefai, 2013; Daunic et al., 2013). For instance, schools tended to place an emphasis on students' performance on standardized assessments, which led teachers to place lessons in mathematics, reading, writing, or science before lessons in social-emotional skills (Daunic et al., 2013).

Additionally, teachers often had difficulty teaching students with social-emotional difficulties, which could have caused them to prefer working with students without these difficulties and subsequently to pay less attention to students with social-emotional needs (Camilerri & Cefai, 2013). However, and importantly, schools were found to be significant settings for students to develop these essential social-emotional skills, such that having an adverse school climate produced social-emotional difficulties (Camilerri & Cefai, 2013). For example, in one study, poor relationships with teachers and classmates, poor behaviors at school, academic underachievement, low classroom engagement, and bullying victimization led to social-emotional difficulties for students, even in the long-term (Camilerri & Cefai, 2013). As such, it appeared essential that schools and families collaborated to foster social-emotional skills for students to reduce the negative impact that poor skills could have (Camilerri & Cefai, 2013; Otgonbaatar, 2021).

Historically, there were certain populations that were more at-risk for poor social-emotional skills than others. For instance, Carnazzo and colleagues (2018) noted that students who had learning disabilities were more likely to have social-emotional difficulties than students without learning disabilities. They found that students with learning disabilities were more likely to drop out of school, serve time in prison, develop poor beliefs and feelings about themselves, and have social-emotional problems that persisted into adulthood (Carnazzo et al., 2018). Specifically, this group was more likely to have poor self-concept, negative self-attributions, poor self-worth, and feelings of loneliness (Carnazzo et al., 2018). The researchers argued that students with learning

disabilities struggled more with communication skills as well as identifying and understanding emotions (Carnazzo et al., 2018). Their histories of academic and social failures contributed to their low self-esteem, and these difficulties led to subsequent negative impacts on their life outcomes (Carnazzo et al., 2018). Similarly, Camilerri and Cefai (2013) found that students who had more social-emotional difficulties were more likely to report feeling rejected, treated unfairly by their teachers, unsupported in having their needs met, and excluded from academic and social aspects of school. They noted that students with social-emotional difficulties were more at risk of failing school, dropping out of school, being socially excluded, using or abusing substances, engaging in delinquent behaviors, and having mental health issues (Camilerri & Cefai, 2013).

Many researchers suggested that social-emotional learning, or the process of learning social-emotional competencies, could act as a foundation for academic learning (Melnick et al., 2018; Restad & Mølstad, 2021). This particular type of learning was found to enable individuals to begin to recognize and manage their emotions, set and achieve goals, recognize others' perspectives, make and maintain positive social relationships, make responsible decisions, and navigate interpersonal situations in an efficient manner (Restad & Mølstad, 2021). As such, social-emotional learning aided in the acquisition of self-awareness, self-management, social awareness, relationship skills, and decision-making skills as related to social situations (Melnick et al., 2018).

Social-Emotional Measurements

Because the literature indicated that social-emotional skills played such an essential role in academic and other life outcomes, it was important to have methods of measuring these skills to implement interventions to improve them. Researchers argued that measuring social-emotional skills was an important aspect of assessment within the school setting because social-emotional measurement could impact school accountability, progress monitoring, preparedness evaluations, and improvement planning (Bolt et al., 2020). However, research showed a well-documented gap between policies for social-emotional assessment and putting those assessments into practice (McKown, 2017). Because of this, there was a lack of data that could be useful for making informed decisions with regards to social-emotional interventions (McKown, 2017). Researchers identified several aspects of social-emotional assessments that should be implemented to aid in appropriate, effective assessment. Importantly, the researchers argued, these social-emotional assessments should be highly ethical and scientific in nature, developed specifically for use in the target context, and able to measure specific dimensions of targeted social-emotional skills (McKown, 2017). When developing social-emotional assessments, McKown (2017) argued that these assessments should be developmentally appropriate as well as deliberate and transparent in their intended purposes for use. For instance, McKown (2017) suggested that this type of assessment could be used to develop curriculum, guide decisions about instruction in schools, inform program effectiveness, monitor students' progress, determine whether students are meeting

standardized measures of social-emotional skills, or determine whether students should receive special education or related services. Similarly, Jones and colleagues (2017) suggested that social-emotional assessments could be utilized to measure student and teacher outcomes, program development and success, and age- or grade-specific skills. The Collaborative for Academic, Social, and Emotional Learning (CASEL) additionally recommended that social-emotional functioning should be assessed in conjunction with measures of school climate, supports, and related outcomes, placing emphasis on social-emotional competencies on their own rather than as they relate to high-stakes testing (Melnick et al., 2018).

Researchers produced several methods for social-emotional measurement, both qualitative and quantitative. Perhaps the most effective of these assessments utilized student input, especially when measuring internalized problems, perceptions, or feelings (Dowdy et al., 2018; Melnick et al., 2018; Otgonbaatar, 2021). One such assessment utilized vignettes that measured biases, perseverance, and cooperation, as well as social-emotional aspects of academic functioning (Otgonbaatar, 2021). However, self-report assessments were found to become confusing when using negative wording, especially for younger individuals (Bolt et al., 2020). For example, measures that relied on the use of negatively worded items (e.g., “I do not…”) may have protected against careless or casual responding, but they also may have become confusing if used in complex manners (Bolt et al., 2020). Other methods of social-emotional assessment included reports from other significant individuals, such as teachers’ ratings using the Strengths and Difficulties

Questionnaire, which measured social, emotional, and behavioral skills in children (Camilleri & Cefai, 2013). Similarly, social-emotional skills and supports were measured using reports from teachers, parents, observations, or practices and policies (Melnick et al., 2018). Other specific measurements of social-emotional skills will be discussed below.

Social-Emotional Competence

Social-emotional competencies were measured in various ways across the lifespan. For example, children as young as 5-6 years of age were assessed using the Social and Emotional Competence Assessment Scale (Ölçer, 2017). Additionally, children in grades kindergarten through third completed a battery of assessments related to social-emotional comprehension and competence in reading facial expressions, inferring others' perspectives, solving social problems, delaying gratification, and tolerating frustration using SELweb, which was described as a web-based assessment system (McKown, 2019). SELweb specifically measured emotion recognition, social perspective-taking, social problem-solving, and self-control through administration of 5 modules for these young students (McKown, 2019).

Emotional Literacy

A particular aspect of social-emotional learning, emotional literacy, was a focus of assessment formulation in research. For instance, Akbag and colleagues (2016) developed a scale that assessed emotional literacy using 34 items measuring 5 dimensions for use with adults. These dimensions included emotional awareness, social competence,

understanding emotions, emotional self-efficacy, and regulating emotions (Akbag et al., 2016). Similarly, researchers used the Widener Emotional Learning Scale (WELS) to measure college students' emotional awareness in themselves and in others, tolerance of differences or conflicts, interpersonal relationship skills, flexibility in perspective-taking and behavior, and self-management skills (Wang et al., 2011). This self-report measure was found to be valid using cross-validation with the Mayer-Salovey-Caruso Emotional Intelligence Test, as well as the Bar-On Emotional Quotient Inventory (Wang et al., 2011). Emotional literacy was also assessed using the BeEmo test battery, which measured an individual's ability to identify emotional expressions from images of faces with different compositions, intensities, and orientations (Geiger et al., 2021).

Assessments Measuring Multiple Aspects

In addition to more narrow-band assessments of social or emotional abilities, researchers also utilized measurements that targeted multiple aspects of social-emotional competencies. One such example was the Social Emotional Health Survey—Secondary (SEHS-S), a 36-item self-report measure used with students in grades 7-12 (Carnazzo et al., 2018; Dowdy et al., 2018). The SEHS-S was designed to measure positive social-emotional constructs, such as belief in self, belief in others, emotional competence, and engaged living (Carnazzo et al., 2018; Dowdy et al., 2018). This assessment was made available in both English and Spanish forms, both of which were found to be structurally valid and reliable (Hinton et al., 2021). A related measurement was the Social-Emotional Distress Survey—Secondary (SEDS-S), which was designed to measure students' mental

health, life satisfaction, and strengths (Dowdy et al., 2018). Similarly, the Psychological Health Questionnaire, a self-report measure of mental disorders, was utilized to measure a range of social-emotional difficulties (Geiger et al., 2021). The YouthPower Action Youth Soft Skills Assessment (YAYSSA) included 48 items designed to measure positive self-concept, higher-order thinking skills, negative self-concept, and social and communication skills in adolescents ages 15-19 years (Cunha et al., 2021). Positive and negative self-concept items included measurements of self-efficacy, self-esteem, self-confidence, self-awareness, and self-belief (Cunha et al., 2021). The higher-order thinking skills dimension measured adolescents' impulsivity, emotions, problem-solving skills, critical thinking skills, and decision-making skills (Cunha et al., 2021). Additionally, the social and communication skills items measured the participants' skills in regulating behaviors, social skills, and communicating with others (Cunha et al., 2021). The YAYSSA was previously modified to be used in developing countries, as well (Cunha et al., 2021).

Social-emotional skills were also measured through observation, as seen with the vignettes used by Otgonbaatar (2021) and with the Teacher Observation of Classroom Adaptation – Checklist (TOCA-C) used by Bradshaw and Kush (2020). Specifically, Otgonbaatar's (2021) vignettes allowed the researchers to view participants' evaluations of their own and others' emotions, skills, and traits. The TOCA-C was used with grades kindergarten through fifth and included 33 items that measured children's concentration problems, aggressive or disruptive behaviors, prosocial behaviors, emotional regulation

difficulties, internalizing problems, family problems, and family involvement with the school or classroom (Bradshaw & Kush, 2020).

Another measure used with young students was the Kindergarten Student Entrance Profile (KSEP), which measured both social-emotional and cognitive abilities in children who were preparing to begin kindergarten (Quirk et al., 2016). Social-emotional items included the child's ability to seek adult help, play cooperatively with others, and control their impulses, as well as items related to their attention, enthusiasm, and persistence (Quirk et al., 2016). The researchers found that the KSEP was able to measure school readiness for children from multiple ethnic and linguistic backgrounds (Quirk et al., 2016). The Brief Multidimensional Student Life Satisfaction Scale (BMSLSS), a self-report measure used with individuals ages 8-18 years, measured students' general satisfaction with their friends, family, self, school, and living environment (Dowdy et al., 2018). Similarly, the Student Adaptation to College Questionnaire (SACQ) included 67 self-report items designed to measure college students' satisfaction with their academic, institutional, social, and personal-emotional adjustment to the college experience (Donado et al., 2021). Because social-emotional skills were consistently found to be important for functioning across the lifespan, it appeared vital that researchers and practitioners became familiar with social-emotional measurements to utilize.

Social-Emotional Interventions

Once social-emotional skills were assessed, individuals experiencing difficulties were targeted for interventions to improve these skills. Social-emotional learning programs were found to be effective, especially when targeting specific aspects of social-emotional skills (Jones et al., 2017). That is, individuals who participated in social-emotional interventions were more likely to experience gains in their social-emotional skills than individuals who did not participate (Jones et al., 2017). Effective interventions led to improvements in social-emotional outcomes for students, including increased emotional literacy, abilities to establish friendships, prosocial behaviors, conflict resolution, impulse control, perspective-taking, and empathy (Jones et al., 2017). Further, social-emotional interventions were also shown to decrease the risk of aggression, depression, anxiety, conduct problems, hyperactivity, and absenteeism or truancy (Jones et al., 2017). When implemented in schools, social-emotional interventions improved students' academic ability, motivation, and skills, as well as their grades in class and scores on standardized assessments of mathematics and reading (Jones et al., 2017). Additionally, social-emotional interventions led to improvements in classroom climate and teacher instructional support, higher graduation rates, less bullying and aggression, and less teacher stress (Melnick et al., 2018). These improvements also subsequently led to reduced disciplinary actions, improved school and social performance, better job outcomes, higher education, and improved college or career readiness (Melnick et al., 2018). In other words, targeting social-emotional skills through intervention

implementation led to improvements in skills, attitudes, behaviors, and academic performance (Restad & Mølstad, 2021).

Though social-emotional interventions were found to be effective, these programs often required substantial time and effort to implement (Daunic et al., 2013; Jones et al., 2017). Because of this, social-emotional interventions were often limited in their dosage, duration, and effectiveness, meaning they were implemented in short, sparse sessions because they were not valued as highly as academic interventions (Jones et al., 2017). Similarly, there was often a lack of staff training and available data to inform interventions, and these interventions were often targeted in the classroom rather than pursuing generalization of social-emotional skills (Jones et al., 2017). Therefore, to efficiently target social-emotional skills, researchers argued that those implementing interventions should collect data from significant individuals on previous interventions that have worked and that haven't worked (Jones et al., 2017). Further, researchers suggested that interventions should shift their focus from classroom settings to include broader environments, such as the playground, cafeteria, school, or everywhere a student spends significant time (Jones et al., 2017). Finally, researchers posited that interventions should be specific and guided by knowledge and data, as well as methodologically clear and rigorous in order to promote skill acquisition, retention, and generalization (Jones et al., 2017).

Social and Emotional Outcomes

STRs were found to be essential for the social and emotional development of students, as healthy STRs predicted healthy social and emotional development and overall adjustment (Griggs et al., 2009; Koepke & Harkins, 2008; Pallini et al., 2019; Prino et al., 2016). Social and emotional development was described by Darling-Churchill and Lippman (2016) as the ability of individuals to form close, secure relationships with peers and adults, as well as experience, regulate, and express emotions in socially and culturally appropriate ways. Further, these researchers noted that social and emotional development allowed individuals to begin exploring and learning about their environment (Darling-Churchill & Lippman, 2016). Skills that were commonly associated with social-emotional competency included empathy, inhibition, self-confidence, ability to take perspective, development of relationships, and, importantly, ability to express and manage emotions in an adaptive manner (Darling-Churchill & Lippman, 2016). Whereas researchers found that conflict and dependency in the STR tended to lead to aggression, antisocial behavior, withdrawal, and negative moods, closeness and other measures of the positive aspects of the STR tended to promote prosocial behaviors, adaptive social and emotional behaviors, and social competence overall (Griggs et al., 2009). Positive STRs were found to act as a protective factor against difficulties with emotion regulation, developmental risks, adverse school experiences, and other risk factors that may have negatively impacted a student by providing a positive psychosocial environment comprised of connectedness,

communication, and care (Baker et al., 2008; Krane et al., 2016; Pallini et al., 2019; Prino et al., 2016). Warm and open STRs appeared to additionally promote social and emotional functioning, while STRs characterized by conflict tended to impede students' overall development (McFarland et al., 2016; Spilt & Koomen, 2009). Additionally, social support from teachers generally promoted students' mental health, contributing to better self-esteem and fewer and/or less severe depressive symptoms (Krane et al., 2016).

Beginning from an early age, STRs were found to have great impacts on students' social and emotional functioning, acting as a crucial factor in the healthy social-emotional development of children, especially within the school setting (Fraire et al., 2008; Ogelman & Seven, 2014). Because many young children only held significant relationships with their family members, the shift to starting school marked a crucial time for children to begin forming new significant relationships with individuals outside the home, namely their teachers. During this time, teachers promoted their students' social-emotional adjustment to school and development in general (Koepke & Harkins, 2008; McFarland et al., 2016).

For young children, STRs promoted social and academic competency (Ogelmen & Seven, 2014; Prino et al., 2016). Specifically, positive STRs were linked to emotional support and security, which then led to students' overall emotional wellbeing as well as engagement in prosocial behavior, and support within the STR promoted overall positive social and emotional outcomes for students (Brown & McIntosh, 2012; Hajovsky et al., 2019; Koepke & Harkins, 2008; Koomen & Jellesma, 2015; McFarland et al., 2016;

Murray & Malmgren, 2005; Pallini et al., 2019; Patrício et al., 2015; Wu et al., 2010). Conversely, negative STRs acted as stressors for students, leading to emotional insecurity (Koomen & Jellesma, 2015). For young children, teachers acted as moderators for social relationships and interactions within their classrooms, as well as attachment figures for their students (Berchiatti et al., 2020). As such, teachers played an especially significant role in young students' development, marking the importance of establishing positive STRs early in students' academic careers (Berchiatti et al., 2020; Gagnon et al., 2019).

As students entered and learned to navigate the school environment, they used teachers as social referents or guides, providing students with information on how to relate to others within the school setting (Hughes et al., 1999; Hughes & Im, 2016; Prino et al., 2016; Quaglia et al., 2013). In a study by Gagnon and colleagues (2019), early STRs that were characterized by warmth and responsiveness increased students' likelihood to be socially competent, possess higher levels of self-control, and exhibit fewer aggressive behaviors; if the STRs were characterized by conflict and dependency, though, young students were more likely to have worsened social-emotional development, poorer self-regulation skills, and more social anxiety (Gagnon et al., 2019). Research showed that conflict in these early STRs led to poor outcomes in the long-term, as well (Murray & Malmgren, 2005). For instance, conflict led to decreases in prosocial behaviors and social competence and increases in aggression (Longobardi et al., 2019). STRs in which the teacher was supportive, affectionate, emotionally involved, and available promoted students' positive self-evaluations and improved their self-concepts,

while STRs in which the teacher was unresponsive, discouraging, punitive, or neglectful led the student to view themselves as unlovable, incompetent, or unworthy, causing them to have a worsened self-concept (McFarland et al., 2016). That said, the STR was found to be able to provide or negate the support that young students needed to become socially competent and adapt to new environments, acting as a protective factor or a risk factor in children's psychological adjustment (Longobardi et al., 2019). Therefore, STRs played a vital role in students' social and emotional outcomes from an early age, with support from the teacher predicting social competence and effective communication (Baker et al., 2008; Fraire et al., 2013; Hughes, 2011; Webb & Neuharth-Pritchett, 2011).

In the same way, social support from teachers appeared to improve self-esteem by promoting a more internalized locus of control (LOC). Self-esteem was consistently associated with LOC (Kurtović et al., 2018). Researchers described an internal LOC as indicating that a given individual believed that they had more control over events and outcomes in their life, whereas an external LOC indicated that the individual believed that events and outcomes in their life were due to external factors, or things outside of their control, such as luck or the actions of others (Aspelmeier et al., 2012; Kurtović et al., 2018). Throughout the literature, an internal LOC was associated with positive life outcomes, including academic achievement, a sense of responsibility, better mental health, adaptive adjustment, problem solving skills, career successes, and overall life satisfaction (Kurtović et al., 2018). Researchers argued that this is because an individual who felt that things in their life were in their control would invest more time and effort

into their actions, leading to better outcomes (Kurtović et al., 2018). For example, if a student had an internal LOC, they would be more likely to study, and would therefore be more likely to earn high grades. Conversely, a student with a more external LOC would be more likely to believe that any effort put into studying would be in vain, and would therefore be less likely to study, making them less likely to earn high grades. Because they believed that things were out of their control, individuals with an external LOC were more likely to report feeling hopeless, depressed, suicidal, anxious, and having a lower self-esteem (Kurtović et al., 2018). Self-esteem, as will be discussed, was shown to be related to better academic achievement (Aspelmeier et al., 2012). As locus of control was associated with self-esteem, it appeared important to promote an internal locus of control, which could improve self-esteem, thereby improving academic achievement (Aspelmeier et al., 2012). In other words, researchers argued that teachers may be able to promote self-esteem by encouraging their students to have more internal LOCs, which could lead to subsequent gains in academic performance. However, there was limited research examining the relationship between LOC and the STR; therefore, the current study will explore this relationship.

Importantly, STRs appeared to be relatively stable as students aged (Miller-Lewis et al., 2014). This indicated that STRs formed early in a child's educational experience set the tone for subsequent STRs throughout their academic career (Miller-Lewis et al., 2014). For instance, in a longitudinal study examining STRs for preschoolers and their subsequent STRs throughout elementary school, preschoolers who began their education

with high-quality STRs tended to also have high-quality STRs with their new teachers each year (Miller-Lewis et al., 2014). In this same study, preschoolers who had poor quality STRs experienced worsening STRs as they progressed through school (Miller-Lewis et al., 2014). Similarly, the children with poor quality STRs were more likely to experience later mental health issues, internalizing behaviors, and less prosocial skills, suggesting that early STRs continued to impact emotional and social wellbeing over several years (Miller-Lewis et al., 2014). The researchers posited that this may have been due to a sequence of responses wherein children who exhibited behavior problems early in school tended to have a harder time forming high-quality STRs, leading to more conflict in the STR, which produced greater mental health issues and subsequently encouraged the students to engage in more problem behaviors (Miller-Lewis et al., 2014). With this positive feedback loop, students who had poor quality relationships with their first teachers were likely to continue to have poor quality relationships with their teachers in the following years. Similarly, Davis and Lease (2007) found that students who had conflictual STRs were more likely to continue having poor quality STRs as well as lower achievement and less school engagement, and students who had worse academic performance and deficits in emotion regulation skills were more likely to have more conflictual STRs by the end of the academic year, which again provided evidence for a positive feedback loop of students' and teachers' behaviors within their STR. These findings provided evidence for the importance of establishing close, warm, high-quality STRs early in students' school experience so that subsequent STRs can continue to

provide the benefits they can provide. Throughout students' academic careers, teachers' influence on their potential outcomes varied, with teachers generally providing more guidance and emotional support for younger students (Miller-Lewis et al., 2014).

As students matured, the STR continued to play a protective role in students' social and emotional functioning (Longobardi et al., 2019). For instance, Jia and colleagues (2017) found that positive STRs protected adolescents against internet addiction by providing them with psychological security. In another study, researchers found that warm and supportive relationships between adolescents and their teachers promoted students' motivation to intervene in bullying situations, whereas conflictual STRs led to higher levels of peer victimization regarding bullying (Berchiatti et al., 2020). Similarly, adolescent-reported social support from their teachers predicted improvements in psychological and social adjustment (Hughes et al., 2012). It may have been that supportive STRs promoted students' feelings of connectedness, which then promoted their social and emotional adjustment by fulfilling their psychological needs (Drugli, 2013). Comparably, a positive relationship between adolescents and their teachers led to decreases in internalizing symptoms and social aggression, as well as better school adjustment and overall improvement of the classroom environment (Longobardi et al., 2019). For adolescents, teachers promoted feelings of relatedness that subsequently led to motivation, satisfaction, and self-efficacy in the school setting (Baker et al., 2008). If adolescents were deprived of these, they were more likely to experience decreased feelings of motivation, satisfaction, and self-efficacy, which likely led to their

decision to drop out of school (Krane et al., 2016). This was supported by research stating that students who dropped out tended to have negative STRs and less support from their teachers, and students who did not drop out reported more positive STRs and more support from their teachers (Krane et al., 2016). In other words, negative STRs predicted student dropout, whereas positive STRs predicted low student intentions to dropout (Krane et al., 2016).

Behavioral Outcomes

The quality of the STR was a vital predictor of students' behavior, especially in elementary and middle school (Ang, 2005; Fraire et al., 2013). Lower-quality STRs led to higher levels of externalizing behaviors for students, while higher-quality STRs predicted engagement in school and overall improvements in behavior (Brown & McIntosh, 2012; Huan et al., 2012). While in school, students began to form relationships with teachers, establishing bonds with them and subsequently taking on their values to some extent (Ang, 2005). In doing so, they began to internalize the values of "good" behaviors that were conducive to learning, such as sitting quietly and engaging in lessons (Ang, 2005). By engaging in these behaviors, students gained favor from their teachers, who tended to prefer students who were cooperative and responsible rather than students who were argumentative and disruptive; this interaction increased the quality of the STR, leading to more improvements in behavior (Ang, 2005; Hughes et al., 2001). When teachers had better STRs, they often offered more encouragement, support, and patience to their students, leading to a phenomenon in which teachers tended to have better, warmer

relationships with students who engaged in behaviors that teachers preferred (Ang, 2005). Similarly, high-quality STRs increased student engagement and subsequent achievement (Hughes et al., 1999; Wu et al., 2010).

On the other hand, problem behaviors were found to be significantly negatively correlated with closeness in the STR (Berchiatti et al., 2020; Brown & McIntosh, 2012). In another positive feedback loop, less closeness and more conflict within the STR led to increases in disruptive behaviors, which likely further damaged the STR quality (Brown & McIntosh, 2012; Drugli, 2013; McFarland et al., 2016; Zee & Koomen, 2017). In other words, conflict in the STR predicted students' externalizing behaviors, which in turn predicted conflict in the STR (Zee & Koomen, 2017). Because externalizing behaviors could be so disruptive in a classroom setting, teachers tended to have a low tolerance for these behaviors, leading to STRs characterized by angry, critical, or punitive interactions rather than warmth, nurturance, and encouragement (Allen et al., 2018; Hughes et al., 1999; Poulou, 2017b; Spilt & Koomen, 2009).

Externalizing behaviors, as previously mentioned, were especially disruptive to a learning environment (Allen et al., 2018). These behaviors may have harmed the STR quality, and low STR quality predicted academic disengagement and aggressive behaviors (Archambault et al., 2017; Hughes, 2011; Hughes et al., 2001; Kavenagh et al., 2020; Poulou, 2017b; Rogers et al., 2015; Zee & Koomen, 2017). While externalizing behaviors predicted STR quality, STR quality also predicted externalizing behaviors (Berchiatti et al., 2020). For example, Gagnon and colleagues (2019) found that teachers

who provided warm, responsive interactions with students were more likely to have students who displayed less aggression and higher levels of self-control. Similarly, in longitudinal studies, a positive STR in one year of school predicted fewer and less severe aggressive behaviors for students the following year, whereas externalizing behaviors, such as aggression and hyperactivity, predicted higher levels of conflict and lower levels of closeness the following year (Ang, 2005, Bosman et al., 2018; Hughes et al., 1999; Webb & Neuharth-Pritchett, 2011). Importantly, though, externalizing behaviors and STRs appeared to impact each other; STRs that involved students with conduct problems tended to be characterized by less closeness and more conflict, illustrating the positive feedback loop previously discussed (Bosman et al., 2018; Ewe, 2019; Murray & Zvoch, 2011; Solheim et al., 2012). However, high-quality STRs acted as a protective factor against students' behavior problems (Drugli & Hjemdal, 2013; Ewe, 2019; Spilt et al., 2012; Webb & Neuharth-Pritchett, 2011). This may have been due to teachers' abilities to promote behavioral competencies (Griggs et al., 2009; Webb & Neuharth-Pritchett, 2011). In promoting these competencies, teachers likely significantly impacted students' behavioral outcomes by providing more warmth and reducing conflict (Baker et al., 2008).

In addition to the relationship between STR quality and externalizing behaviors, previous studies also found evidence for a relationship between STR quality and academic engagement. For example, Pallini and colleagues (2019) found that students with more attention problems tended to have more conflictual relationships with their

teachers than students who did not. Because attention problems impacted students' ability to attend to and engage in lessons, this study provided support for the relationship between academic engagement and STR quality (Pallini et al., 2019). In another study, students who perceived more conflict in the STR were more likely to be rated by their teachers as being less engaged in class, with less teacher-rated engagement acting as the predictor for more student-rated conflict (Hughes et al., 2012). As such, conflict in the STR predicted less classroom engagement, while support and overall closeness in the STR tended to promote student engagement and subsequent academic achievement (Drugli & Hjemdal, 2013; Kavenagh et al., 2020; Koomen & Jellesma, 2015; McFarland et al., 2016; Wu et al., 2010). In their study, Fraire and colleagues (2013) posited that this correlation may have been because students with close, supportive STRs were more able to effectively communicate with their teachers and devote their attention to the learning process. This was supported by other researchers who found that warm, supportive STRs promoted students' security, which subsequently allowed the student to participate in the learning process freely and actively (Hughes, 2011; Spilt et al., 2012). Another theory was that positive STRs tended to promote students' interests in school activities and motivation to learn, thereby increasing engagement in school (Berchiatti et al., 2020). Conversely, conflictual STRs appeared to harm students' attitudes toward school by creating an environment that was perceived as aversive instead of supportive, leading to less school liking, less cooperation, and less engagement in the classroom (Huan et al.,

2012). As such, STRs and academic engagement were often found to be positively correlated.

Academic Outcomes

In addition to social, emotional, and behavioral outcomes, the STR appeared to impact students' academic outcomes. The literature showed that having close, supportive, non-conflictual STRs allowed students to feel motivated and capable of learning in a classroom (Rogers et al., 2015). This belief then increased academic achievement for students, as research consistently showed a positive relationship between STRs and academic performance (Ang, 2005; Drugli, 2013; Gagnon et al., 2019; Hajovsky et al., 2019; Hughes et al., 2012; Koepke & Harkins, 2008; Koomen & Jellesma, 2015; Mason et al., 2017; Ogelman & Seven, 2014; Prino et al., 2016; Suldo et al., 2014; Webb & Neuharth-Pritchett, 2011; Zhou et al., 2020). Like the previously discussed outcomes, the relationship between STRs and academic outcomes was likely reciprocal or bidirectional in nature, such that conflict or closeness may have predicted academic failure or achievement, respectively, or students' academic achievement may have predicted the quality of their relationship with their teachers (Hajovsky et al., 2019; Hughes et al., 2012; Krane et al., 2016). For example, in a longitudinal study, Hughes and colleagues (2012) found that student-perceived conflict and warmth within the STR predicted subsequent reading and math achievement. This finding was stronger for negative aspects of the relationship than for positive aspects, meaning that conflict within the STR more strongly predicted low academic achievement than warmth predicted high academic

achievement (Hughes et al., 2012). One researcher posited that students' ability to feel connected to their teachers and their schools was what influenced their academic performance because positive STRs appeared to meet the students' basic psychological needs (Drugli, 2013). Similarly, teachers' abilities to meet their students' needs likely motivated their students to succeed by providing them with encouragement and instilling confidence (Frymier & Houser, 2000). Supportive STRs also promoted academic mastery and competency, including in reading abilities (Gagnon et al., 2019; Koepke & Harkins, 2008; Koomen & Jellesma, 2015). By providing warm, responsive relationships free from conflict and dependence, teachers were able to mitigate the risk factors that students may have been subject to, thereby decreasing the likelihood that these students would have poor academic achievement or other school problems (Gagnon et al., 2019). As such, many interventions targeted for at-risk students included a component related to improving the STR quality (Webb & Neuharth-Pritchett, 2011). By improving STR quality, such as by increasing informal conversations between the student and teacher outside of class, teachers provided much-needed support to at-risk students, improving their academic achievement (Krane et al., 2016). Conversely, teachers also were able to increase the risk of students' low academic achievement by rejecting their students or establishing a poor quality STR (Ewe, 2019). These negative, poor quality relationships placed students at further risk of academic underachievement or dropping out of school (Krane et al., 2016; Spilt et al., 2012). Specifically, in a study examining high schoolers' dropout rates as related to their STRs, students who reported negative relationships with

their teachers with less support were more likely to drop out of high school, whereas students who graduated high school were more likely to report having positive relationships with more support from their teachers (Krane et al., 2016). However, by mitigating risk factors for students by increasing STR quality and instilling confidence, teachers were able to promote student success (Ang, 2005; Gagnon et al., 2019; Krane et al., 2016; Webb & Neuharth-Pritchett, 2011).

As mentioned, a positive STR promoted academic success and school functioning, whereas a conflictual STR led to poor achievement longitudinally (Ang, 2005; Fraire et al., 2013; Murray & Malmgren, 2005; Zhou et al., 2020). Researchers claimed that positive STRs may have promoted students' self-perceptions and self-efficacy in school, which then led to increases in academic performance (Zhou et al., 2020). Additionally, positive STRs were typically characterized by trust, warmth, and low negativity, which increased students' feelings of security, allowing them to be motivated to learn and participate in a supportive learning environment (Baker et al., 2008; Ewe, 2019; Zhou et al., 2020). By establishing these secure relationships, students likely felt more able to communicate effectively with their teachers and subsequently paid greater attention to their learning, which then improved their academic performance (Ewe, 2019; Fraire et al., 2013). Similarly, positive STRs promoted emotional development, self-regulation, and academic competency, showing the importance of STRs in impacting students' academic performance (Ogelman & Seven, 2014).

The STR appeared especially important for influencing students' academic performance early in their academic careers, as researchers found that warm and open STRs fostered overall academic functioning (Prino et al., 2016; Spilt & Koomen, 2009). Additionally, STRs influenced students' performance in specific academic areas. As an example, positive STRs promoted academic success in reading and general language skills (Baker et al., 2008). For instance, warm STRs led to students' higher achievement in reading skills, and closeness improved children's language development and acquisition of reading skills (Baker et al., 2008). Researchers also found that high conflict or dependency in the STR led to worse performance on measures of language competency and overall academic readiness in preschoolers (Solheim et al., 2012). Similarly, conflict in the STR led to longitudinal decreases in math performance (Mason et al., 2017). Researchers also found support for the relationship between teacher-reported STR quality and high school students' grade-point averages (GPAs), indicating that STRs continued to be influential across students' academic careers (Suldo et al., 2014).

While the STR directly influenced students' academic achievement, this relationship was also possibly mediated by the effect that the STR had on students' engagement. That is, a positive STR may have increased student engagement, which then led to increased academic achievement. Pallini and colleagues (2019) noted that engagement and attention in class was crucial to students' academic achievement, which was consistently corroborated by numerous studies. For instance, Archambault and

colleagues (2017) also found that engagement predicted school perseverance and success, and that close and supportive STRs tended to improve student engagement. Conversely, STRs characterized by conflict led to decreases in student engagement as well as poor attitudes towards school, such as disinterest in learning and avoidance (Archambault et al., 2017). Comparably, weak bonds with teachers led students to feeling alienated, which predicted disengagement, which then decreased academic performance, whereas positive STRs allowed students to feel secure, motivated, and capable of learning in a classroom (Rogers et al., 2015). By creating positive STRs with their students, teachers promoted students' engagement, school satisfaction, and overall academic achievement (Hughes et al., 2012; Rogers et al., 2015; Wu et al., 2010). Researchers also found that positive STRs increased students' sense of school belongingness, which additionally increased academic engagement and subsequent achievement (Wu et al., 2010). This benefit was evident across ages, for preschoolers through high schoolers (Frymier & Houser, 2000; Wu et al., 2010). Additionally, a positive STR appeared to continue promoting engagement and achievement longitudinally (Frymier & Houser, 2000; Wu et al., 2010). Poor-quality STRs, though, led students to feeling rejected and having negative views of their school experience, thereby leading to less engagement and subsequently poor academic achievement (Frymier & Houser, 2000). Similarly, students with conflictual STRs were less likely to like school, engage in school, and therefore be academically successful (Koepke & Harkins, 2008; Wilkins, 2014). As such, it appeared important that teachers provided students with close, warm, high-quality STRs to promote students' sense of

security at school, which then allowed them to actively participate in learning activities, leading to improvements in their academic achievement (Zhou et al., 2020).

Because STR quality was such a significant predictor of engagement and motivation, many studies also showed that the STR indirectly affected academic achievement (Kavenagh et al., 2020; Murray & Malmgren, 2005). Specifically, STRs that were caring, supportive, and overall positive tended to foster students' academic interest, motivation, and engagement, leading to improvements in academic achievement, while STRs that were high in conflict led to less academic engagement and subsequently poorer achievement (Kavenagh et al., 2020; Zee & Koomen, 2017). For example, students with conflictual STRs were more likely to be retained a grade, engage in externalizing behaviors, and experience peer rejection, all of which impacted their academic engagement and motivation, which then hindered their academic achievement (Hughes, 2011; Zee & Koomen, 2017). Additionally, students who were not engaged in school were more likely to have poor academic performance, drop out of school, and engage in externalizing behaviors (Lee, 2012). Conversely, warm and positive STRs provided students with social support that fostered a sense of school belongingness and improved academic self-concept, leading to greater effort, persistence, and commitment to school, which then improved academic achievement, showing that engagement was a significant predictor of academic achievement (Hughes, 2011; Lee, 2012; Mason et al., 2017). Therefore, the STR played a significant role in students' school motivation, involvement, adjustment, attitude, attendance, and general engagement in learning, which impacted

their academic performance (Drugli & Hjemdal, 2013; Patrício et al., 2015). It was possible that students with high-quality STRs engaged more in school because the support from their teachers encouraged them to expend more effort in class and work harder for the teachers they like, resulting in better achievement (Huan et al., 2012). Based on this information, academic engagement likely mediated the relationship between the STR and academic achievement (Bosman et al., 2018; Hajovsky et al., 2019; Wilkins, 2014).

As STR quality affected achievement, students' achievement also affected STR quality (Mason et al., 2017). Specifically, researchers found that students who performed poorly at the beginning of the school year were more likely to have more conflictual STRs at the end of the school year, while students who had higher academic achievement were more likely to have close STRs at the end of the school year (Mason et al., 2017). As with the other outcomes correlated to the STR, the relationship between the STR and academic achievement appeared to be reciprocal (Hajovsky et al., 2019; Hughes et al., 2012; Krane et al., 2016; Mason et al., 2017). Based on the information presented here, the STR and academic achievement were consistently found to be highly positively correlated.

Demographic Differences in the STR

As could be expected, students had vastly different STRs from one another. This section will cover the major demographic factors that contribute to differences in the STR, including gender, race, disability, and age. Regarding gender, researchers

consistently found evidence that female students and teachers tended to report better STRs than males (Spilt et al., 2012). Specifically, girls were more likely to have a close relationship with their teachers, regardless of gender, and these relationships were more likely to be characterized by higher warmth and lower conflict, while boys tended to have STRs that were more conflictual and less close (Drugli, 2013; Fraire et al., 2013; Gregoriadis & Tsigilis, 2008; Hajovsky et al., 2017; Hajovsky et al., 2019; Hughes et al., 2012; Hughes & Im, 2016; Koepke & Harkins, 2008; Koomen & Jellesma, 2015; McFarland et al., 2016; Spilt et al., 2012; Walker & Graham, 2021; Wu et al., 2010; Zee & Koomen, 2017). Similarly, boys were more likely to report higher levels of negativity and conflict in the STR than girls (Zee & Koomen, 2017). Girls were also more likely to receive support from their teachers than boys (Hughes et al., 2001). Girls generally had more positive relationships with their teachers than boys, and female teachers tended to have higher levels of closeness and lower levels of conflict in their relationships with their students than male teachers (Drugli, 2013; McFarland et al., 2016; Patrício et al., 2015; Spilt et al., 2012). Male teachers, on the other hand, tended to report more conflict with their students, both boys and girls, and female teachers tended to report more closeness in their relationships with students (McFarland et al., 2016). Researchers argued that this finding may be due to the biological processes and societal norms established for relational functioning for each gender; that is, women were more likely to engage in socialization and use cooperative techniques in making and maintaining relationships, whereas men were more likely to choose aggression and power assertion,

which were associated with conflict (Fraire et al., 2013; Koepke & Harkins, 2008; Spilt et al., 2012). Alternatively, the manner in which boys tended to express themselves typically involved action-oriented behaviors, which could have easily been misinterpreted as misbehavior, leading to increased conflict in the STR, while girls were more likely to engage in gentle conversation based on verbal communication, which promoted closeness and warmth (Huan et al., 2012; Koepke & Harkins, 2008). Another explanation for these gender differences was that the "feminization" of education led teachers to prefer more feminine behaviors, or those that are typical of females, such as cooperation, compliance, and attentiveness, rather than the stereotypical masculine behaviors involving impulsivity, autonomy, and activity, leading to more conflict with male students and more closeness with female students as teachers preferred girls over boys (Davis & Lease, 2007; Hughes et al., 2001; Spilt et al., 2012). However, it should be noted that boys and their teachers both still tended to rate their overall STRs positively, regardless of the greater conflict compared to the STRs reported by girls and their teachers (Kavenagh et al., 2020; Quaglia et al., 2013). Although STRs between teachers and their male students tended to have more conflict than those between teachers and their female students, the STR as a whole was still often rated positively (Kavenagh et al., 2020; Quaglia et al., 2013). It is also important to note that boys benefitted from a close, supportive STR as much as girls did, highlighting the importance of establishing these positive STRs, especially with boys who may have otherwise formed negative STRs (Hughes & Im, 2016).

Race and ethnicity also correlated with differences in the STR. For instance, ethnic minority students, such as African American and Hispanic/Latinx students, tended to have more conflictual, less close relationships with their teachers than students of the ethnic majority (Webb & Neuharth-Pritchett, 2011; Wu et al., 2010). This may have been because, in the United States, the teacher workforce was primarily Caucasian, leading to differences in cultural norms and values within a classroom setting, which then caused conflicts (Webb & Neuharth-Pritchett, 2011). However, STR quality may have been especially important for ethnic minority students; high-quality STRs helped students of ethnic minorities adjust to school, engage in fewer problem behaviors, and establish trust and communication (Murray & Zvoch, 2011; Thijs et al., 2012). It was possible that ethnic minority students were at increased risk for conflict within the STR because they were of a different ethnicity than their teachers, leading to difficulties in interpersonal communication and negative interpretations of their behavior due to a lack of understanding of cultural differences (Thijs et al., 2012). In support of this argument, Fowler and colleagues (2008) found that African American teachers tended to rate their African American students as possessing prosocial behaviors more often than their Caucasian colleagues, indicating that the shared culture and ethnicity made way for more accurate interpretations of behavior and interactions within the STR. Because of this, it appeared important that teachers established trust and open communication within the STR, especially with ethnic minority students, in order to promote higher STR quality (Murray & Zvoch, 2011).

Students with disabilities were also more likely to experience more conflict and less closeness within the STR than students without disabilities. Because students without disabilities were more able to self-regulate and engage in fewer externalizing behaviors, teachers tended to prefer them over students with disabilities (Walker & Graham, 2021). For instance, in studies of STRs between students with attention deficit/hyperactivity disorder (ADHD) and their teachers, researchers found that the symptoms characteristic of ADHD contributed to worse school functioning and led to more conflict within the STR (Blacher et al., 2014; Rogers et al., 2015; Zendarski et al., 2020). Specifically, students with ADHD engaged in more off-task behavior, had shorter attention spans, were less engaged in the lessons, avoided collaborative peer work, persevered less than their peers without ADHD, and had lower overall achievement than their peers without ADHD (Rogers et al., 2015; Zendarski et al., 2020). This led to the students feeling less related to their teacher, feeling less supported in their autonomy by their teacher and their classroom, and feeling less competent at school (Rogers et al., 2015). Likewise, the teachers of the students with ADHD were more likely to report higher levels of stress in teaching these students, and they perceived these students less favorably than their peers without ADHD in terms of behavior and academic performance (Rogers et al., 2015; Zendarski et al., 2020). Because of these behaviors and difficulties in school, students with ADHD were at risk of establishing and maintaining STRs that were higher in conflict and lower in closeness than students without ADHD (Blacher et al., 2014; Rogers et al., 2015; Zendarski et al., 2020). Along with ADHD, teachers were more

likely to report less closeness and more conflict in their STRs with students with autism spectrum disorder (ASD), learning disabilities (LD), or intellectual disabilities (ID; Blacher et al., 2014; McFarland et al., 2016; Prino et al., 2016). Teachers found these students harder to connect with than students without disabilities, leading to more conflict and less closeness (McFarland et al., 2016; Prino et al., 2016). Because of these differences, students with disabilities were at increased risk of low-quality STRs.

Finally, students' age acted as a factor in determining STR quality. Research showed that STR quality tended to decline as students aged, with younger students having more positive, warm, and close STRs (Drugli, 2013; Koepke & Harkins, 2008; Patrício et al., 2015). As students matured, they reported less support from their STRs, and their school environment became impersonal, formal, and competitive (Patrício et al., 2015). This led to less positive STRs that were characterized by less closeness and more conflict (Drugli, 2013; Patrício et al., 2015). As such, college students may be especially at risk of having low-quality STRs.

School Transitions

The effects of the STR on student outcomes appeared especially potent during school transitions, such as the transition from middle to high school and from high school to college. During these transitions, students became more sensitive to classroom experiences and had to learn to adapt to their new school environment, which left a lasting impact on their academic outcomes (Walker & Graham, 2021). School transitions were often marked by increases in depression and other internalizing and externalizing

behaviors, as well as decreases in self-esteem and academic competence (Longobardi et al., 2019). This may have been because such transitions required students to learn about and adjust to their new environment and the new people within their environment, which led to stress (Bakadorova & Raufelder, 2018; Longobardi et al., 2019). As such, it was important for teachers to use the STR within the classroom to encourage students' adaptive adjustment to the new environment, which led to better outcomes in academic areas, as well as psychological, emotional, and relational areas (Anderson et al., 2011; Longobardi et al., 2019; Poulou, 2017b).

If the transition was accompanied by worsened STRs, students were more likely to skip classes, have poor achievement, have low self-esteem, have negative attitudes about school, and subsequently drop out (Anderson et al., 2011). Fortunately, positive STRs during school transitions had long-term mitigating effects against these negative outcomes by promoting resiliency through support and warmth (Anderson et al., 2011; Graziano et al., 2016). However, transitions generally coincided with overall declines in STR quality, and STR quality also tended to decline as students aged, as will be discussed (Davis & Lease, 2007). This put students who were transitioning to college at an especially increased risk of experiencing negative outcomes. Therefore, it appeared crucial that college professors promoted a positive class climate, which could impact students' academic competence, motivation, and subsequent academic achievement (Davis & Lease, 2007).

STRs in Higher Education

Despite the extensive literature regarding the STR for younger students, including preschoolers through highschoolers, there was limited research examining the STR for students in higher education (Hagenauer & Volet, 2014). As discussed, the STR played a vital role in students' success during school transitions. The same can be said for the transition from high school to college, and from undergraduate to graduate school. During these transitions, and indeed during transitions between classifications, researchers noted that students must go through the process of meeting new professors and establishing new relationships, taking the time to exchange and learn new information about one another as well as develop and adjust expectations about what the new STR will hold (Frymier & Houser, 2000). Positive STRs, especially during these transitions and in middle and high school, promoted students' development (Brinkworth et al., 2018). Beginning in adolescence, students experienced an increased need for autonomy, place more importance on peer relationships over relationships with teachers, and reported declining quality of relationships with adults (Murray & Zvoch, 2011). Relatedly, STRs as students matured become less personal and less positive (Gehlbach et al., 2012). As such, by the time they entered college, students placed less importance on the STR, likely lessening the impact of the STR on the previously discussed positive outcomes (Murray & Zvoch, 2011). Researchers argued that relationships in college may be especially important due to the high costs, financial or otherwise, of student dropouts; STRs may very well have served as a protective factor against student dropouts

(Hagenauer & Volet, 2014). While college STRs were not considered as important as they were for younger students, the STR continued to be a vital aspect of students' college experiences, influencing academic outcomes such as class satisfaction, school retention, study habits, and overall academic achievement (Hagenauer & Volet, 2014).

What little research has been found regarding the STR in higher education has occasionally focused on observable behaviors that the teacher engaged in (Tormey, 2021). In other words, the emphasis was placed on teachers' behaviors, such as verbal and nonverbal signs of warmth, friendliness, and liking, rather than the emotional quality of the STR (Tormey, 2021). When considering emotions, students tended to describe their best teachers as passionate, compassionate, exhilarated, empathetic, and caring (Tormey, 2021). This indicated that emotional relationships between students and their professors were important for students (Tormey, 2021). Based on this finding, Tormey (2021) recommended that professors should improve their relationships with their students by learning their students' names, seeking feedback on their teaching, being clear and consistent, being enthusiastic, and being accessible to students.

STR Measurement

Throughout the literature, one of the most commonly used measures of STRs was the Student-Teacher Relationship Survey (STRS), which was originally developed by Pianta (1991) to measure teachers' perceptions of specific facets of their relationship with a given student in early or middle childhood (Tsigilis & Gregoriadis, 2008). These facets included closeness, conflict, and dependency, as have been discussed previously. The

STRS required teachers to respond to 28 self-report items related to their overall perceptions of their relationship with a specific student, the student's interactions with the teacher, and the teacher's beliefs about the student's feelings towards them (Doumen et al., 2012). This scale reported raw scores for each subscale as well as a total raw score, with higher scores indicating a generally positive relationship that was characterized by low levels of conflict and dependency and high levels of closeness (e.g., Doumen et al., 2012).

Though the STRS was a widely used, reliable, and valid measure of student-teacher relationships, it was used to measure STRs for children and was not normed for use with college students. Therefore, the current study will use the Barrett-Lennard Relationship Inventory, Other-to-Self 40-item scale (BLRI OS-40). As described, the BLRI was designed to utilize a four-dimension model of describing relationships that was based on level of regard, empathic understanding, unconditionality of regard, and congruence (Al-Selah, 2002; Barrett-Lennard, 2015). The BLRI was developed based upon the work of Carl Rogers and his therapeutic approaches to measure relationships between therapists and their clients (Ganley, 1989). This inventory has since been used to measure relationships between many different individuals, such as students and their professors, younger students and their teachers, family members, spouses, friends, and even the relationship an individual has with themselves (Al-Selah, 2002; Barrett-Lennard, 2015; Silva et al., 2016). Therefore, given that research showed that this inventory is reliable and valid (e.g., Ganley, 1989), and that it has been used with various populations,

the current study will use the BLRI in measuring college students' relationships with their professors.

Other measures used to assess the STR included subscales of larger tests, questionnaires, and rating scales. For example, Konishi and colleagues (2010) used a scale that measured student-teacher connectedness and that asked students to respond to five items related to their teachers. With this scale, the students were asked to think of all their teachers while providing their ratings (Konishi et al., 2010). Another student-report measure, the Class Affective Relationships Inventory (CARI), required students to respond to 15 items about their professors (Tormey, 2021). The CARI measured assertion and status, affiliation and warmth, and attachment and safety within the STR for these students, and it provided useful information about students' perceptions of the emotional quality of their relationships with their teachers (Tormey, 2021). Similarly, the Relatedness Scale measured the extent to which students desired to be psychologically closer to their teacher and the overall emotional tone of the relationship from the students' perspectives (Decker et al., 2007). In addition, the Classroom Emotions Scale (CES) measured students' emotional experiences while in class, the emotional support they felt, and the emotional effort they put into the learning experience (Tormey, 2021). The Student Evaluation of Educational Quality scale measured the emotional quality of class relationships from students' perspectives, including their teacher's friendliness, accessibility, and interest in students (Tormey, 2021). Similarly, the Student Perception of Affective Relationship with Teacher Scale (SPARTS) measured closeness, conflict,

and dependency, much like the STRS (e.g., Longobardi et al., 2017; Roorda et al., 2019). Other scales measured narrower aspects of the STR, such as the Questionnaire on Teacher Interaction scale (QTI), which was based on students' descriptions of teachers' behaviors as related to dominance or submission and opposition or cooperation (Tormey, 2021). Comparably, the Network of Relationships Inventory (NRI) was a student-report measure of the STR (e.g., Prewett et al., 2019).

Teacher-reported measures of the STR also served as informative sources (e.g., Doumen et al., 2012). For example, the Teacher Relationship Inventory measured teachers' perspectives of their relationships with a given student based on how much help they provided their students for problems related to emotion regulation, family conflicts, social competency, behavioral struggles, and outside schoolwork (Prewett et al., 2019). In addition, outside observers were used to provide objective ratings of the STR quality (Doumen et al., 2012). For instance, the Classroom Assessment Scoring System for Kindergarten (CLASS-K) was an observation system used to measure the STR between the teacher and a given student, including items related to positive climate, negative climate, and teacher sensitivity (Doumen et al., 2012). However, though observations were more objective, they also came with the risk of making assumptions based on limited samples of observable behaviors rather than considering the relational history, emotional connection, and other nuances of a given relationship (Doumen et al., 2012).

STR Interventions

After measuring the STR quality, it may be determined that an intervention is necessary to improve an individual's outcomes. One example of a well-established intervention program was the School Development Program (SDP), which targeted school culture as a whole to benefit students, especially ones from low-income backgrounds (Davis & Dupper, 2004). The SDP emphasized collaboration between school administration, teacher support staff, and parents to improve relationships within the school environment and promote students' social, emotional, and academic development (Davis & Dupper, 2004). This program was shown to improve students' grades, academic achievement test scores, and social competence (Davis & Dupper, 2004). Similarly, the Child Development Program (CDP) aimed to create caring school environments by promoting relationships (Davis & Dupper, 2004). The essential feature of the CDP was that it argued that teachers should make their students feel valued and accepted, which led to more prosocial behaviors, motivation for learning, and fewer conduct problems (Davis & Dupper, 2004). The CDP was also shown to improve students' social competence and reduce delinquent behaviors (Davis & Dupper, 2004).

Researchers suggested that, within school settings, teachers should engage in both direct and indirect methods of promoting a positive STR, which can lead to a more positive class and school climate (Kincade et al., 2020). For instance, direct methods of improving the STR included verbal praise, checking in on students, expressing care, greeting students, getting to know students, listening, and showing respect (Kincade et

al., 2020). Indirect methods included establishing clear classroom rules and routines, encouraging parental involvement, sending positive notes home, instilling students with a sense of responsibility, making deliberate choices in classroom organization, and promoting students' choices and empowerment (Kincade et al., 2020). In addition, researchers posited that teachers should engage in collaborative problem-solving with their students, teach self-regulation and emotion understanding, encourage positive emotional expression, and promote self-monitoring, self-esteem, and goal-setting (Kincade et al., 2020). Similarly, researchers argued that teachers made a significant impact on students' outcomes by making meaningful connections and using effortful engagement (McHugh et al., 2013). This effortful engagement involved active and deliberate interpersonal engagement with another individual, showing that one cared for that person and providing support (McHugh et al., 2013). Additionally, researchers suggested that teachers should seek to establish commonalities with their students to reduce feelings of separation and to form connections (McHugh et al., 2013). Finally, teachers' support of students promoted positive STRs and therefore improved students' outcomes (McHugh et al., 2013).

The Current Study

Due to the lack of research on the STR in higher education, and due to the overreliance of teacher-report on evaluation of the STR, the current study aimed to examine the STR among college students as reported by students (Kavenagh et al., 2020; Murray & Zvoch, 2011; Spilt & Koomen, 2009). Therefore, as discussed, the BLRI OS-

40 was utilized to measure college students' perceptions of their relationships with their professors.

The current study aimed to examine the relationship between college students and their professors, as reported by students. Specifically, the current study aimed to examine the following research questions:

1. What are the student characteristics that contribute to the quality of the relationship between college students and their professors?
2. Which student characteristics contribute the most to the STR quality between college students and their professors?

It was hypothesized that students who reported higher self-esteem, self-efficacy, academic commitment, and internal locus of control would also report having better quality STRs with their professors.

CHAPTER III

Methods

The current study aimed to examine the relationship between college students and their professors, as reported by students. Specifically, the current study aimed to examine the following research questions:

1. What are the student characteristics that contribute to the quality of the relationship between college students and their professors?
2. Which student characteristics contribute the most to the STR quality between students and their professors?

Participants

Participants in the current study included college students aged 18 years and older. College students included those pursuing an undergraduate degree (e.g., associate's, bachelor's) or a graduate degree (e.g., master's, doctorate).

Participants were recruited through social media posts on Facebook, Instagram, and Survey Circle, as well as through word-of-mouth. Facebook groups were utilized to recruit participants. A list of the Facebook groups that were posted in can be found in Appendix H.

Before beginning participation, the students electronically signed an informed consent form that indicated their participation was voluntary and they were able to

withdraw from the study at any time without penalty. Consenting students who were at least 18 years of age continued to complete a questionnaire regarding their relationships with their professors, self-efficacy, self-esteem, academic commitment, locus of control, and their demographic information (e.g., gender, age, classification, major).

Variables

The independent variables examined in the current study included college students' sense of self-efficacy, self-esteem, academic commitment, and locus of control, as well as general demographic factors. The dependent variable was the quality of the relationship between students and their professors.

Instruments

Each participant signed an informed consent form electronically (Appendix A). The informed consent detailed the nature of the current study, noted that their participation was voluntary, and provided them with contact information should they desire to contact the researcher. Upon agreeing to the informed consent, participants completed a questionnaire that required approximately 20 minutes to complete.

Student-Teacher Relationship

The Barrett-Lennard Relationship Inventory (BLRI) was designed to measure an individual's perceptions of their relationship with another individual using 40 self-report items (Al-Selah, 2002; Barrett-Lennard, 2015; Appendix B). While the BLRI was originally formulated to measure the relationship between an individual and their counselor or therapist, the inventory has been used to measure various relationships (Al-

Selah, 2002). The BLRI also has two versions: Myself-to-Other (MO) and Other-to-Self (OS), used to measure an individual's perceptions of their relationship with another person and their perceptions of another person's feelings of their relationship, respectively (Silva et al., 2016). For the purposes of the current study, the BLRI OS-40 was utilized to measure college students' perceptions of their professors' feelings about them (Al-Selah, 2002; Silva et al., 2016). This inventory has been found to be both valid and reliable (Al-Selah, 2002).

The BLRI OS-40 presented respondents with statements that expressed their experiences in their interpersonal relationships with their professors in four dimensions: level of regard, empathic understanding, unconditionality of regard, and congruence (Silva et al., 2016). Level of regard refers to the typical emotional reactions an individual has toward another in their relationship; empathic understanding is described as the recognition of another's emotions; unconditionality of regard refers to the level of constancy of typical feelings of respect by one individual towards another; and congruence is the process that involves the desire to be highly committed to another individual, knowing the other individual's experiences, and being able to recognize their feelings (Cramer, 1986; Silva et al., 2016). Each dimension measured is comprised of 10 items each, totaling 40 items. Participants responded to each item by rating the degree to which they agreed or disagreed with the statement provided on a 6-point scale (Silva et al., 2016). The BLRI OS-40 scoring method was modified for ease of use during data analysis. The original BLRI OS-40 scoring included ratings that ranged from -3 (NO, *I*

strongly feel that it is not true) to +3 (YES, *I strongly feel that it is true*), so that a rating of -3 indicated strong disagreement with the statement and +3 indicated strong agreement with the statement (Silva et al., 2016). Using the modified rating method, ratings ranged from 1 (NO, *I strongly feel that it is not true*) to 6 (YES, *I strongly feel that it is true*), with high scores indicating a better-quality relationship (Silva et al., 2016). The BLRI OS-40 can be found in Appendix B.

Self-Efficacy

Students' sense of self-efficacy was measured using the General Self-Efficacy Scale (GSE), which included 10 items related to self-perceptions of individuals' abilities to be independent, solve problems on their own, and accomplish their goals (Schwarzer & Jerusalem, 1995; Appendix C). This measure is rated using a 4-point Likert-type scale with ratings ranging from 0 (*Not at all true*) to 3 (*Exactly true*). Higher scores indicated higher self-perceived general self-efficacy (Schwarzer & Jerusalem, 1995).

Academic Commitment

Academic commitment was measured using the Academic Commitment Scale (ACS) developed by Human-Vogel and Rabe (2015; Appendix D). The ACS was adapted from the Investment Model of Commitment scale developed by Rusbult and colleagues (1998) to be better suited for academic settings. This scale included 29 items that were rated using a 6-point Likert-type scale with possible ratings ranging from 1 (*Strongly disagree*) to 6 (*Strongly agree*). Possible total scores on the ACS ranged from 30-180, with higher scores indicating a higher level of academic commitment (Human-Vogel &

Rabe, 2015). The ACS measured participants' level of commitment, satisfaction with their studies, investment in their studies, perceptions of alternatives to studying, and meaningfulness of their commitments (Human-Vogel & Rabe, 2015). Level of commitment items related to the likelihood that the participant would finish their studies rather than give up (Human-Vogel & Rabe, 2015). Satisfaction items related to participants' satisfaction with their studies, and level of investment items related to the time and effort that they put into their studies (Human-Vogel & Rabe, 2015). Perceptions of alternatives items represented the extent to which the participant would rather do something else rather than study, and meaningfulness of commitment items represented the extent to which the participant felt their commitment to their studies shaped their identity and allowed them to express their identity (Human-Vogel & Rabe, 2015).

Locus of Control

The Rotter Locus of Control Scale (RLOCS) was designed to measure individuals' levels of internal or external control (Rotter, 1966; Appendix E). Specifically, the RLOCS measured the degree to which an individual believed events were due to their own actions or due to external factors beyond their control (Rotter, 1966). This scale provided 29 self-report items, with each item presenting the respondent with two choices; the respondent was asked to select the statement that they agreed with the most (Rotter, 1966). The RLOCS was scored by adding the number of external locus of control choices that were chosen by the participant, with possible scores ranging from

0-27 (Rotter, 1966). Higher scores using this measure indicated that the participant had a more external locus of control.

Self-Esteem

The Rosenberg Self-Esteem scale was designed to measure self-esteem (Rosenberg, 1965; Appendix F). This scale consisted of 10 items, 5 of which were negatively worded (Rosenberg, 1965). Participants responded to each item by rating the degree to which they agreed with or disagreed with a statement, with responses ranging from 1 (*Strongly Agree*) to 4 (*Strongly Disagree*). Five items were reverse-scored due to the negative wording. Total scores ranged from 0-30, with scores between 0-15 suggesting that the participant had low self-esteem (Rosenberg, 1965).

Demographics

Demographic information was obtained through self-report responses on a questionnaire (Appendix G). Participants were asked to report their gender, age, marital status, and educational level. Regarding education, participants were asked to mark the highest degree they had completed, as well as their current classification (e.g., 1st year, 2nd year, 5th+ year, graduate program). Participants additionally reported their GPA, father's education, mother's education, and employment status. Participants were also asked to report their income level, race, ethnicity, and state of origin.

Post Participation

After completing the survey and questionnaire, participants were debriefed on the purpose of the current study. They were provided with the researcher's contact

information should they have questions or concerns regarding their participation. Participants were not compensated for their participation.

Research Design

The current study utilized quantitative research methods. Analyses of the data included correlation and descriptive statistics in order to provide information about students' relationships with their professors at differing levels. Exploratory analyses were also conducted to examine relationships between the aforementioned variables. Additionally, a regression analysis was conducted to address the second research question, which asks which factors contribute the most to the STR quality.

CHAPTER IV

Results

Descriptive Statistics

Participants

A total of 205 participants started the online questionnaire, but due to incompletion of the questionnaire, 122 participants' data were excluded in conducting data analyses. Therefore, 83 participants' data were used for data analyses. Of these participants, 88% (*N* = 73) identified as female, 7.2% (*N* = 6) identified as male, and 3.6% (*N* = 3) identified as nonbinary, third gender, or other. A summary of this data can be found in Table 1 (Appendix I). Regarding ages, 22.9% (*N* = 19) were aged 18-22, 43.4% (*N* = 36) were aged 22-29, 16.9% (*N* = 14) were aged 30-39, 6% (*N* = 5) were aged 40-49, 8.4% (*N* = 7) were aged 50-59, and 1.2% (*N* = 1) were aged 60-69. A summary of this data can be found in Table 2 (Appendix J). Most participants reported that they were never married (65.1%, *N* = 54), with others reporting that they were currently married (27.7%, *N* = 23), divorced (3.6%, *N* = 3), or separated (2.4%, *N* = 2). A summary of this data can be found in Table 3 (Table K). The majority of participants identified as not Hispanic or Latine/Latinx (80.7%, *N* = 67), while others did identify as Hispanic or Latine/Latinx (16.9%, *N* = 14). A summary of this data can be found in Table 4 (Appendix L). Most participants identified as non-Hispanic White or Caucasian

(57.8%, *N* = 48), followed by Asian or Pacific Islander (15.7%, *N* = 13), Hispanic or Latine/Latinx (12%, *N* = 10), non-Hispanic Black or African American (6%, *N* = 5), or Native American/Aboriginal/Aleut (1.2%, *N* = 1). About 6% (*N* = 5) reported that they identified with another unlisted racial or ethnic group. A summary of this data can be found in Table 5 (Appendix M). Participants who lived in the United States were additionally asked to report their state of origin. These participants reported that they were originally from Arizona (2.4%, *N* = 2), California (7.2%, *N* = 6), Connecticut (1.2%, *N* = 1), Florida (4.8%, *N* = 4), Hawaii (1.2%, *N* = 1), Illinois (2.4%, *N* = 2), Iowa (1.2%, *N* = 1), Kansas (2.4%, *N* = 2), Kentucky (1.2%, *N* = 1), Louisiana (1.2%, *N* = 1), Maryland (1.2%, *N* = 1), Massachusetts (1.2%, *N* = 1), Michigan (3.6%, *N* = 3), Minnesota (1.2%, *N* = 1), Missouri (1.2%, *N* = 1), Montana (1.2%, *N* = 1), New Hampshire (1.2%, *N* = 1), New York (2.4%, *N* = 2), North Carolina (1.2%, *N* = 1), Ohio (4.8%, *N* = 4), Oklahoma (1.2%, *N* = 1), Pennsylvania (1.2%, *N* = 1), Tennessee (1.2%, *N* = 1), Texas (25.3%, *N* = 21), Vermont (1.2%, *N* = 1), and Wisconsin (1.2%, *N* = 1). Of those who participated, 20.5% (*N* = 17) reported that they were not from the United States or any of its territories. A summary of this data can be found in Table 6 (Appendix N).

Most participants were currently enrolled in a graduate program (67.5%, *N* = 56). The remaining participants were enrolled as first-years or freshmen (4.8%, *N* = 4), third-years or juniors (8.4%, *N* = 7), fourth-years or seniors (16.9%, *N* = 14), or fifth-years or

above enrolled in an undergraduate program (1.2%, *N* = 1). No participants were in their second year or sophomore year of undergraduate studies. A summary of this data can be found in Table 7 (Appendix O). Most participants reported having a GPA between 3.1 and 4.0 or above (85.5%, *N* = 71). Others reported having a GPA between 2.0 and 3.0 (8.4%, *N* = 7), and others reported a GPA outside the provided ranges or preferred to not report their GPA (4.8%, *N* = 4). A summary of this data can be found in Table 8 (Appendix P). Many participants reported that they had already obtained a bachelor's degree or equivalent (38.6%, *N* = 32). Others reported that they had already obtained a master's degree or equivalent (36.1%, *N* = 30), an associate's degree or equivalent (9.6%, *N* = 8), a high school degree or equivalent (6%, *N* = 5), less than one year of college (3.6%, *N* = 3), at least one year of college without a degree (2.4%, *N* = 2), or a doctoral degree or equivalent (2.4%, *N* = 2). A summary of this data can be found in Table 9 (Appendix Q).

Participants also reported their parents' level of education. Participants' fathers completed no formal schooling (1.2%, *N* = 1), elementary through 8th grade (9.6%, *N* = 8), 9th through 11th grade (2.4%, *N* = 2), high school or a high school degree equivalent (22.9%, *N* = 19), less than one year of college (3.6%, *N* = 3), at least one year of college without obtaining a degree (2.4%, *N* = 2), an associate's degree or equivalent (6%, *N* = 5), a bachelor's degree or equivalent (26.5%, *N* = 22), a master's degree or equivalent (16.9%, *N* = 14), a professional degree (1.2%, *N* = 1), or a doctorate degree or equivalent (2.4%, *N* = 2). A summary of this data can be found in Table 10 (Appendix R).

Participants' mothers completed no formal schooling (1.2%, *N* = 1), elementary through 8th grade (4.8%, *N* = 4), 9th through 11th grade (3.6%, *N* = 3), high school or a high school degree equivalent (20.5%, *N* = 17), less than one year of college (4.8%, *N* = 4), at least one year of college without obtaining a degree (3.6%, *N* = 3), an associate's degree or equivalent (4.8%, *N* = 4), a bachelor's degree or equivalent (30.1%, *N* = 35), a master's degree or equivalent (15.7%, *N* = 13), a professional degree (3.6%, *N* = 3), or a doctorate degree or equivalent (4.8%, *N* = 4). A summary of this data can be found in Table 11 (Appendix S).

Participants also reported their employment status. Most participants reported that they were currently employed as students (47%, *N* = 39). Others reported that they were currently employed for wages (38.6%, *N* = 32), self-employed (3.6%, *N* = 3), out of work and looking for work (3.6%, *N* = 3), a homemaker (1.2%, *N* = 1), retired (2.4%, *N* = 2), or another occupation that was not listed (2.4%, *N* = 2). A summary of this data can be found in Table 12 (Appendix T). Of those employed, most reported that the nature of their work was being a student (50.6%, *N* = 42). Others reported that they were employed at a for-profit company for wages (18.1%, *N* = 15), employed at a non-profit or charitable organization (9.6%, *N* = 8), employed by their local government (2.4%, *N* = 2), employed by their state government (2.4%, *N* = 2), employed by the federal government (3.6%, *N* = 3), self-employed (3.6%, *N* = 3), unemployed (1.2%, *N* = 1), or employed for another type of work that was not listed (7.2%, *N* = 6). A summary of this data can be found in Table 13 (Appendix U). Participants additionally reported their household's annual

income, or their family of origin's annual income by selecting from a range of options. Participants' incomes ranged from $0 to $10,000 (8.4%, *N* = 7), from $10,000 to $19,000 (2.4%, *N* = 2), from $20,000 to $29,000 (2.4%, *N* = 2), from $30,000 to $39,000 (10.8%, *N* = 9), from $40,000 to $49,000 (12%, *N* = 10), from $50,000 to $59,000 (2.4%, *N* = 2), from $60,000 to $69,000 (6%, *N* = 5), from $70,000 to $79,000 (6%, *N* = 5), from $80,000 to $89,000 (1.2%, *N* = 1), from $90,000 to $99,000 (7.2%, *N* = 6), from $100,000 to $149,000 (9.6%, *N* = 8), or $150,000 or greater (14.5%, *N* = 12). About 15.7% of participants (*N* = 13) preferred to not report their household's annual income. A summary of this data can be found in Table 14 (Appendix V).

Correlation Analyses

BLRI Subscales. Correlation analyses were run to examine the BLRI OS-40 total score and its relationship to scores on its subscales, as well as the relationships between these subscales, in order to gain a deeper understanding of how different relationship characteristics tended to relate to each other (Table 18, Appendix Z). Using Cohen's (1988) proposed guidelines for correlational strength, there was a strong positive correlation between the total score on the BLRI and level of regard, $r(77) = .86$, $p < .001$, empathic understanding, $r(77) = .93$, $p < .001$, and congruence subscales, $r(77) = .90$, $p < .001$. There was also a strong positive correlation between the total BLRI score and the subscale of unconditionality of regard, $r(77) = .60$, $p < .001$. This indicates that, as a student perceived a more positive relationship with their professor, greater empathy between the two members, and integration within the relationship, the overall relationship

quality also improved. Further, as the student perceived higher levels of consistency within the relationship, the overall STR quality also improved.

Within the subscales, there was a strong positive correlation between empathic understanding and level of regard, $r(79) = .81$, $p < .001$, indicating that the more positive feelings a student reported, the more likely they were to also report understanding within the STR. Additionally, There was a strong positive correlation between congruence and level of regard, $r(81) = .71$, $p < .001$, and between congruence and empathic understanding, $r(79) = .82$, $p < .001$, indicating that the more integrated a student felt with their professor, the more likely they were to also report positive feelings along with greater understanding of one another. There was a strong positive correlation between empathic understanding and unconditionality of regard, $r(79) = .81$, $p < .001$, indicating that the more consistency a student had in their relationship with their professor, the more likely they were to also feel a greater understanding within their STR. There was also a strong positive correlation between congruence and unconditionality of regard, $r(81) = .71$, $p < .001$, indicating that students who reported more consistency in their STRs also reported a greater level of integration with their professors. Finally, there was a weak positive correlation between unconditionality of regard and level of regard, $r(79) = .25$, $p < .05$, indicating that when a student reported consistency within their STR, they were also somewhat more likely to report positive feelings within the STR.

Additional descriptive analyses were conducted to gain more information about students' overall relationships with their professors. Total scores on the BLRI OS-40

ranged from 40-240, with higher scores indicating a closer relationship between students and their professors. Subtest scores on the BLRI OS-40 ranged from 10-60, again with higher scores indicating a closer relationship between students and their professors. Given that this is the first study to the researcher's knowledge to utilize the BLRI OS-40 to measure college students' relationships with their professors, and given the ranges of possible scores, it was assumed that "average" scores were 140 for the total score and 35 for the subtest scores. However, due to the lack of research on STRs for this population, norm-referenced average scores could not be determined. Overall, participants reported that their relationships with their professors were not as close as expected, M = 112.89, SD = 27.76. This indicates that participants generally reported having STRs that were not characterized by positive feelings, integration, understanding, or consistency. Further, participants generally reported average to low level of regard (M = 25.23, SD = 9.75), empathic understanding (M = 27.83, SD = 8.99), and congruence (M = 27.70, SD = 7.66), but they reported more average levels of unconditionality of regard (M = 31.44, SD = 6.90). This suggests that, overall, college students in the current study viewed the level of regard to be neither overly positive nor overly negative. They similarly reported average understanding between each member of the STR, stable feelings of one another, and average integration with their professors. A table detailing these descriptive statistics can be found in Appendix EE (Table 23).

Academic Commitment Subscales. Correlation analyses were also run to examine the relationships between ACS subscales and its total score (Table 17, Appendix

Y). There was a strong positive correlation between the total score on the ACS and its subscales of satisfaction ($r(77) = .86$, $p < .001$), investment ($r(77) = .76$, $p < .001$), and meaningfulness ($r(77) = .88$, $p < .001$). This indicates that when a student reported being satisfied with their studies, invested in their education, and finding meaning within their studies, they were more likely to have an overall higher level of commitment to their academics. There was a strong positive correlation between the total score on the ACS and the subscale of commitment, $r(77) = .69$, $p < .001$, indicating that the higher levels of overall academic commitment a student reported, the more likely they were to complete their academic endeavors. As could be expected, there was a moderate negative correlation between the total ACS score and the subscale of quality of alternatives, $r(77) = -.30$, $p < .01$, meaning that when a student felt that their time would be better spent doing anything but studying, they reported somewhat lower overall academic commitment.

Within the subscales, there was a strong positive relationship between commitment and satisfaction, $r(79) = .63$, $p < .001$. There was also a moderate positive relationship between commitment and investment ($r(79) = .46$, $p < .001$) and commitment and meaningfulness ($r(80) = .43$, $p < .001$), indicating that when a student reported feeling more committed to their learning, they were more likely to report feeling more satisfied, invested, and able to find meaning in their studies. There was a weak negative correlation between commitment and quality of alternatives, $r(79) = -.25$, $p < .05$, indicating that students who were more committed to their education were less likely

to find alternatives to studying more appealing. There was also a moderate negative correlation between satisfaction and quality of alternatives, $r(79) = -.40$, $p < .001$, similarly indicating that the more satisfied a student was with their studies, the less likely they were to prefer alternatives to studying. There was a strong positive correlation between satisfaction and investment, $r(79) = .51$, $p < .001$, as well as between satisfaction and meaningfulness, $r(80) = .68$, $p < .001$, suggesting that the more satisfied a student was with their studies, the more likely they were to be invested in their learning and the more likely they were to report finding meaning in their learning. There was a weak negative correlation between quality of alternatives and investment, $r(79) = -.28$, $p < .01$, again indicating that the more invested a student was in their studies, the less likely they were to want to pursue alternatives to studying. There was also a moderate negative correlation between quality of alternatives and meaningfulness, $r(80) = -.44$, $p < .001$, indicating that the more meaning a student found in their education, the less likely they were to report finding alternatives appealing. Finally, there was a strong positive correlation between meaningfulness and investment, $r(80) = .61$, $p < .001$, suggesting that students who reported being able to find meaning in their studies also reported being invested in their education.

Academic Commitment and STR Quality. Correlation analyses were run to examine the relationship between scores on the ACS and BLRI OS-40, as well as their subscales (Table 22; Appendix DD). There was a moderate negative correlation between total scores on both the ACS and BLRI OS-40, $r(73) = -.30$, $p < .05$, indicating that the

more academic commitment a student reported having, the less likely they were to have an overall close relationship with their professor. As will be discussed, this may be due to the nature of the scale utilized to measure STR quality in the current study. There was also a moderate negative correlation between total scores on the ACS and the STR aspect of empathic understanding, $r(77) = -.32$, $p < .01$, indicating that students who were more committed to their academics were slightly less likely to feel mutual understanding within their STRs, including what each other meant and felt when communicating (Al-Selah, 2002; Barrett-Lennard, 2015). Further, there was a weak negative correlation between ACS total scores and scores on the STR aspect of congruence, $r(77) = -.24$, $p < .05$, which measured consistency within the relationship (Barrett-Lennard, 2015). This indicated that students who were more academically committed were slightly less likely to have stable, consistent relationships with their professors.

There was a weak negative correlation between total scores on the BLRI OS-40 and level of commitment scores, $r(76) = -.24$, $p < .05$, indicating that students who were more committed to finishing their studies were slightly less likely to have close, warm relationships with their professors. There was also a moderate negative correlation between total STR quality and academic satisfaction, $r(76) = -.34$, $p < .01$, indicating that students who had more positive relationships with their professors were less likely to be satisfied with their studies. There was a weak negative correlation between total STR quality and academic meaningfulness, $r(77) = 0.25$, $p < .05$, indicating that students with

higher-quality STRs were slightly less likely to find meaning for their lives or personalities within their education.

Within the subscales for the ACS and BLRI OS-40, there were several weak negative correlations. Level of regard and meaningfulness of academics were weakly negatively correlated, $r(81) = -.23$, $p < .05$, indicating that the more positive of a relationship students had with their professors, the less likely they were to find meaning in their academic endeavors. Additionally, level of commitment and empathic understanding had a weak negative correlation, $r(78) = -.22$, $p < .05$, meaning that the more committed a student was to finishing their academics, the less likely they were to have a deep understanding within their STRs. Further, level of commitment and unconditionality of regard had a weak negative correlation, $r(78) = -.25$, $p < .05$, indicating that the more commitment a student had to completing their education, the less likely they were to have a stable relationship with their professor. Level of commitment was also weakly negatively correlated with congruence, $r(80) = -.23$, $p < .05$, indicating that the more committed a student was to finishing their education, the less integrated they were with their professors. Academic satisfaction had a moderate negative correlation with empathic understanding, $r(78) = -.35$, $p < .01$, meaning that students who had more understanding within their STRs were less likely to be satisfied with their academics. Satisfaction was also weakly negatively correlated with unconditionality of regard, $r(78) = -.24$, $p < .05$, indicating that students who were more satisfied with their studies were less likely to have stable, consistent relationships with their professors.

Satisfaction was additionally moderately negatively correlated with congruence, $r(80) = -.31$, $p < .01$, indicating that students who were more integrated with their professors were less likely to be satisfied with their academics. Finally, academic meaningfulness and empathic understanding had a weak, negative correlation, $r(79) = -.27$, $p < .05$, meaning that students who had deep understanding in their STRs were less likely to find meaning in their academics. Quality of academic alternatives and level of academic investment were not significantly correlated with any BRLI OS-40 subscales.

Student Characteristics. Exploratory correlation analyses were conducted to examine the relationship between the surveyed student characteristics and STR quality (Table 16, Appendix X). Surprisingly, the only significant correlations found between scores on the student characteristic scales were between academic commitment, STR quality, and self-efficacy. Specifically, there was a moderate negative correlation between academic commitment and STR quality, $r(73) = -.30$, $p < .05$, indicating that students who were more committed to their studies were less likely to report having positive, close relationships with their professors. However, there was a moderate positive correlation between academic commitment and self-efficacy, $r(75) = .37$, $p < .001$, indicating that students who felt more independent and able to accomplish their own goals were more likely to be committed to their education.

Demographics and Student Characteristics. Exploratory correlation analyses were run to examine the relationships between student characteristics. Table 15 (Appendix W) details these correlations. Interestingly, only two significant correlations

were found, and both were weak. There was a weak positive correlation between students' sense of self-efficacy and their academic classifications, $r(78) = .28$, $p < .05$, indicating that students who had been in college longer (e.g., third-year, fourth-year, graduate students) were more likely to report having a higher sense of self-efficacy, including a higher sense of independence and ability to accomplish goals. Similarly, there was a moderate positive correlation between self-efficacy and level of education, $r(78) = .38$, $p < .001$, such that students who had completed higher levels of education (e.g., bachelor's degree, master's degree, professional or doctorate degree) were also more likely to report having higher levels of self-efficacy.

Regression Analyses

A hierarchical regression analysis was conducted to determine the variables that best predicted college students' relationship quality with their professors (Tables 19, 20, 21; Appendices AA, BB, CC). Model 1 examined the role of students' academic commitment using the Academic Commitment Scale (ACS). Model 2 used academic commitment and added self-efficacy, measured by the General Self-Efficacy Scale (GSES). Model 3 used these variables and added locus of control as measured by the Rotter Locus of Control Scale (RLOCS). Model 4 used all of the aforementioned variables and added the characteristic of self-esteem, measured by the Rosenberg Self-Esteem Scale (RSES). Finally, Model 5 included all of the aforementioned variables and added the demographic variables of GPA, gender, age, classification, income, race, and ethnicity. Model 1 was a significant predictor above and beyond the other four models,

$F(1, 66) = 5.693$, $p = .020$, $R^2 = .079$. This indicates that academic commitment accounted for about 7.9% of the variance in college students' relationships with their professors to a significant degree.

An analysis of variance (ANOVA) was conducted to examine the models independently of each other (Table 21, Appendix DD). Model 1was found to be a significant predictor of college students' relationship quality with their professors, $F = 5.693$, $p = .020$. No other models were found to significantly predict STR quality.

CHAPTER V

Discussion and Conclusions

Discussion

Due to the lack of research regarding college students' perceptions of their relationships with their professors, this study aimed to examine the relationships between student characteristics and overall student-professor relationship quality. Unlike previous studies, the current study aimed to utilize students' perceptions of their relationships with their professors rather than rely on teachers' reports of relationship quality. Specifically, the current study aimed to examine the characteristics of students that best predicted their STR quality with their professors.

Regression Analyses

It was hypothesized that students who reported higher self-esteem, self-efficacy, academic commitment, and internal locus of control would also report having better quality STRs with their professors. This hypothesis was not supported by the data. Academic commitment was found to significantly predict STR quality above and beyond the other student characteristics that were measured in the current study. However, when examining the correlational data, academic commitment was weakly negatively correlated with STR quality, indicating that students who were more committed to their education were somewhat *less* likely to have close, positive relationships with their

professors. When the models were examined independently of one another, again only Model 1 was a significant predictor of STR quality. This indicates that, above and beyond any other student characteristics, academic commitment was the single best predictor of STR quality for college students, regardless of the presence of additional student characteristics. Therefore, in the current study, it appeared that self-esteem, self-efficacy, and locus of control were not significant predictors of STR quality, which did not support the hypothesis.

Interestingly, higher academic commitment scores predicted STRs characterized by less positivity, mutual understanding, integration, and consistency. This may be due to the nature of the STR measurement tool utilized in the current study, which was a general measure of relationship quality rather than a specific measure of student-professor relationship quality (Al-Selah, 2002; Barrett-Lennard, 2016). Items on the BLRI OS-40 referenced feelings that may not be typical of a student-professor relationship, such as perceiving that a professor is genuine in their feelings with the student, likes or dislikes the student, or is willing to say whatever is on their mind (Appendix B). Therefore, this inventory may actually be more related to inappropriate student-professor relationships, which could explain the negative correlation between academic commitment scores and STR quality scores. That is, students who were more committed to their education were evidently less likely to engage in relationships with their professors that could be perceived as inappropriate, such as being emotionally involved or affectionate with their

professors. The ACS measured five aspects of academic commitment, many of which were negatively correlated with the four aspects of the STR that were measured using the BLRI OS-40, which likely accounts for the overall negative relationship between STR quality and academic commitment. These relationships will be discussed in the following section.

Correlation Analyses

Though the primary focus of the current study was to examine the factors that predicted STR quality, additional exploratory correlational analyses were conducted to attain more detailed information about the relationships between the characteristics at play. Interestingly, when examining student characteristics and demographics, only two significant correlations were found (Table 15; Appendix W). Specifically, self-esteem had a weak positive correlation with student classification, so that students who were further along in their college education were slightly more likely to have higher self-esteem. Because the current study was cross-sectional, causality cannot be determined; in other words, it is unclear whether students with higher self-esteem were more likely to continue their education, or whether students who had completed more education were more likely to have higher self-esteem. Similarly, self-esteem had a moderate positive correlation with completed education, so that students who had obtained higher degrees also reported having higher self-esteem. As with classification, directionality of this relationship cannot be determined. Therefore, it is possible that having higher self-esteem

led students to pursue higher education, or students who had completed more schooling were more likely to also have high self-esteem.

When examining the relationships between the student characteristics measured in the current study, only two significant relationships were found (Table 16; Appendix X). A moderate, positive correlation was found between the student characteristics of self-esteem and academic commitment, indicating that students who were more committed to their educations were more likely to have higher self-esteem (Table 16; Appendix X). As mentioned before, due to the cross-sectional design of the current study, causation cannot be determined in this correlation; higher self-esteem may have led students to be more committed to their studies, or students who were more committed to their education may have had higher self-esteem.

A moderate, negative correlation between academic commitment and STR quality was also found, such that students who reported being more committed to their studies overall were less likely to report having close, warm relationships with their professors. As discussed, this is likely due to the nature of the measurement tool used to examine STR quality. The BLRI OS-40 may have measured aspects of relationships that are uncommon to student-teacher relationships, instead measuring relationships more akin to familial or friendly ones (Barrett-Lennard, 2016). Because the BLRI OS-40 was designed to measure relationships in general, it is likely that it was not a sufficient measure for examining student-teacher relationships specifically. However, this correlation still provides useful information regarding college students' relationships and values in their

education; students who were more committed to their academics were less likely to engage in close, warm relationships with their professors, which could potentially harm their education (Hoffman, 2014). College students have been found to avoid time alone with university faculty members due to the inappropriate nature of such interactions, which likely led to the lower scores on the BLRI OS-40 (Hoffman, 2014). Further, though social media and other methods of communication have been utilized more, college students have found interactions with their professors and other faculty through such means to be inappropriate, as well (Hoffman, 2014). Students' wariness to be engaged in a relationship with their professors likely led to the negative correlation found in the current study, with students who placed more value, time, and effort into their education being less likely to engage in warm, close relationships with their professors due to the potentially inappropriate nature of such relationships. As will be discussed in the limitations, had another measure of STR quality been utilized in the current study, this correlation may have been positive instead. Though only two significant relationships were found amongst the measured student characteristics, the current study provided useful insight into college students' characteristics and their relationships with their professors.

Due to the interesting nature of the negative correlation between STR quality and academic commitment, further correlational analyses were conducted to examine the relationships between these scales in detail (Table 22; Appendix DD). Total scores on the BLRI OS-40 were moderately and negatively correlated with the overall academic

commitment score as well as the academic commitment subscale of level of, satisfaction. Total STR quality scores were also weakly negatively correlated with the academic commitment subscales of commitment and meaningfulness. This indicated that students who intended to complete their education, who found satisfaction in their studies, and who incorporated education as part of their personalities were less likely to report having close, warm relationships with their professors. Students with these particular characteristics may be especially likely to view close relationships with their professors as unethical or otherwise inappropriate, which could have negative effects on their education (Hoffman, 2014). Further, the STR aspect of level of regard had a weak negative correlation with academic meaningfulness, indicating that students who felt their professors held positive opinions of them were slightly less likely to find meaning and personal fulfillment in their studies. This may be because students who felt they were more liked by their professors did not feel as much intrinsic motivation to commit themselves to their academic work. Alternatively, students who did not incorporate academics into their personalities may have felt that they were held in a more positive regard by their professors because they did not put as much pressure on themselves to be successful in academics or liked by their professors. Students who placed more emphasis on academics in determining their personalities may have reported having less close relationships with their professors because they cared more about academic success than about having positive relationships with their professors.

Empathic understanding had a moderate, negative correlation with academic satisfaction, as well as with overall academic commitment, indicating that students who had more mutual understanding of one another within their STRs were less likely to report feeling satisfied with their studies and committed to their education. Students who found satisfaction in their educational pursuits may have been less likely to also pursue deep relationships with their professors, finding satisfaction in their studies alone rather than in the relationships formed with faculty members. Similarly, students who were more committed to their studies overall may have valued deep relationships with their professors less than students who were less academically committed. Empathic understanding also had a weak, negative correlation with academic meaningfulness, suggesting that students who had deep relationships with their professors were less likely to find meaning in their studies. It is possible that students who established their personalities in their educational careers were less likely to pursue closer relationships with their professors.

Unconditionality of regard had a weak, negative correlation with level of academic commitment and academic satisfaction, indicating that students who had more stable relationships with their professors were less likely to be satisfied with their education and want to finish their schooling. Students who find satisfaction in their studies may be less likely to put effort into maintaining stable relationships with their professors because they may not require additional positive reinforcement through such relationships in their education. Further, students who intend to complete their education

may put more effort into doing so rather than sustaining stable relationships with their professors.

The STR aspect of congruence had weak negative correlations with level of academic commitment and overall commitment to studies, as well as a moderate negative correlation with academic satisfaction. This suggests that students who were more integrated with their professors were less likely to want to finish their education or find their studies satisfying. Students who were committed to completing their education and who were satisfied with their academics may have been less likely to seek out such enmeshed relationships with their professors, putting time and effort into the studies they enjoyed rather than in relationships with faculty members.

Limitations

The current study possessed several limitations that likely impacted the results. Perhaps the most substantial limitation is that the BLRI OS-40 was utilized to measure student-professor relationship quality. This inventory is a general measure of relationships between any two people and is not specific to the STR (Barrett-Lennard, 1962; 2016). The BLRI OS-40 was selected due to its use in previous research (e.g., Al-Selah, 2002). After data was collected and analyses were run, it became apparent that there was another BLRI measure intended for measurement of student-teacher relationships, specifically (Barrett-Lennard, 2016). However, this teacher-student (T-S) measure has only been found to be useful for measuring relationships between teachers and students in middle school and high school (Barrett-Lennard, 2016). Therefore, it is

possible that such a measure would not have produced valid results in regard to the aim of the current study. Though the BLRI OS-40 produced valuable information regarding college students' relationships with their professors, future researchers should consider using a different measure or adapting the BLRI OS-40 T-S for use with college students.

Another limitation of the current study is the participants' demographics: the vast majority of participants were female (N = 73; 88.0%), non-Hispanic or Latine/Latinx (N = 67; 80.7%), White or Caucasian (N = 48; 57.8%), and from Texas (N = 21; 25.3%). Therefore, these results are likely more applicable to White females living within the southern United States than to other populations. Additionally, many participants were excluded from the current study due to insufficient responses through attrition, thereby limiting the power of the results. This may have been because the study was presented to participants electronically rather than in-person, allowing for participants to become distracted, report false or biased information, or drop out of the study. Further, participants were recruited primarily through Facebook groups designed for college students to share their research studies to gain participants. Because of this, many members of the Facebook groups were likely those already committed to their academics and further along in their educational careers. Therefore, such participants were possibly more likely to report higher levels of academic commitment and higher degree attainment than the general population, potentially skewing the results. Future researchers should aim to obtain a more representative sample of participants and encourage participation through in-person administration of the measures.

Finally, as discussed, another limitation has to do with the self-report nature of the measures utilized. Because participants reported on their own beliefs, feelings, and characteristics, it is possible that the results were skewed due to bias or false reporting. Because the survey was administered electronically, it cannot be determined whether participants were truthful or attentive throughout the study. Future researchers may benefit from collecting data through observational means or from multiple data sources, such as professors or family members. Additionally, the cross-sectional nature of the current study did not allow for causation to be determined in correlations. Future researchers may consider using longitudinal measures to establish causation. Finally, the current study did not include a measure related to the value college students placed on the STR, limiting the results; that is, college students may not find student-professor relationships necessary to their success in higher education. Future researchers should consider including such a measure.

Implications

School psychologists have often been confined to evaluation-based roles, with an emphasis on assessment and consultation (Watkins et al., 2001). As such, many have reported a desire to diversify their functions within school settings (Watkins et al., 2001). One role that school psychologists could take on is to address student-teacher relationships through interventions. While school psychologists are not as prevalent in higher education, with many taking on professorships or counseling roles, these professionals may be better able to serve as interventionists for the STR than others

(Zavadski & Facci, 2012). School psychologists additionally may provide services to aid college students in adjusting to life in higher education, including establishing and maintaining new relationships, such as those with professors (Zavadski & Facci, 2012). However, based on the findings in the current study, college students may not require assistance in establishing these relationships if they do not desire high-quality STRs. Regardless, school psychologists may aid in improving student-professor relationships through teacher trainings, mental health services, and promoting social competence (Ross et al., 2002; Zavadski & Facci, 2012).

High-quality relationships with professors may additionally aid students in forming strong relationships with other colleagues and professionals in their future endeavors. As discussed by Gersick and colleagues (2000), professionals tend to form relationships with one another based on collegiality, admiration, mentorship, support, and friendship, among other factors; this may relate to the STR qualities of regard, empathy, congruence, and unconditionality of regard (Barrett-Lennard, 2015; Gersick et al., 2000). By establishing such strong relationships with professors, college students may become more prepared to have higher-quality relationships with other professionals in their future careers. People have reported that professional relationships are important to their satisfaction in their careers, with developmental relationships and assistance promoting work satisfaction (Higgins, 2000). Because relationships are evidently important in the workplace, learning how to establish and maintain professional relationships while in college may be especially beneficial to college students. School psychologists in higher

education may additionally aid college students in this regard, by incorporating relationship skills into workforce preparation services, for example (e.g., Hines et al., 2019). That is, in helping college students prepare for their future careers, school psychologists may choose to additionally address professional relationships, beginning with student-teacher relationships (e.g., Hines et al., 2019; Gersick et al., 2000).

Conclusions

Though the only significant predictor of STR quality for college students was found to be academic commitment, further analysis of the student characteristics revealed more detailed information about the relationships at play in determining STR quality. Specifically, correlational analyses showed that academic commitment was negatively related to overall STR quality. As discussed, this may be due to the fact that the STR measure utilized, the BLRI OS-40, likely measured the more inappropriate facets of a student-professor relationship. Regression analyses revealed that, above and beyond other student characteristics, a student's academic commitment was the single best predictor of their relationship quality with their professor. Therefore, it is evident that other student characteristics, including self-esteem, self-efficacy, locus of control, and demographics, did not significantly impact college students' relationship quality with their professors. For college students, it appears that academic commitment is the most important factor in predicting STR quality with their professors.

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Appendices

Appendix A: Informed Consent

Informed Consent

You are invited to participate in a web-based online survey on College Students' Perceptions of the Student-Teacher Relationship. This is a research project being conducted by Lauren Biggs, a graduate student from Stephen F. Austin State University. It should take approximately 20 minutes to complete.

PARTICIPATION
Your participation in this survey is voluntary. You may refuse to participate in the research or exit the survey at any time without penalty.

BENEFITS
Your responses in this survey will help us learn more about college students' relationships with their professors. If you would like to have the results of this study, you may email Lauren Biggs at lauren.evans@sfasu.edu

RISKS
There are no foreseeable risks involved in participating in this study other than those encountered in daily life.

CONFIDENTIALITY
Your survey answers will be sent to a link at Qualtrics.com where data will be stored in a password-protected electronic format. Qualtrics does not collect identifying information such as your name or email address. Your responses will remain anonymous. No one will be able to identify you or your answers in this study, and no one will know whether you participated in this study.

CONTACT
If you have questions at any time about the study or the procedures, you may contact the research supervisor, Dr. Nina Ellis-Hervey, via email at ellishernm@sfasu.edu, or the ORSP ad (936) 468-6606.

ELECTRONIC CONSENT
Please select your choice below. You may print a copy of this consent form for your records. Clicking on the "Agree" button indicates that:

1. You have read the above information;
2. You voluntarily agree to participate; and
3. You are 18 years-old or older.

a. Agree
b. Disagree

Appendix B: Barrett-Lennard Relationship Inventory, Other-to-Self (OS-40)

Instructions

Below are listed a variety of ways that one person may feel or behave in relation to another person.

Please consider each statement with reference to your present relationship with **one of your professors** of your choice, mentally inserting his or her name in the space provided. For example, if the other person's name was John, you would read the first statement as "John respects me" and the second as "John usually senses or realizes what I am feeling."

For each statement, indicate how strongly you feel that it is true, or not true, in this relationship. Please be sure to mark every one.

Please indicate how strongly you feel that each statement is true or not true in your relationship with *one* of your professors.

_____respects me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ usually senses or realizes what I am feeling.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____'s interests in me depends on my words and actions (or how I perform).	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true

I feel that _____ puts on a role or front with me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ feels a true liking for me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ reacts to my words but does not see the way I feel.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
Whether I am feeling happy or unhappy with myself makes no real difference to the way he/she feels about me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ doesn't avoid or go round anything that matters between us.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true

_____ is indifferent to me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ nearly always sees exactly what I mean.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
Depending on my behavior, _____ has a better (or a worse) opinion of me sometimes than s/he has at other times.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
I feel that _____ is genuine with me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
I know I'm valued and appreciated by _____.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true

_____'s own attitudes get in the way of understanding me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
No matter what I tell myself _____ likes (or dislikes) me just the same.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ keeps quiet about his/her real inner impressions and feelings.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ finds me rather dull and uninteresting.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ realizes what I mean even when I have difficulty in saying it.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true

_____ wants me to be a certain kind of person.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ is willing to say whatever is on his/her mind with me, including feelings about either of us or how we are getting along.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ cares for me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ doesn't listen and pick up on what I think and feel.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ likes certain things about me, and there are other things s/he does not like in me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true	(No) I feel that it is probably untrue, or more	No I feel it is not true	NO I strongly feel that it is not true

			than untrue	untrue than true		
_____ is openly himself/herself in our relationship.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
I feel that _____ disapproves of me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ usually understands the whole of what I mean.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
Whether thoughts or feelings I express are “good” or “bad” makes no difference to _____’s feelings towards me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
Sometimes _____ is not at all comfortable but we go on,	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or	(No) I feel that it is probably untrue, or	No I feel it is not true	NO I strongly feel that it is not true

outwardly ignoring it.			more true than untrue	more untrue than true		
_____ is friendly and warm to me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ does not understand me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ approves of some things about me (or some of my ways), and plainly disapproves of other things (or ways I act and express myself).	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
I think _____ always knows exactly what s/he feels with me; s/he doesn't cover up inside.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ just tolerates or	YES	Yes	(Yes)	(No)	No	NO

puts up with me.	I strongly feel that it is true	I feel it is true	I feel that it is probably true, or more true than untrue	I feel that it is probably untrue, or more untrue than true	I feel it is not true	I strongly feel that it is not true
_____ appreciates exactly how the things I experience feel to me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
Sometimes I am more worthwhile in _____'s eyes that I am at other times.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
At moments I feel that _____'s outward response to me is quite different from the way s/he feels underneath.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
_____ feels affection for me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true

_____'s response to me is so fixed and automatic that I don't get through to him/her.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
I don't think that anything I say or do really changes the way _____ feels toward me.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true
I believe that _____ has feelings s/he does not tell me about that affect our relationship.	YES I strongly feel that it is true	Yes I feel it is true	(Yes) I feel that it is probably true, or more true than untrue	(No) I feel that it is probably untrue, or more untrue than true	No I feel it is not true	NO I strongly feel that it is not true

Appendix C: General Self-Efficacy Scale

Please respond to the following statements about yourself according to how strongly you feel about each statement.

I can always manage to solve problems if I try hard enough.	Not at all true	Hardly true	Moderately true	Exactly true
If someone opposes me, I can find the means and ways to get what I want.	Not at all true	Hardly true	Moderately true	Exactly true
It is easy for me to stick to my aims and accomplish my goals.	Not at all true	Hardly true	Moderately true	Exactly true
I am confident that I could deal efficiently with unexpected events.	Not at all true	Hardly true	Moderately true	Exactly true
Thanks to my resourcefulness, I know how to handle unforeseen situations.	Not at all true	Hardly true	Moderately true	Exactly true
I can solve most of my problems if I invest the necessary effort.	Not at all true	Hardly true	Moderately true	Exactly true
I can remain calm when facing difficulties because I can rely on my coping abilities.	Not at all true	Hardly true	Moderately true	Exactly true
When I am confronted with a problem, I can usually find several solutions.	Not at all true	Hardly true	Moderately true	Exactly true
If I am in trouble, I can usually think of a solution.	Not at all true	Hardly true	Moderately true	Exactly true
I can usually handle whatever comes my way.	Not at all true	Hardly true	Moderately true	Exactly true

Appendix D: Academic Commitment Scale

Please respond to the following statements about yourself according to how strongly you feel about each statement.

I want to continue with my studies.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I believe in life-long learning.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I am determined to complete my studies successfully.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I will persist with my studies.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I am not prepared to give up studying.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
My studies give me a great deal of satisfaction.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I am very happy with my studies.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
Being able to study is close to ideal.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
My studies are fulfilling to me.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
My studies fulfill my needs for intellectual interaction.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree

I enjoy studying.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I feel content with my studies.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I feel very involved in my studies - very strongly linked to my studies.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
If I had a choice, I would rather do something other than study.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
There are better things in life than studying.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
Anything else would be better than having to study.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I feel very involved in my studies - like I have put a great deal into it.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
Compared to others I know, I have invested a great deal of time and effort in my studies.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree

I spend a lot of time on my studies.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I usually put a lot of effort into my studies.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I do a lot to ensure success in my studies.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
Being a student allows me to express myself completely.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
My approach to my studies reflects who I am as a person.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
My studies contribute to shaping me as a person.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I am the kind of person who thrives on studying.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
My studies fulfill me.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
Studying is a central aspect of who I am.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
Studying lends meaning to my life.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I express myself	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree

through my studies.						
Studying is an important part of my life.	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree

Appendix E: Rotter's Locus of Control Scale

Select the statement that you agree with the most.

a. Children get into trouble because their parents punish them too much.
b. The trouble with most children nowadays is that their parents are too easy with them.

Select the statement that you agree with the most.

a. Many of the unhappy things in people's lives are partly due to bad luck.
b. People's misfortunes result from the mistakes they make.

Select the statement that you agree with the most.

a. One of the major reasons why we have wars is because people don't take enough interest in politics.
b. There will always be wars, no matter how hard people try to prevent them.

Select the statement that you agree with the most.

a. In the long run people get the respect they deserve in this world.
b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

Select the statement that you agree with the most.

a. The idea that teachers are unfair to students is nonsense.
b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

Select the statement that you agree with the most.

a. Without the right breaks one cannot be an effective leader.
b. Capable people who fail to become leaders have not taken advantage of their opportunities.

Select the statement that you agree with the most.

a. No matter how hard you try some people just don't like you.
b. People who can't get others to like them don't understand how to get along with others.

Select the statement that you agree with the most.

a. Heredity plays the major role in determining one's personality.
b. It is one's experiences in life which determine what they're like.

Select the statement that you agree with the most.

a. I have often found that what is going to happen will happen.

b. Trusting fate has never turned out as well for me as making a decision to take a definite course of action.

Select the statement that you agree with the most.

a. In the case of the well-prepared student there is rarely, if ever, such a thing as an unfair test.
b. Many times exam questions tend to be so unrelated to coursework that studying is really useless.

Select the statement that you agree with the most.

a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
b. Getting a good job depends mainly on being in the right place at the right time.

Select the statement that you agree with the most.

a. The average citizen can have an influence in government decisions.
b. This world is run by the few people in power, and there is not much the little guy can do about it.

Select the statement that you agree with the most.

a. When I make plans, I am almost certain that I can make them work.
b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

Select the statement that you agree with the most.

a. There are certain people who are just no good.
b. There is some good in everybody.

Select the statement that you agree with the most.

a. In my case getting what I want has little or nothing to do with luck.
b. Many times we might as well just decide what to do by flipping a coin.

Select the statement that you agree with the most.

a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
b. Getting people to do the right thing depends upon ability. Luck has little or nothing to do with it.

Select the statement that you agree with the most.

a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control.

b. By taking an active part in political and social affairs the people can control world events.

Select the statement that you agree with the most.
a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
b. There really is no such thing as "luck."

Select the statement that you agree with the most.
a. One should always be willing to admit mistakes.
b. It is usually best to cover up one's mistakes.

Select the statement that you agree with the most.
a. It is hard to know whether or not a person really likes you.
b. How many friends you have depends upon how nice a person you are.

Select the statement that you agree with the most.
a. In the long run the bad things that happen to us are balanced by the good ones.
b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

Select the statement that you agree with the most.
a. With enough effort we can wipe out political corruption.
b. It is difficult for people to have much control over the things politicians do in office.

Select the statement that you agree with the most.
a. Sometimes I can't understand how teachers arrive at the grades they give.
b. There is a direct connection between how hard I study and the grades I get.

Select the statement that you agree with the most.
a. A good leader expects people to decide for themselves what they should do.
b. A good leader makes it clear to everybody what their jobs are.

Select the statement that you agree with the most.
a. Many times I feel that I have little influence over the things that happen to me.
b. It is impossible for me to believe that chance or luck plays an important role in my life.

Select the statement that you agree with the most.
a. People are lonely because they don't try to be friendly.

b. There's not much use in trying too hard to please people; if they like you, they like you.

Select the statement that you agree with the most.

a. There is too much emphasis on athletics in high school.
b. Team sports are an excellent way to build character.

Select the statement that you agree with the most.

a. What happens to me is my own doing.
b. Sometimes I feel that I don't have enough control over the direction my life is taking.

Select the statement that you agree with the most.

a. Most of the time I can't understand why politicians behave the way they do.
b. In the long run the people are responsible for bad government on a national as well as on a local level.

Appendix F: Rosenberg Self-Esteem Scale

Below is a list of statements dealing with your general feelings about yourself. Select how strongly you agree or disagree with each statement.

I feel that I am a person of worth, at least on an equal plane with others.	Strongly Agree	Agree	Disagree	Strongly Disagree
I feel that I have a number of good qualities.	Strongly Agree	Agree	Disagree	Strongly Disagree
All in all, I am inclined to feel that I am a failure.	Strongly Agree	Agree	Disagree	Strongly Disagree
I am able to do things as well as most other people.	Strongly Agree	Agree	Disagree	Strongly Disagree
I feel I do not have much to be proud of.	Strongly Agree	Agree	Disagree	Strongly Disagree
I take a positive attitude toward myself.	Strongly Agree	Agree	Disagree	Strongly Disagree
On the whole, I am satisfied with myself.	Strongly Agree	Agree	Disagree	Strongly Disagree
I wish I could have more respect for myself.	Strongly Agree	Agree	Disagree	Strongly Disagree
I certainly feel useless at times.	Strongly Agree	Agree	Disagree	Strongly Disagree
At times I think I am no good at all.	Strongly Agree	Agree	Disagree	Strongly Disagree

Appendix G: Demographic Items

Please respond to the following items regarding your demographic information.

What is your gender?

a. Male
b. Female
c. Non-binary / third gender / other
d. Prefer not to say

What is your age?

a. 18-22
b. 22-29
c. 30-39
d. 40-49
e. 50-59
f. 60-69
g. 70+

What year of college or university are you currently in?

a. Junior college, pre-university college, or intermediate college
b. 1st year/freshman
c. 2nd year/sophomore
d. 3rd year/junior
e. 4th year/senior
f. 5th+ year of undergraduate studies
g. Graduate or professional school (e.g., doctoral program, master's program, nursing program, dental school, medical school)

What is your current grade point average (GPA)?

a. Less than 2.0
b. 2.0 - 3.0
c. 3.1 - 4.0+
d. Other/prefer not to say

What is your marital status?

a. Married
b. Widowed
c. Divorced
d. Separated
e. Never married

What is the highest degree or level of school you have completed? If currently enrolled, mark the previous grade or highest degree received.

a. No schooling completed
b. Elementary school to 8th grade
c. 9th, 10th, or 11th grade
d. 12th grade, no diploma
e. High school graduate - high school diploma or the equivalent (e.g., GED)
f. Some college credit, but less than 1 year
g. 1 or more years of college, no degree
h. Associate's degree (e.g., AA, AS)
i. Bachelor's degree (e.g., BA, BS, AB)
j. Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)
k. Professional degree (e.g., MD, DDS, DVM, LLB, JD)
l. Doctoral degree (e.g., PhD, EdD)

What is the highest degree or level of school your father completed?

a. No schooling completed
b. Elementary school to 8th grade
c. 9th, 10th, or 11th grade
d. 12th grade, no diploma
e. High school graduate - high school diploma or the equivalent (e.g., GED)
f. Some college credit, but less than 1 year
g. 1 or more years of college, no degree
h. Associate's degree (e.g., AA, AS)
i. Bachelor's degree (e.g., BA, BS, AB)
j. Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)
k. Professional degree (e.g., MD, DDS, DVM, LLB, JD)
l. Doctoral degree (e.g., PhD, EdD)
m. Don't know

What is the highest degree or level of school your mother completed?

a. No schooling completed
b. Elementary school to 8th grade
c. 9th, 10th, or 11th grade
d. 12th grade, no diploma
e. High school graduate - high school diploma or the equivalent (e.g., GED)
f. Some college credit, but less than 1 year
g. 1 or more years of college, no degree
h. Associate's degree (e.g., AA, AS)
i. Bachelor's degree (e.g., BA, BS, AB)
j. Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)

k. Professional degree (e.g., MD, DDS, DVM, LLB, JD)
l. Doctoral degree (e.g., PhD, EdD)
m. Don't know

What is your current employment status?

a. Employed for wages
b. Self-employed
c. Out of work and looking for work
d. Out of work but not currently looking for work
e. Homemaker
f. Student
g. Retired
h. Unable to work
i. Other/not listed

Please describe your work.

a. Employee of a for-profit company or business or of an individual, for wages, salary, and/or commission
b. Employee of a not-for-profit, tax exempt, or charitable organization
c. Local government employee (e.g., city, county)
d. State government employee
e. Federal government employee
f. Self-employed in own not-incorporated business, professional practice, or farm
g. Self-employed in own incorporated business, professional practice, or farm
h. Working without pay in family business or farm
i. Student
j. Unemployed
k. Other/not listed

What is your total household income (for students, what is your family of origin's income)?

a. Less than $10,000
b. $10,000 - $19,999
c. $20,000 - $29,999
d. $30,000 - $39,999
e. $40,000 - $49,999
f. $50,000 - $59,999
g. $60,000 - $69,999
h. $70,000 - $79,999
i. $80,000 - $89,999
j. $90,000 - $99,999

k. $100,000 - $149,999
l. More than $150,000
m. Prefer not to say

What is your ethnicity?
a. Hispanic or Latine/Latinx
b. Not Hispanic or Latine/Latinx

To which racial or ethnic group do you most identify?
a. African-American/Black (Non-Hispanic)
b. Asian/Pacific Islander
c. Caucasian/White (Non-Hispanic)
d. Latine/Latinx or Hispanic
e. Native American, Aleut, or Aboriginal
f. Other: _____

What is your state of origin?
a. Alabama
b. Alaska
c. Arizona
d. Arkansas
e. California
f. Colorado
g. Connecticut
h. Delaware
i. Florida
j. Georgia
k. Hawaii
l. Idaho
m. Illinois
n. Indiana
o. Iowa
p. Kansas
q. Kentucky
r. Louisiana
s. Maine
t. Maryland
u. Massachusetts
v. Michigan
w. Minnesota
x. Mississippi

y. Missouri
z. Montana
aa. Nebraska
bb. Nevada
cc. New Hampshire
dd. New Jersey
ee. New Mexico
ff. New York
gg. North Carolina
hh. North Dakota
ii. Ohio
jj. Oklahoma
kk. Oregon
ll. Pennsylvania
mm. Rhode Island
nn. South Carolina
oo. South Dakota
pp. Tennessee
qq. Texas
rr. Utah
ss. Vermont
tt. Virginia
uu. Washington
vv. West Virginia
ww. Wisconsin
xx. Wyoming
yy. US Territory
zz. Not listed

Appendix H

Survey Publication Locations

Facebook Groups: 9/20/23

1. Applied Research in Education
2. COLLEGE TALK
3. COMPLETE Thesis Support | For PhD, Masters, and other Research Students
4. dissertation questionnaire
5. Dissertation Research Group
6. Dissertation Support Group
7. Dissertation Survey Exchange
8. Dissertation Survey Exchange – Share Your Research Study, Find Participants
9. Early Career School Psych Support Group
10. Find Participants | Thesis/Dissertation Survey Exchange
11. Get Survey Responses - Share Survey, Data Collection, Dissertation, Thesis
12. Graduate Student Research Community (PhD / Doctoral Mentorship)
13. LGBTQ Research and Researchers in Higher Education and Student Affairs
14. Phd students or researchers in Psychology: worldwide group
15. Psychology and Statistics: early career researchers and students forum
16. Psychology Research
17. QUESTIONNAIRE
18. Questionnaire & Survey Exchange
19. Questionnaire Exchange Program
20. Research Participation - Dissertation, Thesis, PhD, Survey Sharing
21. Research Survey Exchange Group
22. Research survey filling
23. Research/Survey - Share Your Research Study, Find Participants
24. School Psych to School Psych
25. School Psychologist
26. SFA Community
27. SFA Student Nurses Association
28. Student Survey Exchange
29. Students Questionnaires Survey
30. Supporting Texas School Psychologists
31. Survey Exchange
32. Survey Exchange / Survey Group / Survey Participants - Dissertation, Thesis
33. Survey Exchange / Survey Sharing for Thesis, Research and Dissertations
34. Survey Questionnaire
35. Survey Sharing - Survey Exchange / Swap - Find More Survey Participants
36. Survey sharing 2022-2023 (English, Active Only)

37. SurveyCircle / Survey Panel – Post Survey, Find Participants, Get Responses
38. SurveyCircle / Survey Panel – Survey, Find Participants, Get Responses
39. The Research Survey Exchange Group
40. Thesis / Survey Questionnaire Filling Group
41. Thesis & Dissertation Help
42. Thesis/Dissertation Survey Exchange
43. University of Houston
44. Women in College Support Group

Appendix I

Table 1

Frequency and Percentages of Participants' Gender

	Frequency	Percent
Male	6	7.2
Female	73	88.0
Non-binary/third gender/other	3	3.6

Appendix J

Table 2

Frequency and Percentages of Participants' Ages

Age range	Frequency	Percent
18-22	19	22.9
22-29	36	43.4
30-39	14	16.9
40-49	5	6.0
50-59	7	8.4
60-69	1	1.2

Appendix K

Table 3

Frequency and Percentages of Participants' Marital Status

Marital Status	Frequency	Percent
Married	23	27.7
Divorced	3	3.6
Separated	2	2.4
Never married	54	98.8

Appendix L

Table 4

Frequency and Percentages of Participants' Ethnicity

Ethnicity	Frequency	Percent
Hispanic or Latine/Latinx	14	16.9
Not Hispanic or Latine/Latinx	67	80.7

Appendix M

Table 5

Frequency and Percentages of Participants' Race

Race	Frequency	Percent
African-American/Black (Non-Hispanic)	5	6.0
Asian/Pacific Islander	13	15.7
Caucasian/White (Non-Hispanic)	48	57.8
Latine/Latinx or Hispanic	10	12.0
Native American, Aleut, or Aboriginal	1	1.2
Other	5	6.0

Appendix N

Table 6

Frequency and Percentages of Participants' State of Origin

State	Frequency	Percent
Arizona	2	2.4
California	6	7.2
Connecticut	1	1.2
Florida	4	4.8
Hawaii	1	1.2
Illinois	2	2.4
Iowa	1	1.2
Kansas	2	2.4
Kentucky	1	1.2
Louisiana	1	1.2
Maryland	1	1.2
Massachusetts	1	1.2
Michigan	3	3.6
Minnesota	1	1.2
Missouri	1	1.2
Montana	1	1.2
New Hampshire	1	1.2
New York	2	2.4
North Carolina	1	1.2
Ohio	4	4.8
Oklahoma	1	1.2
Pennsylvania	1	1.2
Tennessee	1	1.2
Texas	21	25.3
Vermont	1	1.2
Wisconsin	1	1.2
Not Listed	17	20.5

Appendix O

Table 7

Frequency and Percentages of Participants' Classifications

Classification	Frequency	Percent
1st Year/Freshman	4	4.8
3rd Year/Junior	7	8.4
4th Year/Senior	14	16.9
5th+ Year of Undergraduate Studies	1	1.2
Graduate or Professional Program	56	67.5

Note: Graduate and professional programs included doctoral programs, master's programs, nursing programs, dental school, medical school, and similar programs.

Appendix P

Table 8

Frequency and Percentages of Participants' GPAs

GPA Range	Frequency	Percent
2.0 - 3.0	7	8.4
3.1 - 4.0+	71	85.5
Other/Prefer Not to Say	4	4.8

Appendix Q

Table 9

Frequency and Percentages of Participants' Education

Completed Education Level	Frequency	Percent
High School	5	6.0
<1 Year of College	3	3.6
≥1 Year of College	2	2.4
Associate's Degree	8	9.6
Bachelor's Degree	32	38.6
Master's Degree	30	36.1
Doctoral Degree	2	2.4

Appendix R

Table 10

Frequency and Percentages of Participants' Fathers' Education

Completed Education Level	Frequency	Percent
No Schooling	1	1.2
Elementary-8th Grade	8	9.6
9th-11th Grade	2	2.4
High School	19	22.9
<1 Year of College	3	3.6
≥1 Year of College	2	2.4
Associate's Degree	5	6.0
Bachelor's Degree	22	26.5
Master's Degree	14	16.9
Professional Degree	1	1.2
Doctoral Degree	2	2.4

Note: Professional programs included doctoral programs, master's programs, nursing programs, dental school, medical school, law school, and similar programs.

Appendix S

Table 11

Frequency and Percentages of Participants' Mothers' Education

Completed Education Level	Frequency	Percent
No Schooling	1	1.2
Elementary-8th Grade	4	4.8
9th-11th Grade	3	3.6
High School	17	20.5
<1 Year of College	4	4.8
≥1 Year of College	3	3.6
Associate's Degree	4	4.8
Bachelor's Degree	25	30.1
Master's Degree	13	15.7
Professional Degree	3	3.6
Doctoral Degree	4	4.8

Note: Professional programs included doctoral programs, master's programs, nursing programs, dental school, medical school, law school, and similar programs.

Appendix T

Table 12

Frequency and Percentages of Participants' Employment Status

Employment Status	Frequency	Percent
Employed for Wages	32	38.6
Self-Employed	3	3.6
Out of Work and Looking for Work	3	3.6
Homemaker	1	1.2
Student	39	47.0
Retired	2	2.4
Other/Not Listed	2	2.4

Appendix U

Table 13

Frequency and Percentages of Participants' Nature of Employment

Type of Work	Frequency	Percent
For-Profit for Salary/Wages/Commission	15	18.1
Not-for-Profit or Charity	8	9.6
Local Government	2	2.4
State Government	2	2.4
Federal Government	3	3.6
Self-Employed	3	3.6
Student	42	50.6
Unemployed	1	1.2
Other/Not Listed	6	7.2

Appendix V

Table 14

Frequency and Percentages of Participants' Household Annual Income

Income Range	Frequency	Percent
Less than $10,000	7	8.4
$10,000 - 19,000	2	2.4
$20,000 - 29,000	2	2.4
$30,000 - 39,000	9	10.8
$40,000 - 49,000	10	12.0
$50,000 - 59,000	2	2.4
$60,000 - 69,000	5	6.0
$70,000 - 79,000	5	6.0
$80,000 - 89,000	1	1.2
$90,000 - 99,000	6	7.2
$100,000 - 149,000	8	9.6
≥ $150,000	12	14.5
Prefer Not To Say	13	15.7

Appendix W

Table 15

Pearson Correlations for Scores Obtained on the BLRI, GSE, ACS, RLOCS, and RSES with Demographic Information

	Year	GPA	Gender	Education	Father's Education	Mother's Education
BLRI Total	.01	-.13	-.19	.14	-.08	-.14
GSE Total	.28*	.07	-.12	.38**	-.13	-.16
ACS Total	.13	.03	-.12	.06	.16	.04
RLOCS Total	.13	.04	.16	-.01	-.01	-.11
RSES Total	.21	.05	-.01	.18	-.00	-.08

*. Correlation is significant at the 0.05 level (2-tailed)

**. Correlation is significant at the 0.01 level (2-tailed)

Appendix X

Table 16

Pearson Correlations for Scores Obtained on the BLRI, GSE, ACS, RLOCS, and RSES

	BLRI Total	GSE Total	ACS Total	RLOCS Total	RSES Total
BLRI Total	1	-.15	-.30*	-.15	.09
GSE Total		1	.37**	-.20	.07
ACS Total			1	-.12	.10
RLOCS Total				1	-.02
RSES Total					1

*. Correlation is significant at the 0.05 level (2-tailed)

**. Correlation is significant at the 0.01 level (2-tailed)

Appendix Y

Table 17

Pearson Correlations for the Academic Commitment Scale and its Subscales

	ACS Total	Commitment	Satisfaction	Quality of Alternatives	Investment	Meaningfulness
ACS Total	1	.69**	.86**	-.30**	.76**	.88**
Commitment		1	.63**	-.25*	.46**	.43**
Satisfaction			1	-.40**	.51**	.68**
Quality of Alternatives				1	-.28**	-.44**
Investment					1	.61**
Meaningfulness						1

*. Correlation is significant at the 0.05 level (1-tailed)

**. Correlation is significant at the 0.01 level (1-tailed)

Appendix Z

Table 18

Pearson Correlations for the Barrett-Lennard Relationship Inventory and its Subscales

	BLRI Total	Regard	Empathy	Unconditionality	Congruence
BLRI Total	1	.86**	.93**	.59**	.90**
Regard		1	.81**	.25*	.71**
Empathy			1	.42**	.82**
Unconditionality				1	.45**
Congruence					1

*. Correlation is significant at the 0.05 level (1-tailed)

**. Correlation is significant at the 0.01 level (1-tailed)

Appendix AA

Table 19

R, R^2, and R^2 Change Coefficients for the Student Characteristic Predictor Models of College Student-Teacher Relationships

Model	R	R^2	Adjusted R^2	R^2 Change	Overall Model Test			
					F Change	df1	df2	p
1	.282	.079	.065	.079	5.69	1	66	.020
2	.289	.083	.055	.004	.28	1	65	.599
3	.337	.114	.072	.030	2.20	1	64	.143
4	.355	.126	.071	.012	.88	1	63	.351
5	.449	.201	.044	.075	.75	7	56	.628

Note: Model 1 = Academic Commitment Scale; Model 2 = ACS and General Self-Efficacy Scale; Model 3 = ACS, GSE, and Rotter Locus of Control Scale; Model 4 = ACS, GSE, RLOCS, and Rosenberg Self-Esteem Scale; Model 5 = ACS, GSE, RLOCS, RSES, Demographics (GPA, gender, age, classification, race, ethnicity, income); Dependent Variable: BLRI Total

Appendix BB

Table 20

Standardized Beta Coefficients for the Student Characteristic Predictors of College Student-Teacher Relationships Using Model 5

Variable	Unstandardized Beta Coefficient	Standard Error of Unstandardized Beta Coefficient	Standardized Beta Coefficient	Tolerance	VIF
(Constant)	258.14	59.43	--	--	--
Academic Commitment	-.62	.24	-.35	.75	1.13
Self-Efficacy	-.69	.95	-.10	.72	1.39
Locus of Control	-1.44	1.18	-.17	.78	1.28
Self-Esteem	.43	.78	.07	.90	1.12
GPA	-5.06	9.10	-.07	.88	1.14
Gender	-22.28	12.71	-.23	.82	1.21
Age	1.17	3.73	.05	.53	1.90
Classification	1.86	3.14	.09	.63	1.58
Household Income	.15	1.09	.02	.65	1.54
Race	.82	3.45	.03	.86	1.16
Ethnicity	10.65	9.94	.14	.87	1.15

Appendix CC

Table 21

Analysis of Variances for Hierarchical Regression Predictors of the College Student-Teacher Relationship

Model	*F*	*p*
1	5.70*	.020
2	3.00	.059
3	2.74	.051
4	2.27	.071
5	1.28	.258

Note: Model 1 = Academic Commitment Scale; Model 2 = ACS and General Self-Efficacy Scale; Model 3 = ACS, GSE, and Rotter Locus of Control Scale; Model 4 = ACS, GSE, RLOCS, and Rosenberg Self-Esteem Scale; Model 5 = ACS, GSE, RLOCS, RSES, GPA, Demographics (gender, age, classification, income, race, ethnicity); Dependent Variable: BLRI Total

*. Significance at the .05 level

Appendix DD

Table 22

Pearson Correlations for the BLRI OS-40 and ACS Subscales

	BLRI Total	Level of Regard	Empathic Understanding	Unconditionality of Regard	Congruence
ACS Total	-.30*	-.22	-.32**	-.16	-.24*
Commitment	-.24*	-.14	-.22*	-.25*	-.23*
Satisfaction	-.34**	-.20	-.35**	-.24*	-.31**
Quality of Alternatives	.09	.16	.11	-.12	.05
Investment	-.12	-.15	-.13	-.12	-.07
Meaningfulness	-.23*	-.23*	-.27*	-.01	-.17

*. Correlation is significant at the 0.05 level (2-tailed)

**. Correlation is significant at the 0.01 level (2-tailed)

Appendix EE

Table 23

Descriptive Statistics of Students' Relationship Quality with their Professors

	Mean	Std. Deviation	Median	Mode
BLRI Total	112.89	27.76	110.00	109.00
Level of Regard	25.23	9.75	23.00	13.00
Empathic Understanding	27.80	8.99	26.00	23.00
Unconditionality of Regard	31.44	6.90	31.00	31.00
Congruence	27.70	7.66	26.00	26.00

Note: BLRI Total scores range from 40-240. Subscale scores range from 10-60.

VITA

After completing high school in Tyler, Texas, in 2017, Lauren began working towards her undergraduate degree at Stephen F. Austin State University (SFA). She graduated with her bachelor's degree in May 2020, majoring in psychology and minoring in special education. She graduated summa cum laude as a university scholar, having completed the requirements to do so through the university's honors college. Upon graduating, Lauren entered the school psychology doctoral program at SFA to earn her Ph.D. in School Psychology. She completed her internship in school psychology at the SFA Charter School.

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APA 7th Edition

This dissertation was typed by Lauren Biggs.