

**STUDENT PERCEPTION OF TEACHER RESPONSE TO STUDENT EMOTION:
ASSOCIATIONS WITH ACADEMIC FUNCTIONING**

by
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ABSTRACT

STUDENT PERCEPTION OF TEACHER RESPONSE TO STUDENT EMOTION: ASSOCIATIONS WITH ACADEMIC FUNCTIONING

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Due to the increased awareness that emotions have on student outcomes within the classroom setting, gaining insight on the emotional socialization process within the classroom setting may lead to continued improvements within the social-emotional learning curricula in the school environment. The goal of this study was to examine the relation between a teacher's emotion socialization practices and their student's academic functioning. Specifically, student perceptions of their teacher's supportive and unsupportive responses were assessed by 398 fourth- and fifth-grade students. I analyzed whether there was a difference in the way students perceived teacher responses to their emotions based on student gender and race. I also analyzed the relation between the students' perception of their teacher's response to student emotions and academic functioning. Furthermore, gender and race were analyzed as moderating factors of this relation. The Coping with Children's Negative Emotions Scale (Fabes et al., 1990) was used to measure student perception of teacher responses to student emotions. The students' academic functioning was measured using the standardized Forward Exam and teachers reported on the student's work ethic (Pierce et al., 1999). Data was analyzed using multivariate analysis of variance and hierarchical linear modeling. Results revealed that male students reported teachers used more unsupportive responses to their emotional expression compared to females, Hispanic

students reported teachers using less supportive responses compared to White and African American students, and African American students reported that teachers used more unsupportive responses compared to White and Hispanic students. Furthermore, results suggest that students' perceptions of unsupportive responses by their teacher significantly predicted English language achievement and student work habits. These findings will help close the gap regarding the impact of teacher emotion socialization practices on students' academic functioning. Implications, limitations, and future directions are discussed.

Keywords: emotion socialization, academic functioning, student-teacher relationship, student-perception, unsupportive response to emotion, supportive response to emotion

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CHAPTER I: INTRODUCTION

Emotion socialization is a dynamic process through which adults communicate ways of expressing, interpreting, and managing emotions (Cekaite & Ekstrom, 2019; Denham, 2007). Beyond emotion socialization in the home setting by parents or caregivers in the early years, schools play an increasingly important role for school-age children. Specifically, emotion regulation or the ability to effectively manage and respond to an emotional experience, is critical because it affects children's social competence, motivation for learning, and academic achievement (Thompson, 2015). Beginning in the early 2000s, social-emotional learning started gaining great momentum within the school setting (Greenberg et al., 2017) due to awareness of the positive influence that emotion regulation had for student outcomes. Despite the importance of student emotion regulation within the school setting, emotion socialization has been studied significantly less within the school context with students and teachers than within the home setting with children's primary care providers.

Children's development of emotion regulation begins at home by parents or caregivers. Eisenberg, Cumberland, and Spinrad (1998) proposed a model of parental socialization of emotions based on empirical findings. Within this seminal paper, the researchers stated that most parental emotion-related behaviors and child outcomes were not very strong or highly consistent. This was partly due to the complexity of socialization outside of the parental role, and the influences that others (i.e., peers, siblings, teachers) contribute towards an individual's emotional development that deserve consideration.

Research has shown that emotions have been recognized as a significant foundation to students' learning and achievement (Li et al., 2020). Pekrun (2006) posits that emotions directly connected to achievement activities or outcomes impact motivation to learn, learning strategies,

and self-regulated learning. Recently, Valiente and colleagues (2020) expanded the Eisenberg and colleagues' model (1998) to include emotion-related socialization that takes place in the classroom setting. Specifically, the Valiente model highlighted how teachers, peers, and the classroom context can provide important aspects of socialization for students' emotional and academic-related outcomes. The importance of understanding emotion socialization within the classroom was related to the recent influx of research conducted on social-emotional learning within the classroom and its influence on student outcomes (Hen & Goroshit, 2016; Yang et al., 2018).

Thompson (2015) asserted that emotion socialization was a main goal for children due to the impact that emotion regulation had on social competence, academic achievement, and psychological well-being. However, compared to the number of studies conducted on parental emotion socialization with their child, there is a lack of studies conducted to understand teachers' emotion socialization practices in the classroom setting. Although there is a fair amount of literature discussing the importance of teachers' social-emotional competencies (Elias, 2009; Jennings, 2011), research that examines the specific practices of emotion socialization for students in the classroom setting is limited. Furthermore, there are limited findings regarding how middle childhood teachers can function as direct and indirect emotion socializers for children and how student's perception of their teacher's response to the students' emotions are associated with their academic functioning in the classroom.

Research has also found that individual student characteristics, such as gender and race, influence students' relationship with their teacher, along with their academic and social outcomes within the classroom. Ahn and Stifter (2006) conducted an observational study on how childcare teachers socialize children's emotion differently by student gender. They found that

teachers provided more physical comfort and distraction to females than to males when students expressed negative emotions. Whereas teachers were more likely to provide males with alternative ways (i.e., guiding an angry child to use their words instead of yelling) to express negative emotions. Regarding race, Bottiani and colleagues (2016) conducted a study on high school students and found that Black students perceived their teacher as less caring when compared to White students. Similar results were found in a younger population by Hughes and Kwok (2007) with African American children having less supportive relationships with their teachers compared to White and Hispanic children. To build on the evidence on the role of individual characteristics in socialization practices, I examined whether students perceive their teachers responding differently to their emotional expression based on gender and race.

A high-quality and warm relationship with their teacher was critical for children's success in school (Zee et al., 2020). Researchers have found that the relationship between a teacher and student can also have an impact on the student's academic functioning. Research has found that teacher conflict and closeness ratings in preschool predict children's academic achievement ratings in first grade (Pianta & Stuhlman, 2004), and low levels of teacher-student conflict in Kindergarten were linked with lower risk for disciplinary problems and school suspension in middle school (Hamre & Pianta, 2001). While the student-teacher relationship has been shown to be related to academic functioning, the specific components of this relationship have not been studied in detail. Specifically, I focused on students' perceptions of their teacher's response to their emotional expression because how teachers respond to student emotions is an important indicator of the quality of student-teacher relationships.

There is even more scant research on a teacher's strategy used to help regulate students' emotions and how a teacher's response to a student's emotional expression may impact school

and academic functioning. Although it was clear that emotions play a prominent role in the educational setting and that teachers have a role in the student's emotional development and achievement (Liew & McTigue, 2010), there is a gap in understanding how student's perceptions of their teacher's response to their emotions may be associated with key academic functioning. Examining student's perceptions of emotion socialization practices by teachers will extend our current understanding of socialization practices of teachers in the classroom. Specifically, I focused on student's perceptions of teachers' supportive or unsupportive responses to a student's emotional expression and the association to academic functioning.

Within my study, I used Valiente and colleagues' (2020) emotion-related socialization model focused on the classroom setting to examine how students' perceived their teacher's responses to emotion expression as either supportive or unsupportive and how students' perceptions of their teacher's response were related to the student's academic functioning. Valiente's model is comprised of five components: (a) student characteristics, (b) classroom context, (c) socialization agent, (d) emotion-related interactions, and (e) student outcomes. These components will be discussed in depth in the literature review.

Gaps within the Research

In this study, I examined teacher emotion socialization practices with a focus on students' perceptions of teacher responses when the student expressed negative emotions in the classroom. Existing research on emotion socialization in schools has focused on teacher perceptions of how they response to students (Curby et al., 2021), while student perceptions of teacher emotion socialization have been understudied. This can be problematic as the teacher may report their actions inaccurately due to social desirability. Student perspectives were important because student emotions, not teachers', were likely to affect students' motivation and engagement to

succeed in school. Furthermore, a teacher may truly believe they are acting in a supportive way; however, the student may perceive the teacher's responses differently. Indeed, Gollner and colleagues (2018) showed that student perceptions of teacher instructional practice and quality were associated with achievement. Further, researchers have agreed that there is an overreliance on teacher-reported data, and that beginning in third grade, there is significant value in obtaining the students' perspectives (Rucinski et al., 2018; Sandilos et al., 2017). Thus, I used student-report to assess teacher responses to student emotions.

Another gap in the literature was that much of the research on emotion socialization focused on early childhood and preschool years. As children develop and enter school, they are tasked with many more activities that require emotion regulation, such as following directions, interacting with peers, and understanding social rules (e.g., which emotions are appropriate to show others). As children develop into middle childhood, their emotional development continues to mature. During middle childhood years, children learn problem-solving coping strategies, understand norms for expressive behavior (i.e., smiling when a friend approaches), and develop awareness of multiple emotions towards a single event or individual (Buckley & Saarni, 2006). Furthermore, teachers scaffold the amount that they were helping students solve their problems and regulate their emotions. For example, early childhood teachers often incorporated labeling emotions, self-regulation, and prosocial skills (Tominey et al., 2017). If a student struggled to learn these emotion-related constructs within their early education years, it may impact the relationship they have with their teacher and peers as they continue with school. Research finds that as children reach middle childhood and have difficulty self-regulating and problem-solving on their own, teachers within the student's classroom may have a more difficult time addressing

these concerns. My study focused on middle childhood students to assess their perceptions of teacher practices to help regulate student emotions within the classroom setting.

The final gap I addressed concerned the relevance of parental emotion socialization practice framework to teacher practice. I applied parent socialization practices that have been systematically researched to study teacher emotion responses in a classroom setting. Fabes and colleagues (1990) examined caregivers' proximal emotion socialization practices and identified six different types of caregiver interventions to child emotion expression. The first and second types were problem-focused and emotion-focused responses, which referred to parental support to solve anguish and reassure the child. The third type was expressive encouragement, which refers to parents' confirmation and praise of their children's emotion expression. The fourth and fifth types were minimization and punitive responses, which referred to the caregivers downplay of emotional expression and use of verbal or physical punishment. The sixth type was a distress response, which occurred when a caregiver became uncomfortable in response to a child's negative emotion expression and the focus was on caregiver's own distress rather than the child's emotional expression. These strategies may be relevant to a teacher, but it is unclear how they are used within the classroom setting because they have not been examined directly.

Study Aims

The aims of the present study were three-fold. The first aim examined whether student perceptions of teacher responses to student's emotions differed by gender and race. Research continues to show that teachers respond differently to students based on gender (Ahn & Stifter, 2006). Student gender also appears to influence the student-teacher relationship (Spilt et al., 2012) such that teachers report closer relationships with female than male students. Students' perceptions of their teacher also differed by gender, such that, male students reported higher

conflict with their teachers than female students and female students felt closer to their teachers than male students (McFarland et al., 2016)

Along with gender, I examined whether a students' perceptions of their teacher's response to their emotional expression differed based on the student's race. Harber and colleagues (2012) conducted a study with 126 public school teachers from middle and high school who were 75.4% female and 89.7% White. They analyzed the positive feedback bias by teachers towards White, Black, and Latino students. The feedback to student work either (a) provided the necessary comments for growth so the student could learn and develop or (b) did not provide constructive criticism, not allowing for the student to be aware of changes that would allow them to be more successful. They found that teachers who believed they were giving feedback to a Black student or to a Latino student supplied more positive feedback than teachers who believed they were giving feedback to a White student for written work of equal merit. This suggested that the same level work gets different feedback from a teacher depending on the student's race. Specifically, White students were given more critical feedback to work on improving their academics, while students of color were given positive praise without specific feedback to develop their skills. However, findings from this study were opposite of Scott and colleagues' (2019) findings, wherein Black students were given more negative feedback to their behavior. This may be due to one study analyzing behavior responses and the other study analyzing academic responses. Inconsistent findings on how teachers respond to academic work of students of color may be similar in how teacher's response to emotional expressions of students of color.

The second aim of this study examined the association between a students' perceptions of their teacher's response to a student's emotional expression and academic functioning. In my

study, academic functioning was assessed based on academic achievement and student work habits. Scores on a statewide standardized test provided information on a student's level of academic achievement. Student work habit information included the teacher's perception of the student's ability to complete work, follow rules, and engage in course material. A goal was to determine whether a teacher used supportive responses towards a student's emotions by helping them identify emotions and problem-solve, would facilitate student learning. Due to in the future, when the student experiences the same emotion, they may then be able to identify and regulate the emotion appropriately and with less cognitive effort, allowing more attention to be focused on academic work. Conversely, unsupportive teacher responses negatively impacted student learning and achievement. For example, a teacher may respond punitively to an angry student who displays dysregulated verbal and/or physical behavior by sending them to the principal's office. This punitive response does not allow the student to learn and practice adaptive regulation strategies to help them stay in the classroom and learn. Punishing or minimizing a child's emotional expression has been connected to lower social and emotional competence when compared to peers whose parents used supportive strategies (Jones et al., 2002). Overall, unsupportive responses to children's negative emotions intensified the child's experience and expression. In turn, children may express the emotions in a dysregulated manner or attempt to hide their emotions, which may interfere with the student's ability to focus on the academic tasks (Jones et al., 2002).

The third aim of this study was to analyze whether the relation between the students' perception of their teacher's response (supportive or unsupportive) to their emotional expression and academic functioning (i.e., academic achievement, work habits) was moderated by gender and race. The research discussed above indicates that emotions were socialized differently for

children based on race and gender. Building on those findings, I examined whether gender and race play a moderating role in the association between student perceptions of teacher response to student emotions and academic functioning.

As my research questions focused on student academic functioning, research provided many important covariates for academic functioning, such as socioeconomic status, home-living, and parental influences. In this study, I focused on student attendance as a covariate for academic functioning. Cutuli and colleagues (2013) examined academic achievement in math and reading for students while focused on attendance. The findings were math and reading achievement scores were lower and growth in math was slower in the students who had lower attendance. The findings highlight the significance of attendance in achievement and the potential for it to be a confound variable in my study. Due to this, I used attendance as a key covariate of academic achievement. The rest of my study constructs will be explained thoroughly in the methodology section of this paper.

Definition of Study Constructs

Students' perceptions of the teacher response to student emotional expression: This was the students' perceptions of the teacher response to the student's experience and expression of emotions in ways that have been interpreted as supportive (e.g., problem-focused, comforting) or unsupportive (e.g., ignoring, minimizing, punishing) (Denham, 2007).

Academic functioning: This construct was measured with three variables, (a) mathematics achievement standardized assessment, (b) English language achievement standardized assessment, and (c) work habits as rated by the student's teacher. Standardized assessments evaluated student performance based on state standards (i.e., Advanced, Proficient, Basic, and Below Basic), but researchers argued that in addition to teacher and school support, non-school

effects (i.e., student lacking prerequisite skills, executive functioning skills) also impacted the standardized assessment (Ladd & Lauen, 2010), which is why work habits were an important addition. Work habits are defined as how the student engages in the routine activities in the classroom setting, including following directions, using time wisely, and completing work independently (Rimm-Kaufman et al., 2009).

CHAPTER II: LITERATURE REVIEW

Children have the task of learning effective ways of expressing, understanding, and managing emotional experiences. Adults help children develop these emotional competencies when they respond to children's emotional expression. Much of the research on emotional development has focused on the caregiver, often the mother, and the child. However, children are spending more time within a classroom setting and this has proven to be a unique setting where academic, behavioral, and emotional development occurs. This study focuses on middle childhood students' perception of how their teacher socializes emotions based on students' demographic characteristics, and whether there is a relation between the students' perceptions of their teacher's response to student emotions and the student's academic functioning. Within this literature review, I will discuss the three emotion socialization practices (modeling, response, and direct teaching). In addition, I will discuss the heuristic model by Valiente and colleagues (2020) as it served as my core theoretical framework. Regarding student characteristics, I will discuss how student race and gender are associated with emotion socialization practices. Lastly, I will discuss how teacher practices are associated with students' academic functioning.

Emotion Socialization

Developmentalists have researched how emotional experience, expression, regulation, and understanding evolve within individuals through socializing with others. Children begin acquiring emotional competence early in life, with the first person a child gains emotional information from being their caregiver (Eisenberg et al., 1998). Parents help children learn the fundamentals of emotional expression and how others will respond to them (Eisenberg et al., 1998). Outside of the home setting, children's emotional outcomes depend on their experiences and learning they receive in the childcare and educational settings where they encounter teachers and peers. The socialization process can both directly and indirectly teach children about emotional development and impact later life outcomes.

Studies on emotion socialization can be dated to the early 1980s where there was a prominent focus on how a family contributed to a child's emotional competence (Lewis & Saarni, 1985) and have continued to be used in research and intervention recently. Specifically, Denham (2007) discussed three socialization practices caregivers use. The first practice, referred to as modeling (Denham, 2007), was where a child may observe the emotions expressed by others. Even when the child was not directly involved in the interaction, such as when their parents argued, were excited, or were sad, modeling allowed a child to gain emotional insight. The second socialization practice was called contingency or response (Denham, 2007) and was what a child received as a response, either positive or negative (e.g., attention, support, interest, disapproval, minimization, etc.), to their own verbal and non-verbal expressions of emotion. The last and third socialization practice, direct teaching, was where the adult explicitly gave information about the expression, causes, and regulation of emotions (Denham, 1998, 2007). Among the three types of practice, my study focused on response. Specifically, student's

perceptions of their teacher's either supportive or unsupportive response to their own emotional expression in the classroom.

The ecological model describes how children develop over time within interrelated systems (Bronfenbrenner, 2006), and the scope of which relationships can influence a child has continued to grow outside of the primary caregiver. Denham (2007) stated that teachers have an important role for student's emotion regulation, as they can help students label, control, and express their emotions within the classroom setting, in a healthy and positive way. Research has identified that the relationship formed between a teacher and student can have a positive influence on the student's social (Blair et al., 2004; Sabol, & Pianta, 2012) and cognitive development (Davis, 2003; Resnick et al., 1997) and on the student's academic outcome, such as achievement scores (Howse et al., 2003). Dysregulated or overregulated emotion can lead to maladaptive behaviors, such as aggressive and withdrawn behaviors, and these behaviors are related to poor peer relations and academic functioning (Farmer & Bierman, 2002). These findings highlight the vital role teachers have in helping children learn appropriate ways to regulate their emotions.

Theoretical Model for Emotion Socialization in the Classroom

Valiente and colleagues (2020) used Eisenberg's parental model (1998) to build a heuristic model to include emotion-related socialization that takes place within the classroom setting. The model by Valiente and colleagues (2020) includes five components that describe emotion-related socialization influences within the classroom setting: (a) a socialization agent, (b) emotion-related interactions, (c) student characteristics, (d) classroom context, and (e) student outcomes. Furthermore, these researchers believe that all these relationships are reciprocal and influence each other. This model shows that within the classroom setting teachers do act as

socializers towards students. However, because the model was introduced recently, little empirical research has been conducted on specific components of teachers as emotional socializers. I will start to fill this gap, as I explore the students' perception of their teacher's response to their emotions.

Although many constructs contribute to the student-teacher relationship, research has limitedly examined which of these constructs specifically contribute to outcomes, such as academic functioning. Wilkins (2014) identified seven different components of the student-teacher relationship from the student's perspective: (a) providing academic and personal support for students, (b) showing concern for and interest in students, (c) motivating students and attending to their personal interests, (d) treating students with respect, (e) being compassionate to students, (f) being accessible to students, and (g) understanding and valuing students' opinions and feelings. Although emotional responses (e.g., compassion, concern, understanding feelings) have been part of student-teacher relationships, research is limited regarding the specific types of teacher responses to student emotion expression in the classroom. Furthermore, when emotional response has been studied, the focus is often on student's emotional and social outcomes, with limited research on academic functioning. Building upon the literature on student-teacher relationships, I focus on teachers' responses to student emotions in the classroom and how they are associated with student academic functioning.

I will use Valiente and colleagues' (2020) model as the core framework for exploring why teachers act as a socializer for students. I will specifically examine the student characteristics (gender and race) and emotion-related interactions with teachers (reactions to students' emotional expression) on academic functioning (academic achievement and work habits). Holistically, the Valiente model shows the factors that influence teachers as the

socialization agent (stress, mental health, emotion, and self-regulation), which in turn, relates to the quality of the student-teacher relationship. In the following sections, I will discuss the key components from the Valiente model that relate to the socialization agent, student-teacher relationship, and student outcomes.

Classroom Context

Emotion socialization has often been studied within the home setting. However, as mothers have become pivotal in the job market in the United States, the average time a mother takes off after birthing a child is 10 weeks (National Center for Health Statistics), leading to infants and young children starting a structured daycare or early school program at a very young age. Due to this, research continues to explore how other adults, such as teachers or daycare providers, can socialize emotions and continue to help the child develop emotional competencies. While children are within more structured settings, such as early preschool settings, they have increased expectations that elicit emotional responses. For example, during much of the day students are expected to sit still, focus their attention, follow instructions, delay gratification, engage in social interactions, and sustain their attention on difficult tasks.

Research has continued to find that within classrooms, students frequently experience a range of emotions such as anxiety, sadness, frustration, and joy (Pekrun & Linnenbrink-Garcia, 2014). Furthermore, teachers also experience varied emotional experiences throughout the day (Frenzel, 2014). Valiente and colleagues (2020) identify the learning environment and collective peer group functions as related to emotion-related socialization within the classroom setting. As this paper does not focus on the peer aspect of socialization, the collective peer group functioning will not be reviewed. The following section identifies key findings within the learning environment from this model.

Learning Environment. Brackett and colleagues (2015) argued that teachers who are better at creating a healthier learning environment can lead more effective emotion-related conversations with students. When conducting classroom context research, three domains continually emerged that related to the learning environment, (a) instructional support (i.e., concept development, quality of feedback), (b) emotional support (i.e., teacher sensitivity, positive climate), and (c) classroom organization (i.e., organization, efficiency, and productivity) (Hamre & Pianta, 2010). These three domains are discussed in further depth below.

Instructional Support. In classrooms with high instructional support, teachers help students to build understanding, emphasize learning and enjoyment, promote effort, increase their work habits, and provide personal attention and encouragement (Turner et al., 2002). Additionally, instructional support consists of teachers providing scaffolding and support creating opportunities for conceptual development, and offering appropriate questioning and feedback for their students (Pakarinen et al., 2011). High instructional quality teachers are associated with children's greater engagement in schoolwork (Downer et al., 2007) and academic functioning (Hamre & Pianta, 2005). School engagement is essential to a student's educational success. Characteristics exhibited by engaged students include work habits such as participation in class activities, being attentive, showing interest in the class learning, and being effortful (Reyes et al., 2012). Research suggests that instructional support from teachers can promote positive academic functioning and facilitate engagement (Wang & Eccles, 2012) and this may be related to instructional support and having less task avoidance by students (Pakarinen et al., 2011).

Pakarinen and colleagues (2011) observed teacher's instructional support and examined task-avoidant behavior and math skills in Kindergarten students. The researchers used the

CLASS observation measurement with concept development, quality of feedback, and language modeling measured for instructional support. Multilevel modeling was used to determine whether the teacher's instructional support would predict Kindergarten classroom differences in children's task-avoidant behavior and math skills. Findings showed that instructional support negatively predicted task-avoidant behavior among the students. Specifically, the less instructional supported observed, the higher the student's teacher rated task-avoidant behavior was. Furthermore, task-avoidant behavior predicted math skills.

Martin and colleagues (2022) investigated the role of student perceived teachers' instructional support (i.e., student reports of relevance, organization and clarity, feedback-feedforward) in predicting students' growth goal setting and academic engagement (i.e., perseverance, school attendance, homework behavior, aspirations). Findings of perceived instructional relevance and feedback-feedforward from teachers positively predicted students' growth goal setting and the goal setting predicted gains in students' academic engagement. The above findings show that teacher instructional support plays a key role in children's engagement in the classroom setting.

In addition to engagement, students perceived instructional support from teachers was associated with student motivation and academic achievement (Song et al., 2015). Ahmed and colleagues (2010) examined the multiple mediational effects of motivational beliefs and emotions that may account for the link between perceived social support and mathematics achievement with 238 seventh-grade students. Perceived teacher support was measured regarding students' perceptions of their math teacher's caring, friendliness, and helpfulness. They found that supportive social relationships were associated with achievement through their effects on competence, interest, enjoyment, and anxiety. Specifically, students who perceived

their teachers as supportive showed higher levels of motivation and achievement. When students perceive teachers as supportive, the support affirms students' sense of security and academic competency in the classroom.

Research indicates that student perceptions of teacher support are linked to academic functioning, such as student grade point average (GPA, Niehaus et al., 2012; Wentzel, 1998). Niehaus and colleagues (2012) conducted a one-year longitudinal study for 330 sixth-grade students examining the extent to which school connectedness (i.e., students' perceptions of school support, number of adults with whom they have a positive relationship) was associated with academic functioning. The students self-reported on their own perceptions of relationship strength with all school adults (e.g., How many adults in this school do you feel really know you as a person), degree to which teachers in the school care about students (e.g., Teachers are interested in students at my school), and students' sense of support in school (e.g., When I am at my school, I feel free to be who I am). The researchers found that students' perception of school support declined significantly across the sixth-grade year, regardless of student gender. Furthermore, students who reported less decline than average in school support had higher end-of-year GPAs than students who experienced more than average declines in school support. Similarly, Yildirim (2012) found that students' perceptions of teacher support (e.g., teacher shows an interest in every student's learning, helps students with their learning) was positively associated with learning strategies used in mathematics, influencing their grade, in a sample of 15-year-old students.

Emotional Support. The construct of emotional support has been measured in a variety of ways such as positive climate, negative climate, teacher sensitivity, and regard for student perspectives (Pianta et al., 2008). Furthermore, emotional support has been measured through

social support such as perceived caring (Wang & Eccles, 2012). For example, students who feel supported socially by teachers tend to have teachers talk with them about personal problems, while the teacher does their best to understand and respect the student. Another way emotional support has been studied is through direct teaching of emotions and consequences to students. Thus, the term emotional support is often used without an agreed upon operational definition.

Research has documented that helping children identify and express emotions appropriately is related to fewer externalizing and internalizing behaviors, higher motivation to learn, a more positive attitude towards school, and higher academic functioning (Hyson, 2004; Kostelnik et al., 2015). Teachers can contribute to the development of student social-emotional learning by the content covered in the classroom, creating social interaction among students, building trusting relationships, and engaging in intentional teaching (Kostelnik et al., 2015).

Researchers have also found that teachers play an essential role in children's emotion regulation through helping children accurately label, manage, and express the emotions experienced in the classroom setting (Pianta, 1999). Ahn (2006) conducted an observational study examining teachers' discussions of emotions in three different childcare centers. Twelve full-time primary teachers read books to preschoolers and then led a group discussion. Four teachers were given books that discussed and focused on emotions. Researchers found that teachers' discussions of emotions helped children identify emotion-related words, understand the causes of emotion, and deal with their emotions positively. Emotional support can consist of teachers helping children understand the emotional experiences and regulation of emotions through direct teaching by explaining the causes and consequences of emotions (Raver, 2003).

Wang and Eccles (2012) conducted a longitudinal study with seventh- through eleventh-grade students, examining the trajectory of four indicators of school engagement (i.e., school

compliance, participation in extracurricular activities, school identification, and subjective valuing of learning at school) and whether support from teachers, peers, and parents contributed to changes in the individual's school engagement over time. Teacher support was measured by teacher-report on the frequency with which they (a) helped students out when they had a personal or social problem at school (b) talked to students about how things were going in their lives (c) understood how students felt, and (d) respected students' opinions. Results indicated that teacher support played an important role in slowing the rate of the decline in school compliance, sense of school identification, and valuing of learning at school across time. Emotional support in this study was related to social support for students.

Additionally, teachers can indirectly influence children's emotional development. Prosen and colleagues (2011) studied pleasant (i.e., joy, surprise, and pride) and unpleasant (i.e., anger, disappointment, fear, sadness, shame, and guilt) emotions expressed by teachers in student-teacher interactions from first to fifth grade. Teachers across all grade levels expressed more unpleasant emotions (i.e., anger) than pleasant emotions when they interacted with students. Teachers experienced anger when students lacked discipline (i.e., fighting with each other), did not follow instructions, did not perform well academically, and were in danger. The next most common emotion expressed was joy, in relation to students' achievement (getting answer correct, completing homework), funny events (i.e., student tells a joke), relaxation (i.e., student plays), and following instructions (i.e., student following directions). Additionally, in general, the teachers' amount of expressed emotion, both pleasant and unpleasant, decreased from grade one to five. However, teachers' expressed anger initially decreased from grades one to three and then increased from grades four to five. Emotional support can be indirectly socialized through

teacher emotion expression within the classroom supports students' emotional development and aids in understanding emotional rules.

Teacher emotional support is significantly and positively associated with students' use of emotion regulation strategies. For example, teachers who provided an emotionally supportive learning environment increased students' ability to delay gratification, manage their frustrations, and maintain emotions during demanding situations (Bailey et al., 2016). These students, in turn, were more likely to create and maintain positive relationships with teachers and peers (Bailey et al., 2016). Students learned to use adaptive strategies such as projection strategies (i.e., how they will feel after completing a task) and self-talk strategies (i.e., if feeling uncertain in class, telling yourself you can be successful, Fried, 2010) when in these supportive classrooms. Optimal teacher emotional support allowed students to think for themselves, make their own decisions, and have some control over their own learning (Reeve et al., 2004). This type of support enabled students to control aspects of their learning, leading to increased emotional regulation (Zimmerman & Lebeau, 2003). When students were encouraged by teachers to be autonomous, by allowing them choices in their learning, students were found to be more successful and express positive emotions (Wubbels et al., 1991).

Classroom Organization. Teachers often report dealing with children's emotions and challenging behaviors is challenging and may limit a teacher's ability to interact with children in a positive way or prompt expression of negative emotions towards children (Ahn & Stifter, 2006). One way a classroom's learning environment is studied is often by its organization, efficiency, and productivity with the opposite of these three constructs being the level of chaos in the classroom. Hamre and Pianta (2010) describe a chaotic classroom as noisy, crowded, and lacking routine. Jeon and colleagues (2016) conducted a study on environmental chaos in

childcare settings and teachers' responsiveness. They found that chaos within the environment was directly associated with teachers' negative responses, including negative emotional reactions and negative social guidance. Similar findings of high classroom chaos and low effortful control were associated with the poorest school outcomes for children (Berger et al., 2017).

Teachers as Socialization Agents

Valiente and colleagues (2020) posit that because of the significant time a child spends in a classroom and the emotional nature of the classroom, the classroom is an essential setting to study socialization for children. Within their model, the socialization agent has two components: (a) teachers' social-emotional functioning and (b) peers' social-emotional and academic functioning. The teachers' social-emotional functioning component described within this model was comprised of four subcategories: stress, emotion, self-regulation, and mental health. These four categories were associated with the teacher's social-emotional functioning and were used to understand what students commonly perceived by their teacher. More so, from the motivational perspective, teachers' social-emotional functioning influenced the student-teacher relationship due to the teacher's ability to be involved and engaged with students. Subsequently, this motivation from the teacher to develop relationships and be engaged in the learning process then influences the students' ability to be motivated to learn. The four categories of teachers' social-emotional functioning are discussed more in depth below.

Stress. Challenging job demands, pay, and low appreciation are the sources of teacher stress, which often influences their health, overall well-being, and student interactions (Dicke et al., 2015; Hakanen et al., 2006), which can have negative effects on both the teacher and the students.

Research has found that teachers experiencing stress have a reduced ability to engage in work focused on strengthening relationships with their students (Yoon, 2002). Furthermore, teacher stress perceived by students leads to less student interest and motivation to learn, as it appears their teachers are not passionate about what they are teaching (Chang, 2009; Pakarinen et al., 2010). This may be due to teachers who experience high levels of stress, feel inefficient about their teaching tasks, and have a difficult time supporting students compared to teaching with less stress (Ramberg et al., 2020).

Ramberg and colleagues (2020) conducted a study in Sweden with 1045 upper secondary school teachers from 46 schools. They found that school-level averages of teacher stress, fatigue, and depressed mood were all significantly negatively associated with students' perceptions of teacher caring and school satisfaction. Pakarinen et al. (2010), studied Finnish students and found an indirect relation between teachers' stress and students' reading skills through students' engagement. These findings illustrate the negative influence of teacher stress on students' academic achievement and the student-teacher relationship.

Stress management in any profession is an essential skill and a lack of these skills can lead to prolonged stress. When considering teachers as a socialization agent, it is important to realize that stress can influence not only the teacher but also the student. Teacher stress may negatively affect their ability to deliver educational material and build relationships with students.

Emotions. Teaching is an emotional endeavor and similar to stress, research finds that teachers' emotions correlate with both their personal well-being and the quality of their teaching (Brackett et al., 2013; Frenzel, 2014). Within the school setting, teachers continuously experience emotional demands from students, parents, coworkers, and administration. Schulz

and Lanehart (2002) assert that emotions can be found in every aspect of teaching, so understanding how a teacher's emotions influence their functioning is essential. A study done with college professors analyzing emotions and methods of teaching found that teachers' experiences of positive emotions, such as motivation and pride, were positively associated with a student-focused approach to teaching. However, negative emotions, anxiety and embarrassment, were found to be positively associated with a teacher-focused approach to teaching (Trigwell, 2012). Understanding teachers' emotions and how they may influence their teaching style is essential to help support teachers' well-being and teaching style, therefore, potentially related to student achievement.

Research has found that teachers' emotions are strongly connected to interactions with their students (Hargreaves, 2000), including the student-teacher relationship. For example, when teachers use positive responses such as joy and satisfaction when a student understands a difficult subject matter or solves a difficult problem, the positive emotion of their teacher improves the student-teacher relationship. Conversely, negative emotions from teachers, such as anger and frustration, were related to lack of classroom discipline and discipline concerns for students (Chang, 2013), negatively influencing the student-teacher relationship.

Hagenauer et al. (2015) also demonstrated that student behavior in the classroom and student-teacher relationships contribute to teacher emotions. Their study had 132 teachers from Austria from 11 different schools where teachers' emotions (joy, anger, and anxiety) were self-reported during their instruction along with student behavior (closeness, student engagement, and lack of discipline). Their results found that the quality of the relationship between teachers and students was significantly related to teachers' emotional experiences during instruction. Teachers who felt more connected with their students were more likely to report joy and less likely to

report anxiety and anger. Furthermore, teachers' anger was reported most often if students misbehaved or did not engage in the learning activity. This may lead teachers experiencing negative emotions to be alienated from their students, which can influence teaching quality, weaken teacher-student relationships, and enhance burnout symptoms (Hagenauer, 2015). When examining teachers as a socialization agent, teacher emotion is essential to identify because it affects teaching quality, teacher-student relationships, and students' academic and emotional functioning.

Self-Regulation. Self-regulation is defined by how one adapts their thoughts, feelings, and actions to achieve goals (Zimmerman, 2000). Research has found that self-regulation is a main factor in differentiating between effective and non-effective teaching. Teachers with more social and emotional skills have been found to be better at providing a learning environment that encourages positive classroom relationships and facilitates student learning (Cuevas et al., 2014; Jennings & Greenberg, 2009). Similarly, Raver and colleagues (2012) also suggest that teachers' proficiency in self-regulation may be important for their students' overall functioning in the classroom. Self-regulation can be assessed in numerous ways, but many studies have focused on using effortful control or executive function skills. Both constructs represent higher-order cognitive skills that focus on controlling behavior, attention, planning and organizing, and emotional self-regulation.

Swanson et al. (2016) conducted a longitudinal study on elementary school teachers' effortful control and student outcomes. The study started when students were in Kindergarten and followed them into second grade. Findings indicated that teachers' effortful control was related to changes in students' externalizing behaviors and conflict with other students from first grade to second grade. Furthermore, teachers' low effortful control was negatively related to

their students' externalizing behaviors. Teachers with better self-regulation, including higher effortful control, have better oversight of the complexities in a classroom, including classroom management, instruction, and interactions with students compared to less-regulated teachers (Hall & Smith, 2006).

Bardack and Obradovic (2019) analyzed upper elementary teachers' executive functioning-related behaviors and routine teaching practices that could relate to students' executive functioning skills. They found a negative relation between teachers' displays of impulsive, distracted, forgetful, and disorganized behaviors during teaching and students' performance of executive functioning tasks. Additionally, they found that teachers' scaffolding of students' planning/organization behaviors positively predicted the students' executive functioning skills later in the school year. Self-regulation, effortful control, and executive functioning skills are all vital in a classroom as they allow teachers the ability to control impulses, focus attention, keep track of competing priorities, and focus on positively supporting students.

Researchers have suggested that teachers higher in self-regulation are better able to respond more supportively to both disruptions in classroom procedures and students' emotional expression than poorly regulated teachers (Swartz & McElwain, 2012). Braun and colleagues (2019) conducted a study with 58 middle school teachers, analyzing whether mindfulness skills within their most stressful class were related to their own well-being, job stress, occupational burnout, depressive and anxiety symptoms, or the quality of interactions with students. They found that mindfulness was significantly associated with lower levels of job stress, occupational burnout, and depressive and anxiety symptoms for teachers, along with higher levels of teachers' emotionally supportive interactions with students. These findings suggest that teachers' well-

being influences the way teachers interact with their students. These higher self-regulation skills then allow teachers to provide more learning opportunities for students to develop their own self-regulation with emotions, positive relationships, and behavior control (Raver et al., 2012).

Mental Health. The final component that Valiente and colleagues (2020) believe influences teachers as socializing agents is the teacher's own mental health. The World Health Organization (2018) defines mental health as a "state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community." The three previous concepts—stress, emotion, and self-regulation—all relate to an individual's mental health. Research continues to find that a teacher's own well-being is related to their classroom practice and student outcomes. Teacher depression is associated with how teachers cope with job demands, how they interact with their students, and how they approach their instruction (Gray et al., 2017; McLean et al., 2018). McLean et al. (2018) studied how teacher depression is linked to classroom instructional experiences. Specifically, they measured academic instruction facilitated by the teacher, students' independent and group work, teachers' planning/organizing instruction, and students' time off tasks and transitions. The study found teachers' depressive symptoms were negatively associated with teacher-facilitated academic instruction provided to the whole class and teachers' planning/organizing instruction. This finding suggests that teachers who experience more depressive symptoms may have a more difficult time implementing instructional approaches that require planning and effort. Further, teachers' depression in elementary schools has been negatively related to students' academic achievement, specifically math (McLean & Conner, 2015). When teachers experience more mental health symptoms, this

can lead to less planning and negative interactions with students—all factors that influence students' academic and emotional outcomes.

It is evident through the research that the four factors of stress, self-regulation, emotion, and mental health contribute to how a teacher acts as a socializing agent with students. Furthermore, these concepts all influence the way a student perceives their teacher and in turn are associated with the student-teacher relationship. Ultimately, the factors which influence a teacher's ability to teach also relate to the student-teacher relationship, motivation, and teacher preparedness, which, in turn, is associated with both academic and emotional outcomes for students.

Emotion-Related Interactions Between Student and Teachers

Within the Valiente et al. (2020) model, the socializing agent (teacher) and emotion-related interactions have a bidirectional relation. In the emotion-related interaction component, the researchers labeled two categories: interaction with teachers and interactions with peers. Within the emotion-related interactions with teachers' category, the researchers identified two subcategories: reactions to students' emotional displays and relationship quality. The next section explains key research findings related to emotion-related interactions with teachers.

Teacher Reactions to Student's Emotional Displays. Much of what research knows about emotion socialization stems from research conducted with parents. This research has brought attention to adults' reactions to a child's emotional expression and how this reaction informs and models appropriate contextual and cultural social-emotional behaviors. Current research is extending the parental emotion socialization model to the school setting with children's teachers (Morris et. al, 2013). Ahn and Stifter (2006) conducted an observational

study on 12 toddlers and preschool teachers examining how the teacher socialized the children's emotions. Results indicated that toddler teachers encouraged children's positive emotion expression more often than preschool teachers did. More specifically, toddler teachers used physical comfort and distraction more often than preschool teachers in response to children's negative emotions. Related to gender, both toddler and preschool teachers provided more physical comfort and distraction to females expressing negative emotion and provided constructive ways to express negative emotions to males. Bassett and colleagues (2017) conducted a study on preschool students and found that when a teacher's negative reactions were lower, students expressed more positive emotions. These limited findings support the notion that teacher's reactions to students' emotional expression represent emotion-related socialization behaviors that influence student outcomes.

Valiente and colleagues (2020) suggest that teachers' social-emotional functioning relates to how they respond to students' emotional expression, as well as how they facilitate an environment in which students feel safe and comfortable to express emotions. Research supports that a teacher's ability to create supportive student-teacher relationships, manage the classroom, and provide emotional responsiveness is influenced by their own social and emotional state (Buettner et al., 2016). Research has found that teachers with higher levels of depression, increased general stress, and emotional exhaustion used more punitive and minimizing reactions to children's negative emotion. On the contrary, teachers who used emotion regulation skills and healthy coping abilities with their stress and own emotions were more likely to support children's negative emotions by using expressive encouragement and responded more positively to students (Buettner et al., 2016).

Supportive Response Strategies. Fabes and colleagues (2002) identified the parental emotion socialization process of response can be identified supportively when the parent permitted their children to express emotions freely and to validate their emotional experiences. The intention behind these supportive responses was to help the child problem-solve the cause of their discomfort, validate the child's emotions, or improve the child's mood (Fabes et al., 2002; Niven et al., 2009). Fabes and colleagues (2002) identified three strategies for supportive emotion regulation of others. First, expressive encouragement reflects the degree to which adults are accepting of children's emotional displays and encourages the child to express their emotion (Fabes et al., 2002). Second, a problem-focused response is used when the adult helps the distressed child solve the problem to alleviate the negative emotion. Third, an emotion-focused response is used when an adult responds with strategies to help the child feel better, such as to comfort or distract the child. If teachers respond to children's emotions in a supportive way that allows acceptance and comfort, this can promote children's emotional development (Denham et al., 2012). Teachers who respond in supportive ways encourage students' expression and management of their own negative emotions.

Unsupportive Response Strategies. In contrast to supportive response strategies, unsupportive responses include punishment and minimization of the individual's emotional experience or expression (Fabes et al., 2002). Unsupportive responses used by adults teach children to suppress their emotions (Denham et al., 2012). Fabes and colleagues (2002) identified three unsupportive responses to a child's emotional expression: minimalization, punitive practices, and distress. Minimalization is used when an adult reduces the seriousness of the child's emotional reaction or diminishes the problem or distressed response. Punitive practices are when an adult verbally or physically punishes a children's emotional expression, and distress is when

an adult expresses discomfort and distress when a child expresses an emotion. Fabes and colleagues (2001) state that when an adult becomes distressed, they are not able to provide sufficient attention to the needs of the child. Negative reactions often occur when an adult makes light of the students' experience or threatens punishment for the emotional outburst.

Student-Teacher Relationship and Students' School Functioning

An attachment-theoretical perspective has been used in the studies of student-teacher relationships. Often this attachment is measured by (a) closeness, communicating in a warm and open manner, (b) conflict, negativity, and predictability, and (c) dependency, the reliance between the student and teacher (Zee et al., 2020). If these three factors—high closeness, low conflict, and low dependency—are optimally created within the student-teacher relationship, this allows students to have a secure base within the classroom setting. The student-teacher relationship is closely relevant to this research study on teacher responses to student emotions.

According to the attachment theory, the student-teacher relationship can help students establish a secure base with an adult within their classroom enabling students to explore and continue to advance their development (Roorda et al., 2011). When the relationship is conflicted, it can then lead to negative internal working models for the child and consequences, such as lower levels of social competence and higher levels of problem behavior (Howes, 2000). Howes (2000) conducted a five-year longitudinal study analyzing the student-teacher relationship and social-emotional competence. They found that a four-year-old student's behavior problems and child-teacher relationship quality predicted a student's second grade social competence with peers. The best predictors for a second grader's aggression and disruption were behavior problems and conflicted child-teacher relationships at age four. Similarly, being in a conflictual social-emotional climate and having low levels of behavior problems at four-years-old predicted

social withdrawal in second grade. This provides evidence that student-teacher relationships and class environment, as early as preschool, can influence long-term internal and external behavior for students.

Two prominent themes emerge when analyzing the teacher-student relationship from the attachment theory: closeness and conflict. Closeness examines the degree of support, warmth, and open communication between a student and teacher, while conflict analyzes negativity, discordance, and coercion (Verschueren & Koomen, 2012). In addition to the already mentioned constructs, researchers have found that if a teacher can make a clear commitment to the student, such as prioritizing their personal needs over academic material, this enhances the student-teacher relationship. Further, when a student realizes the commitment from the teacher, the student may feel more commitment and motivation to meeting the goals of the teacher (Learner & Kruger, 1997). Additionally, the student-teacher relationship appears to be bidirectional, indicating that not only can the teacher influence the relationship, but the student can also influence the teacher (Skalicka et al., 2015). Student characteristics, such as gender, race, social skills, and externalizing behaviors, can elicit responses from teachers, influencing the relationship. Skalicka and colleagues (2015) conducted a longitudinal study investigating the relationship between student-teacher conflict and children's externalized behavior and whether this relation was reciprocal. They found bidirectional relations between student-teacher conflict and teacher-reported externalizing behavior between preschool and first grade. These findings were mainly driven from aggression and rule-breaking behaviors from students, which negatively influenced the student-teacher relationship.

A positive relationship between a teacher and student has been found to have numerous positive effects for a student, such as increased motivation (Opdenakker et al., 2012; Zee et al.,

2013), academic achievement (Den Brok et al., 2004; Roorda et al., 2011; Zee et al., 2013), self-concept, emotional development (Davis, 2003), school well-being (Baker, 2006), and transition during critical time periods (Gaias et al., 2020). Furthermore, positive relationships between a student and teacher are associated with less externalizing and internalizing behaviors (Pianta & Stuhlman, 2004). Research suggests that stronger relationships motivate teachers to invest more into the student, leading to a student's success in school (Hamre & Pianta, 2001). Overall, the student-teacher relationship plays an essential role in student motivation and academic functioning.

Research indicates that negative student-teacher relationships have adverse effects on student outcomes. For example, students with higher externalizing behaviors tend to have higher conflict with the teacher, resulting in a lower student-teacher relationship (Zee et al., 2017). Children with externalizing behavior also often display low levels of social skills, which interferes with developing closeness with a teacher. Zee and colleagues (2017) examined teachers' perceptions of conflict and closeness within the student-teacher relationship and how students' externalizing behaviors influences teachers' self-efficacy beliefs. The study involved third- to sixth-grade students and their teachers. Teacher self-efficacy beliefs were rated by the teacher towards selected students within the classroom across four domains: instructional strategies, student engagement, behavior management, and emotional support. The results showed that students' externalizing behavior predicted higher levels of teacher-perceived conflict, which resulted in lower self-efficacy beliefs from teachers for the student. Similar results were found by Skalicka and colleagues (2015), who also studied the student-teacher relationship, specifically conflict, and students' externalizing behaviors. The researchers examined whether there was a reciprocal relationship between the student-teacher relationship

and a child's social skills. Data was collected on social skills, externalizing behaviors, and student-teacher conflict in a longitudinal process for preschool to third-grade students. Their findings suggested that externalizing behavior is a stronger predictor of conflict in the student-teacher relationship than children's social skills. Additionally, student-teacher conflict was predictive of externalizing behavior, as well as later social skills.

Overall, it is clear that a strong student-teacher relationship, as indicated by high closeness and low conflict, predicts positive outcomes, such as academic functioning (Shi & Ettekal, 2021), motivation (Zee et al., 2020), and social development (Davis, 2003) for students. When students build a strong relationship with their teachers, students view teachers as a secure base for learning, which leads to students' better ability to learn, express themselves, and engage in academic content.

Academic Functioning

Academic achievement is often evaluated by standards-based assessments within the school setting. These standardized assessments evaluate student performance, but researchers argue in addition to teacher and school support, non-school effects (i.e., student lacking prerequisite skills, emotion regulation) also impact the standardized assessment (Ladd & Lauen, 2010). Using standardized assessments for academic achievement is important due to the consistency and similarity of this assessment for all students. However, the standardized assessments do not directly assess the student's motivation, engagements in the classroom, and ability to compete work on a long-term basis, throughout the school year. These less standardized factors of academic achievement influence a student's ability to be successful within the academic realm and influence a student's year-long grades. Incorporating an assessment that captures a student's long-term performance within the classroom setting, such as

work habits, will allow this domain to be more encompassing to a student's academic functioning. This study will use both mathematics and English language arts standardized assessments completed by the students, in addition to a teacher's perception of work habits within the classroom, to get a well-rounded view of student academic functioning.

A student's attendance at school is a key predictor in their academic achievement (Cutuli et al., 2013; Lehr et al., 2004). Roby (2004) used data from 3,171 students in fourth, sixth, ninth, and twelfth grade and examined their standardized assessment scores with the school's average attendance rates and found a statistically significant relation between the school's average student attendance and school's average student achievement at all grade levels. The correlation of student attendance and student achievement is moderate to strong, with the most significant relationship occurring in ninth grade. As such, I used attendance as a covariate to reduce the likelihood of this influencing the relation between students' perceptions of their teacher's response to student emotions and academic functioning.

Student Characteristics

Valiente and colleagues' (2020) model identifies student characteristics as a main component of socialization practices. These researchers recognize many factors are relevant to student outcomes such as age, sex, temperament, student IQ, family SES, and teacher education. However, they do not go into these characteristics in detail and how they incorporate directly into the model. In my study, I will examine the role of student gender and race to examine whether these student characteristics influence student's perception of how their teacher responds to their emotional expression.

Literature shows that a positive teacher-student relationship is associated with numerous positive outcomes for students and can be a buffer against risks associated with problem behaviors and poor self-regulation skills (Silver et al., 2005). Research finds student individual characteristics influence the student-teacher relationship, such as gender, race, language ability, and behavior (Baker, 2006; Murray & Greenberg, 2000; O'Connor, 2010). In the next section, student characteristics of gender and race will be discussed in more detail in relation to how these characteristics interact with the student-teacher relationship and academic functioning.

Gender. Student gender appears to influence the student-teacher relationship. Researchers continue to find that females often report higher quality relationships with their teachers than males (Howes, 2000). Females tend to be more positively engaged within the classroom, which could potentially promote a higher quality student-teacher relationship (Hughes et al., 2008). Contrarily, teachers consistently, from preschool to middle school, rate their relationship with males as higher in conflict and lower in closeness (Hamre & Pianta, 2001; Saft & Pianta, 2001). The concept of teachers having poorer relationships with males than females, continues to be found in recent research (O'Conner, 2010; Spilt et al., 2012).

Split and colleagues (2012) conducted a longitudinal study, from first to fifth grade, analyzing patterns in both conflict and warmth as predictors of achievement in middle school with a diverse sample of 657 students and their teachers. This study was specifically aimed to examine the trajectories of change in the teacher-student relationship throughout elementary school years and the influence on school performance of academically at-risk children in middle school. The findings indicate that low levels of teacher-rated warmth were associated with lower academic gains for males. Furthermore, regardless of the teacher gender, relationships with male

students were reported as more conflictual and female teachers reported less closeness with male students.

Hajovsky and colleagues (2017) analyzed longitudinal data between teacher-student closeness and conflict across elementary grades and gender groups using the National Institute of Child Health and Human Development longitudinal sample. Their findings continue to support the teacher-rated closeness decreased for both genders over time, but conflict increased for males and there was more variance throughout the years for males. McFarland and colleagues (2016) investigated the role of teacher and child gender on student-teacher relationships and found male students had higher conflict with their teachers than female students, and female students felt closer to their teachers than male students. Furthermore, they found that teacher gender had a positive correlation with student-teacher relationships closeness for males and females. Specifically, female teachers had a strong relationship with both male and female students. However, male teachers had more conflicts with both males and females than female teachers.

Furthermore, the literature on the effect of student gender has shown teachers interact with males and females differently. Jones and Dindia (2004) did a meta-analysis on 32 empirical studies on gender differences and found that male students had more interaction opportunities with their teachers and were more frequently called on and responded to in the classroom than female students.

Studies on student-teacher gender interaction effects on academic achievement have offered very mixed results and have differed in their interpretations. Some studies found that having a teacher of the same gender does not affect students' achievement (Neugebauer et al., 2010; Winters et al., 2013). Krkovic and colleagues (2014) aimed their study on the effects of the teacher-student gender interaction on teachers' evaluations in mathematics, language, and school

success, in a large sample of Finnish sixth-grade students. They found that male teachers do not evaluate males better or worse than females, and female teachers do not evaluate females as better or worse than males. However, Dee (2006) reported strong evidence that females' performance was generally higher when taught by female teachers and males by male teachers. Dee (2007) additionally reported that the teacher-student gender interaction affects teachers' perceptions of students' performance, as teachers preferred students of the same gender.

The role of gender in society continues to be an important topic in education (Krkovic et al., 2014) and research findings on gender continue to be relatively stable. That is, females typically outperform males on reading competency and males outperform females in mathematics (OCED 2013). Dee (2006) conducted a large-scale longitudinal study in the United States and found that when children enter Kindergarten, they do not show performance differences in mathematics and reading skills. However, by the end of the third grade, males outperform females in mathematics, and females outperform males in reading. As students continue to mature, these gender performance gaps have doubled (Dee 2006). This creates the question of whether gender gaps in performance stem from the result of cognitive development only or whether they develop in part from peoples' different perception and treatment of male and female students. Specifically in an academic realm, adults (i.e., teachers, parents) and society may encourage males to be more interested in mathematics, while prompting females to be interested in reading, leading to actual performance differences.

Overall, it appears that there continues to be a gap within academic functioning for males and females with mixed findings. On one hand, research has found that when teachers evaluate students there are no significant differences between male and female students and some studies have shown no academic achievement difference by having a teacher of the same gender

(Neugebauer et al., 2010; Winters et al., 2013). On the other hand, males are observed to have more verbal interactions with their teacher (Krkovic et al., 2014), and it appears that gender influences the student-teacher relationship, which then relates to the student's academic functioning (Dee, 2007). Although there continues to be a consistent performance difference between male and female students in mathematics and reading, it is important to add to the student-teacher relationship research by studying how students perceive their teacher's response to their emotional expression as a potential reason why this relationship may be stronger or weaker for a specific gender.

Race. A student's racial characteristics also appear to influence the student-teacher relationship and response to emotional expressions. Cultural differences between children and teachers may contribute to teachers' misinterpretation of children as emotionally dysregulated (Sirin, Ryce, & Mir, 2009). Formal schooling in the United States is centered around European American values (Bennett, 2001), and a teacher who is similar in racial/ethnic and/or language background may be able to provide a more emotionally supportive classroom climate (Nelson et al., 2013; Saft & Pianta, 2001). However, other researchers have not found associations between teacher-child relational quality and racial match between students and teachers (Ewing & Taylor, 2009; Howes et al., 2011).

In a recent study, researchers examined whether same-race teachers better connect with their students. This question is rooted in the critical role teachers play in their students' cognitive and behavioral development (Kraft, 2019). Teachers' expectations about appropriate classroom behavior are informed by their own values and beliefs, which can shape their perceptions of student behavior in the classroom setting. Tenenbaum and Ruck (2007) conducted a meta review and found children of color receive less positive attention and less praise from teachers than

White students. However, among the 10 studies they examined of negative speech used by teachers towards students, they did not find any significant differences. That is, it did not appear that teachers used more negative speech with ethnic minority children than with European American children. However, Tosolt (2010) investigated whether student's perceptions of caring (i.e., interpersonal, academic, and fairness) teacher behavior differed by student race. Findings of African American students were more likely to value caring that helped them achieve greater academic success, while White students were more likely to value caring that built strong interpersonal relationships.

Despite evidence on the race disparity in student-teacher relationships, it is not clear why this difference exists. Teachers have described higher quality relationships with European American students than African American and Latino American students (Birch & Ladd, 1997; Hamre & Pianta, 2001; Saft & Pianta, 2001). Literature in similar areas may indirectly make some connections. For example, researchers have found that African American children show more behavior problems and lower levels of positive social and emotional skills when entering school, compared to White students as rated by their classroom teacher (Matthews et al., 2010). This may lead to increased conflict between the student and the teacher and lower levels of teacher support. It is also possible that teachers may be more attuned to children who share similar ethnic backgrounds so they can be more responsive to their needs than children whose backgrounds and beliefs are unknown to their teacher (Split et al., 2012). Finally, it is possible that teachers endorse racial stereotypes, consciously or subconsciously, that may influence their behavior and perceptions of these students (Thijs et al., 2012). This is an area that needs continued further research to clarify why race influences the student-teacher relationship.

Using Valiente and colleagues (2020) model, I will describe teachers' roles as socializers and the constructs that impact the teacher's ability to socialize student emotions. These factors not only influence the teacher's practice in the classroom but also what students perceive from their teacher, which in turn, relates to the student-teacher relationship. This study will add to the research within the education field to gain insight into how teachers may respond to students' emotional expression depending on the student's characteristics. Research continues to show the importance of the student-teacher relationship on student outcomes, but the individual construct, emotional response/support, that make up this relationship is much less researched. Thus, I will examine the specific construct of the supportive or unsupportive responses that children perceive from their teacher and their link to student academic functioning.

Research Questions and Hypotheses

1. How does the students' perception of their teacher's response to their own emotional expression differ based on gender?

Hypothesis 1a- Because females tend to report higher levels of psychological closeness with their teachers than do males (Howes, 2000), female students perceive their teacher using more supportive strategies than male students.

Hypothesis 1b- Because the student-teacher relationship between males and their teacher is often higher in conflict than females (Hamre & Pianta, 2001), male students perceive their teacher using more unsupportive strategies than female students.

2. How does the students' perception of their teacher's response to their own emotional expression differ based on race?

Hypothesis 2- Research is inconclusive on perceptions minority students have of their teacher. Some studies suggest minority students have more positive perceptions of their teachers than White students (Cherng & Halpin, 2016); while others suggest there is no difference (Ettekal, & Shi, 2020). Thus, the analysis of race and supportive and unsupportive responses will be exploratory.

3. What is the relation between students' perception of their teacher's response (supportive or unsupportive) to their own emotional expression and their academic functioning (i.e., mathematics achievement, English language achievement, work habits)?

Hypothesis 3a- Because closer student-teacher relationships increase motivation and academic engagement (Baker et al., 2004; Davis, 2003; Den Brok et al., 2004; Opendakker et al., 2012; Zee et al., 2013; Roorda et al., 2011), students who perceive their teachers as using more supportive responses will have higher mathematics achievement scores.

Hypothesis 3b- Because closer student-teacher relationships increase motivation and academic engagement (Baker et al., 2004; Davis, 2003; Den Brok et al., 2004; Opendakker et al., 2012; Zee et al., 2013; Roorda et al., 2011), students who perceive their teachers as using more supportive responses will have higher English language achievement scores.

Hypothesis 3c- Because closer student-teacher relationships increase motivation and academic engagement (Baker et al., 2004; Davis, 2003; Den Brok et al., 2004; Opendakker et al., 2012; Zee et al., 2013; Roorda et al., 2011), students who perceive their teachers as using more supportive responses will have higher work habit scores as rated by their teacher.

Hypothesis 3d- Because conflict between the student-teacher relationship decreases motivation and academic engagement (Skalicka et al., 2015), students who perceive their teachers as using more unsupportive responses are associated with lower mathematics achievement scores.

Hypothesis 3e- Because conflict between the student-teacher relationship decreases motivation and academic engagement (Skalicka et al., 2015), students who perceive their teachers as using more unsupportive responses are associated with lower English language achievement scores.

Hypothesis 3f- Because conflict between the student-teacher relationship decreases motivation and academic engagement (Skalicka et al., 2015), students who perceive their teachers as using more unsupportive responses are associated with lower work habits score as rated by their teacher.

4. Is the relation between students' perception of their teacher's response (supportive or unsupportive) to their emotional expression and their academic functioning (i.e., English language achievement, mathematics achievement, work habits) moderated by gender and race?

Due to limited research on teacher emotion socialization practices, this question will be examined in an exploratory manner.

CHAPTER III: METHODS

Participants

A sample of 398 fourth- and fifth-grade students were recruited. Regarding demographic characteristics, 51.3% of the students were male, 16.3% were Black, 33.4% were Hispanic, 42.2% were White, and 8% were Asian, biracial, or Native American. Within the classrooms, the

students' race was generally homogeneous. Specifically, 75% of the classrooms had at least 60% of the same student race. These students were recruited from 24 general education classrooms from eight public elementary schools in the urban Midwest. According to public data, these districts have 35% – 55.3% of students on free or reduced-priced lunch, 7% –17% of students on Individual Education Plans, and the racial composition ranges from 2%-50.8% White, 2.9% – 15.1% Asian, 10.9% – 42.6% African American, and 8.1% – 98% Hispanic population. Schools provided demographic information (child's age, gender, race) and Forward test scores from the spring of the year when research was conducted.

Additionally, 22 classroom teachers participated in the study. The teachers ranged in years of experience from 1 year to 32 years, with the average being 10.4 years of teaching experience. Ninety-two percent of the teachers were female and 4.5% were Black, 4.8% were Hispanic, 86.2% were White, and 4.5% were mixed race.

Per inclusion criteria, participants were enrolled in fourth or fifth grade and had signed parental consent and child assent forms. Students who did not obtain a signed parent/guardian consent form or did not sign the student assent form were excluded from study participation.

Procedures

The study procedure was approved by the University of Wisconsin-Milwaukee's Institutional Review Board, and the study occurred between January 2019 and June 2019 at eight elementary schools in the urban Midwest. Students from elementary schools in the Midwest were recruited to participate in a larger study focused on interpersonal emotion regulation. Initially, research team members contacted multiple school principals, both public and charter, throughout the university's city. Once schools approved the study being conducted within their building, an

hour-long meeting was conducted with the principal, fourth- and fifth-grade teachers, and research team to discuss the school's potential involvement. An executive summary was provided to each principal and classroom teacher with the study details, including the benefits and risks.

Researchers delivered parent and teacher consent forms to participating teachers. The consent forms included the lead researcher's contact information to ensure all questions parents or teachers had could be answered. Additionally, each student received an introductory cover letter to bring home explaining the purpose of the study and that participation was voluntary. Parents were instructed to indicate their decision (yes or no) regarding their child's participation and to return the form to the student's teacher. A research team member conducted weekly check-ins with the classroom teachers (either in person or via email) to keep track of how many consents had been turned in. Once a classroom had returned consent rate where 65% of the students would be participating, the research team set up a day and time with the teacher that the survey could be completed. Once the survey was finished, regardless of participation, all students were given a stationery gift (e.g., notebook and highlighter). Parents and students were reminded that consent and participation could be withdrawn at any point without incurring any penalty.

Throughout March to June 2019, the research team members visited the classroom. Those not participating were asked to sit quietly at their desks and do work independently. The students who were participating were given a student assent form, and the purpose of the study, confidentiality, and willingness to participate was reviewed with the students. Once all questions were answered, students signed the assent form. Once collected, the research team went through and read each question individually to the group of students and allowed an ample amount of time for the students to respond before reading the next question. Additional research team

members walked around the room and answered any questions the students had. If any students needed additional time, they were allowed. Following the completion of the questionnaire, a research team member debriefed the students. A make-up day, arranged via the teacher and research member, was held for committed students absent on the initial day of data collection. The survey took approximately 45 minutes to complete, and students were provided brief movement breaks throughout the data collection.

The same day when the research team administered the student questionnaire, the teacher was given a questionnaire to fill out for themselves and one for each participating student. The teacher was given approximately two weeks to complete the questionnaires. The teacher was compensated with a \$75 gift card.

Once all questionnaires were completed and collected, each child's name written on the front cover was removed and replaced with an identification number for de-identification. These de-identified questionnaires remained locked in a file cabinet in the lead researcher's office. Data was entered into a computerized data system, which had a password-encrypted protection program to ensure further security. Two individuals entered the data to ensure accuracy in the entry process.

Measures

Students' Perception of Their Teacher's Response to Student Emotion. The Coping with Children's Negative Emotions Scale (CCNES) was created by Fabes and colleagues (1990). The CCNES presents 12 hypothetical scenarios in which a child gets upset or angry and the rater determines to what extent they respond to the negative affect expressed. This scale has six subscales that reflect the specific coping response, Distress Reactions (become uncomfortable

and uneasy in dealing with my “anger”), Punitive Reactions (yell at me for becoming so “angry”), Expressive Encouragement (encourage me to express my “anger”), Emotion-Focused Reactions (talk to me to calm me down), Problem-Focused Reactions (help me think of things to do to solve the problem), and Minimization Reactions (tell me not to make such a big deal out of it). Multiple scales have been developed from the CCNES, specifically ones for teachers to self-report on their reactions to their students, and one for adolescents to rate the caregivers’ response to their own emotional expression (Fabes et al., 2001). In the current study, the scale created for adolescents to rate their caregivers’ response was adapted for students to rate their teachers, instead of parents, in a school setting, instead of home setting. Specifically, the word “parent,” was replaced with the word “teacher,” and some of the examples were re-worded to fit the school setting instead of the home setting. Furthermore, with the younger-aged participants of the current study, the rating was reduced from a seven-point to a five-point scale.

For this study, students rated teacher responses to their emotion expression regarding the five subscales that were most applicable to the school setting. For example, students were given the vignette “When I get angry at something or someone in my school, my teacher...” and were asked to indicate their likeliness of using five types of reactions: (a) punitive reactions (e.g., “threatens to punish me”), (b) minimization reactions (e.g., “tells me I’m overreacting”), (c) expressive encouragement (e.g., “encourages me to let my angry feelings out”), (d) problem-focused reactions (e.g., “tries to help resolve the conflict”), and (e) emotion-focused reactions (e.g., “tries to help me calm down”). We did not include the distress reactions subscale due to student’s perceptions being used and the distress reaction measures the teacher’s distress.

The specific strategies were grouped into two broad categories of supportive and non-supportive strategies (Fabes et al., 2002). First, unsupportive strategies included minimization

response and punitive response subscales. Denham and Kochanoff (2002) used the CCNES for parents to rate their own reaction to their 3- and 4-year-old children and found this unsupportive scale had a mean alpha of .83; test-retest reliability of .41 for mothers, .60 for fathers. Zachary and colleagues (2019) reported an alpha level of .84 for unsupportive responses. The Cronbach's alpha reliability of the unsupportive response scale in the current sample was .79.

Second, supportive strategies included expressive encouragement, emotion-focused response, and problem-focused response. Denham and Kochanoff (2002) found this supportive scale had a mean alpha of .81 (average of expressive encouragement, emotion-focused, and problem-focused subscales); test-retest reliability of .45 for mothers, .50 for fathers. Further, Zachary and colleagues (2019) reported .95 for the supportive responses. The Cronbach's alpha reliability for the supportive response scale for the current study was .87.

Academic Functioning. The Wisconsin Forward Exam is designed to gauge how well students are doing academically based on the Wisconsin Academic Standards. According to the Wisconsin Department of Public Instruction, these standards for fourth- and fifth-grade students outline what students should know and assess whether they are on track with peers (Wisconsin Department of Public Instruction, 2021). The Forward Exam was administered online in the spring of each school year in English language, mathematics, science, and social studies for fourth-grade students and English language and mathematics for fifth-grade students. In the current study, we used the English language and mathematics assessment data for each grade. The reliability coefficient for fourth- and fifth-grade students in English language is .87 and .85 and in mathematics .91 for each grade (Wisconsin Department of Public Instruction, 2019). Each score falls into one of four levels: Advanced, Proficient, Basic, or Below Basic. These scores

will be converted into a scale from one to four with one representing Below Basic (1) up to four being Advanced (4).

Work Habits. Teachers answered six questions for each student on their individual work habits. Previous studies used teacher data from students' reports cards to measure work habits (Pierce et al., 1999) and the same six questions were used in this study. The questions assessed the teacher's perception of the student's motivation, attention to classwork, and executive functioning skills and reflected the teacher's perceptions of the student's academic engagement. Example questions included "works well independently" and "is attentive in class." Teachers rated these six questions on a five-point rating scale ranging from (1) very poor to (5) very good. Pierce and colleagues (1999) reported Cronbach's alpha of .93. The Cronbach's alpha for the current study was .96.

Attendance. A student's attendance at school plays a large role in their academic success (Lehr et al., 2004; Cutuli et al., 2013) and will be used as a control variable due to the potential of being a confounding variable. Attendance was measured as a percentage of days attended and is used as a covariate given its link to academic achievement (Alexander et al., 2001; Gottfried, 2010).

Table 1 summarizes the constructs in this study along with the measure used to assess the construct and the source of information.

Gender and Race. Student characteristics of gender and race were provided from the school records.

Table 1

Study Constructs and Measures

Study Construct	Measure	Reporter
Teacher Response to Students' Emotional Expression	Coping with Children's Negative Emotions Scale (Fabes et al., 1990)	Self
Academic Functioning	a) Academic achievement in English language arts and mathematics on statewide Forward exam	Standardized-Exam
	b) Work habits (Pierce et al., 1999)	Teacher
Attendance	Percentage of days attended	School record
Gender		School record
Race		School record

Analysis

Question 1: How does the student's perception of teacher response to their own emotional expression differ based on gender?

To assess whether students' perceptions of teacher responses to their own emotional expression differs based on gender, a MANOVA was conducted. In this analysis, the independent variable was the student's gender, and the dependent variables were the student's perception of the teacher's supportive and unsupportive responses. The analysis will determine whether there is a difference between males and females for both, supportive and unsupportive, responses.

Question 2: How does the students' perception of their teacher's response to their own emotional expression differ based on race?

Second, to assess whether students' perceptions of their teacher's responses to their own emotional expression differs based on race, an MANOVA analysis was conducted. In this analysis, the independent variable had one factor, race, with the three levels being White, Black, and Hispanic and the dependent variables were students' perceptions of supportive or unsupportive response. The "other" category of race was excluded from this analysis (N = 366). This analysis addressed whether there were differences between the students' perception of their teacher's response to the emotional expression depending on the student's race. After a MANOVA was conducted, a planned pairwise comparison was completed using the Bonferroni adjusted F-test and the alpha level ($.05/3=.017$) was adjusted for three comparisons (Black and White, Hispanic and White, and Black and Hispanic) to determine whether a difference existed between the groups.

Question 3: What is the relation between students' perception of their teacher's response (supportive or unsupportive) to their own emotional expression and their academic functioning (i.e., mathematics achievement, English language achievement, work habits)?

An analysis was conducted to examine the association between a students' perceptions of their teacher's response to their own emotional expression and academic functioning. A total of three separate regression analyses were conducted. The dependent variable for each regression was the indicator of academic functioning (mathematics achievement, English language achievement, work habits) and teacher response (supportive, unsupportive) being the independent variables in all three regression analyses. The main interests were the coefficients of supportive and unsupportive responses in relation to academic functioning. Race, gender, and

attendance were used as statistical control variables. The Adjusted R^2 value will be reported as it is a better estimate of the true population value as it considers and tests different independent variables against the model (Pallant, 2020).

Question 4: Is the relation between students' perception of their teacher's response (supportive or unsupportive) to their emotional expression and their academic functioning (i.e., mathematics achievement, English language achievement, work habits) moderated by gender and race?

Six additional analyses were conducted to assess whether the strength of the association between students' perceptions of their teacher's response (supportive and unsupportive) and their academic functioning (mathematics achievement, English language achievement, work habits) was moderated by race or gender. A moderator variable is one that influences the direction or strength of the relation between an independent and dependent variable. All continuous variables in these equations were mean centered. The reference group for the gender equation was males and for race the reference group was White as these variables will be dummy coded.

I then compared whether the interaction model fits significantly better than the no-interaction model using the change in R^2 and its corresponding F-statistic. If there was a significant interaction, this meant the effect of student perceptions of teacher responses on academic functioning differed by gender. Additionally, I plotted this equation on a graph using Excel. I did the same procedure as above to see whether race was a moderating factor within this relationship. The reference group for the race computation was White. If there was a significant interaction, this meant the effect of teacher responses on academic functioning differed between target races (Black and Hispanic) and reference race (White).

CHAPTER IV: RESULTS

Preliminary Analyses

IBM SPSS Statistics 27 was used to perform the analyses for each of the four research questions. Data was entered into an electronic system by two independent researchers to check for accuracy. Screening of data indicated no data outside of the range of possible value for any variables. Missing data was minimal, with one to three missing values (0.2 – 0.7%) in the study variables.

The means, standard deviations, and zero-order correlations among the study variables are presented in Table 2. The correlation between student perceptions of teacher support and unsupportive response was very small and negative ($r = -.06, p = .05$), which indicates these constructs were distinct from each other. In addition, the magnitude of correlation found in the current study is consistent with that reported in prior research. For example, Fabes and colleagues (2008) conducted a psychometric property study for the CCNES and found similarly low correlations between supportive and unsupportive response subscales ($-.14 < r < -.02$). In a recent study, Poulou and colleagues (2022) also reported a small magnitude of correlation ($r = .08$) between the two types of responses.

Table 2

Means, Standard Deviations, and Correlations of Study Variables

Variable	1	2	3	4	5	6
1. Supportive Response	--					
2. Unsupportive Response	-.06	--				
3. English Achievement	-.08	-.16**	--			

4. Math Achievement	-.09	-.08	.67**	--		
5. Work Habits	-.05	-.31**	.34**	.34**	--	
6. Attendance	-.03	-.13*	.14**	.15**	.18**	--
M/(SD)	3.23(.96)	1.68(.83)	2.36(.90)	2.36(.89)	3.83(1.1)	95.32(4.28)
Range	1-5	1-5	1-4	1-4	1-5	78-100

* $p < .05$. ** $p < .01$.

Statistical Assumptions

Assumptions for MANOVA. Multivariate analysis of variance (MANOVA) was used for my first two research questions and the statistical assumptions are reviewed below. There are three assumptions that are needed for the statistical MANOVA to be valid: multivariate normality on the dependent variables in each population, independence, and homogeneity of the covariance matrices (Howell, 2012). A distribution graph was created and the Mahalanobis distance was calculated to assess the samples to ensure the data normality. Independence confirms that observations were independent of each other in the group and across the group. Homogeneity of the covariance matrices states that populations (male and females for research question one and Hispanic, African American, and White for research question two) have the same variances and covariances. The variances of each population (male and females for research question one and Hispanic, African American, and White for research question two) were calculated and inspected to ensure variances were equal.

Assumptions were checked regarding normality, linearity, and homogeneity of variance. I first examined Mahalanobis distance to check for multivariable normality and outliers. The Mahalanobis distance for my study was 18.05. This value was then compared to the critical value, which was 13.82 ($p < .001$). The data was examined and there were four outlier points that

exceeded the 13.82 critical value. MANOVA can tolerate a few outliers as long as their scores are not too extreme and that there is a reasonable sample size, thus these four points were left in the analyses (Pallant, 2020). Additionally, frequency distributions were inspected via histogram, as well as skewness and kurtosis values. Students' perceptions of their teacher's unsupportive response to their emotional expression variable (skewness = 1.74, kurtosis = 2.71) had a non-normal distribution. Students' perceptions of their teacher's unsupportive response to their emotional expression were positively skewed, indicating a low number of students reported that their teacher used unsupportive responses ($M = 1.68$ $SD = .83$). With large samples (over 200), non-normal distribution is acceptable (Tabachnick & Fidell, 2013). Students' perceptions of their teacher's supportive response to their emotional expression ($M = 3.2$ $SD = .96$), appeared normally distributed (Skewness = $-.33$, Kurtosis = $-.74$).

To assess linearity, probability-probability (P-P) plots and scatterplots were visually inspected with a focus on the fitted loess line to assess linearity of variable relations (Appendix B). Each P-P plot was examined to determine whether the data points were generally arranged along a line, whereas the scatterplot was used to identify whether a horizontal line appeared to fit each residual plot reasonably well. Residual deviations did not appear to be systematic, and it appeared reasonable to conclude that variable relations were best represented by a linear model. The assumption of homogeneity of variance appeared to be met through visual inspection of scatterplots showing residuals at predicted levels of Y. There appeared to be no systematic relationship between the variance of the predictor values and the values of the outcome variable.

Assumptions for multiple regression. The third and fourth analysis involved multiple regression. The statistical assumptions for regression are a linear relationship between the dependent variable and the independent variables, multivariate normality, homoscedasticity, and

no multicollinearity (Howell, 2012). The linear relationship and homoscedasticity were analyzed using a scatterplot to determine whether there was a linear or curvilinear relationship.

Multivariate normality is met when the residuals are normally distributed, and this was examined by plotting the residual against their frequency and visually comparing with the normal distribution. Lastly, to examine multicollinearity (i.e., high correlations among independent variables), a variance inflation factor was examined.

P-P plots and scatterplots of the residuals versus each dependent variable were checked for the assumptions for (a) linearity, (b) normality, and (c) homoscedasticity (Appendix C). To examine multicollinearity, correlations of .70 or higher (Pallant, 2020) indicate potential multicollinearity. Multicollinearity was not a concern because the correlations among predictor variables ranged from -.06 – .18. Further, the tolerance and VIF values did not indicate multicollinearity (Supportive Response, Tolerance = .98, VIF = 1.02; Unsupportive Response, Tolerance = .94, VIF = 1.06).

Primary Analyses

Question #1: How does the students' perception of their teacher's response to their own emotional expression differ based on gender?

For the first research question, I used a MANOVA to analyze the effect of student gender on student's perception of their teacher's supportive or unsupportive response (Table 3). The multivariate test of the gender difference was not significant, Wilk's $A = .99$, $F(1,395) = 2.28$, $p = .10$, $\eta^2 = .01$. The η^2 indicated that approximately 1% of the multivariate variance of the dependent variables was associated with gender.

The MANOVA was not significant and may be due to the low correlation between the dependent variables. The MANOVA recommended having moderately correlated dependent variables. However, even though the magnitude of the correlation was low between my dependent variables, I decided to run a MANOVA due to supportive and unsupportive response both came from the same individual and running the MANOVA took some of the individual differences error out. However, given the low correlation between supportive and unsupportive responses, separate ANOVAs were also acceptable. As such, although the post hoc analysis was not part of the priori data analytic plan, the following post hoc exploratory analysis was completed to explore potential associations among these critical variables. I decided to interpret the gender effects because the dependent variables were not correlated with each other in which case separate ANOVA tests were acceptable. A Bonferroni adjustment was used as this was a post-hoc assessment. To reduce the chance of a Type 1 error, I divided my original alpha level of .05 by the number of analyses (.05/2), giving a new alpha level of .025 to test each ANOVA. These results suggested that male students had a statistically higher mean ($M = 1.75$, $SD = .82$) than female students ($M = 1.59$, $SD = .82$) for perceived teacher unsupportive responses.

Table 3

Between Subjects Effects for Gender and Student Perception of Teachers' Supportive and Unsupportive Response

Measure	Female	Male	$F(1, 394)$	η^2
	$M(SD)$	$M(SD)$		
Supportive Response	3.20 (.96)	3.27 (.95)	.48	.001
Unsupportive Response	1.59 (.82)	1.75 (.82)	3.92*	.01

* $p < .025$.

Question #2: How does the students' perception of their teacher's response to their own emotional expression differ based on race?

For the second research question, I used a MANOVA to analyze the effect of student race on the student's perception of their teacher's supportive or unsupportive response (Table 4). The participants who identified as "other" were removed from this analysis ($n = 364$) for meaningful interpretation of the results. The Box's Test of Equality of Covariance Matrices checks the assumption of homogeneity of covariance across the groups using $p \leq .001$ as a criterion and my sample violated this assumption as the $p \leq .001$. Thus, the Pillai's Trace test was used as it is a test statistic that is robust and not highly linked to assumptions about the normality of the distribution of the data (Tabachnick & Fidell, 2013). The multivariate test of the race difference was significant, Pillai's Trace = .11, $F(2, 362) = 10.66$, $p < .001$, $\eta^2 = .06$. The η^2 indicated that approximately 6% of multivariate variance of the dependent variables was associated with race.

Because the MANOVA was significant, I then completed a between-subjects post-hoc ANOVA. A Bonferroni adjustment was used as this was a post-hoc assessment. To reduce the chance of a Type 1 error, I divided my original alpha level of .05 by the number of analyses (.05/3), giving a new alpha level of .017 to test each ANOVA. Both the student's perceptions of the teacher's supportive response and their perceptions of teacher's unsupportive response had a statistically significant difference between race, $F(2, 362) = 4.98$, $p < .01$ for supportive response and $F(2,362) = 15.54$, $p < .001$ for unsupportive responses.

Table 4

Between-Subject Effects for Race and Supportive and Unsupportive Response

Measure	African	Hispanic	White	$F(2, 363)$	η^2
	American				
	$M (SD)$	$M (SD)$	$M (SD)$		
Supportive Response	3.38 (.86)	3.03 (1.00)	3.34 (.91)	4.98*	.03
Unsupportive Response	2.14 (1.09)	1.48 (.67)	1.65 (.72)	15.54**	.08

* $p < .01$. ** $p < .001$.

Regarding supportive response, post hoc comparisons using the Tukey HSD test indicated that the mean score for the Hispanic students ($M = 3.03$, $SD = 1.00$) was significantly lower than the African American students ($M = 3.38$, $SD = 0.86$, $p = .04$) and White students ($M = 3.34$, $SD = .91$, $p = .01$) for student perceived supportive responses. However, African American students ($M = 3.38$, $SD = 0.86$, $p = .96$) did not significantly differ from White students ($M = 3.34$, $SD = .91$) for student perceived supportive responses. Regarding unsupportive response, the Tukey HSD test indicated that the mean score for African American students ($M = 2.14$, $SD = 1.09$) was significantly higher than the Hispanic students ($M = 1.48$, $SD = .67$, $p < .001$) and White students ($M = 1.65$, $SD = .72$, $p < .001$) for student perceived unsupportive responses. However, Hispanic students ($M = 1.48$, $SD = .67$, $p = .16$) did not significantly differ from White students.

Question 3: What is the relation between students' perception of their teacher's response (supportive or unsupportive) to their own emotional expression and their academic functioning (i.e., mathematics achievement, English language achievement, work habits)?

English Language Achievement. A hierarchical linear regression analysis was conducted to examine the association between teacher's supportive and unsupportive responses to emotions and English language achievement (Table 5). In the first step, covariates (gender, race, and

attendance) were entered into the regression model. In the second step, the independent variables of interest were entered (supportive and unsupportive response). The results of the first block of the regression model were statistically significant [$F(4,357) = 8.77$, Adjusted $R^2 = .08$, $p < .001$]. Additionally, the Adjusted R^2 value of .08 suggests that gender, attendance, and race account for 8% of the variance in English language achievement. Specifically, female students had higher levels of English language achievement than males. Black and Hispanic students had lower levels of English language achievement than White students. Students who had higher attendance had higher levels of English language achievement than students who had lower attendance. For the second block, the predictor variables, students' perceptions of supportive response and unsupportive response, were entered into the analysis. The results of the second block of regression model were statistically significant [$F(6, 355) = 3.46$, Adjusted $R^2 = .09$, $p = .03$]. Additionally, the R^2 change value of .02 associated with this regression model suggests that the addition of supportive response and unsupportive response to the first block model accounts for 2% of the variation to English language achievement. Unsupportive teacher response was significantly associated with predicting English language achievement; however, supportive teacher response was not. Specifically, as unsupportive response decreased by one-point, English language achievement increased ($\beta = -.13$, $p = .03$). The covariates, unsupportive response, and supportive response accounted for approximately 9% of the variance in English language achievement.

Table 5

Results of Hierarchical Multiple Regression Analysis for English Language Achievement

Variable	Unstandardized B	SE	β	Adj R^2	ΔR^2
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Step 1				.08	.09**
Female	.29**	.09	.10		
Black	-.39**	.14	-.16		
Hispanic	-.39**	.10	-.21		
Attendance	.03*	.01	.13		
Step 2				.09	.02*
Female	.26**	.09	.14		
Black	-.33*	.14	-.14		
Hispanic	-.43**	.10	-.23		
Attendance	.03*	.01	.12		
Unsupportive Response	-.13*	.06	-.12		
Supportive Response	-.08	.05	-.09		

Note. For gender, male was the reference group. For race, White was the reference group.

* $p < .05$. ** $p < .01$

Mathematics Achievement. A hierarchical linear regression analysis was conducted to examine the association between teachers' supportive and unsupportive responses to emotions and mathematics achievement (Table 6). In the first step, covariates (gender, race, and attendance) were entered into the regression model. In the second step, the independent variables of interests were entered (supportive and unsupportive response). The results of the first block of the regression model were statistically significant [$F(4,357) = 7.27$, Adjusted $R^2 = .07$, $p < .001$]. Additionally, the Adjusted R^2 value of .07 suggests that gender, attendance, and race accounts for 7% of the variance in mathematics achievement. Specifically, Black and Hispanic students had lower levels of mathematics achievement than White students. Students who had higher

attendance had higher levels of mathematics achievement than students who had lower attendance. For the second block, the predictor variables, students' perceptions of supportive response and unsupportive response, were entered into the analysis. The results of the second block of regression model were not statistically significant [$F(6, 355) = 3.84$, Adjusted $R^2 = .07$, $p = .27$]. The covariates, students' perceptions of unsupportive response and supportive response accounted for approximately 7% of the variance in mathematics achievement. The addition of unsupportive response and supportive response was not statistically significant, indicating that adding these two variables to the model did not significantly explain any additional variance in mathematics achievement.

Table 6

Results of Hierarchical Multiple Regression Analysis for Mathematics Achievement

Variable	Unstandardized B	SE	β	Adj R^2	ΔR^2
Step 1				.07	.08**
Female	-.01	.09	-.01		
Black	-.38**	.13	-.16		
Hispanic	-.42**	.10	-.23		
Attendance	.02*	.01	.12		
Step 2				.07	.01
Female	-.03	.09	-.02		
Black	-.33**	.14	-.15		
Hispanic	-.45**	.10	-.25		
Attendance	.02*	.01	.11		

Unsupportive	-.05	.06	-.05
Response			
Supportive	-.07	.05	-.08
Response			

Note. For gender, male was reference group. For race, White was the reference group.

* $p < .05$. ** $p < .01$

Work Habits. A hierarchical linear regression analysis was conducted to examine the association between teachers' supportive and unsupportive responses to emotions and work habits (Table 7). In the first step, covariates (gender, race, and attendance) were entered into the regression model. In the second step, the independent variables of interests were entered (supportive and unsupportive response). The results of the first block of the regression model were statistically significant [$F(4,356) = 18.89$, Adjusted $R^2 = .17$, $p < .001$]. Additionally, the Adjusted R^2 value of .17 suggests that gender, attendance, and race accounts for 17% of the variance in work habits. Specifically, female students had higher levels of work habits than males. Black students had lower levels of work habits than White students, while Hispanic students had higher levels of work habits than White students. Students who had higher attendance had higher levels of work habits than students who had lower attendance. For the second block, the predictor variables, supportive response and unsupportive response, were entered into the analysis. The results of the second block of regression model were statistically significant [$F(6, 354) = 16.16$, Adjusted $R^2 = .20$, $p < .001$]. Additionally, the R^2 change value of .04 associated with this regression model suggests that the addition of supportive response and unsupportive response to the first block model accounts for 4% of the variation to work habits. Unsupportive teacher response was significantly associated with predicting work habits;

however, supportive teacher response was not. Specifically, as the average perceptions of unsupportive response decreased by one point, work habit score increased ($\beta = -.27, p < .001$). The covariates, unsupportive response, and supportive response accounted for approximately 20% of the variance in work habits.

Table 7

Results of Hierarchical Multiple Regression Analysis for Work Habits

Variable	Unstandardized <i>B</i>	SE	β	Adj R^2	ΔR^2
Step 1				.17	.18**
Female	.68**	.10	.33		
Black	-.53**	.15	-.19		
Hispanic	.07	.11	.03		
Attendance	.03**	.01	.14		
Step 2				.20	.04**
Female	.63**	.10	.30		
Black	-.40**	.15	-.15		
Hispanic	.03	.11	.01		
Attendance	.03*	.01	.13		
Unsupportive Response	-.27**	.06	-.21		
Supportive Response	-.02	.05	-.02		

Note. For gender, male was reference group. For race, White was the reference group.

* $p < .05$. ** $p < .01$

Question 4: Is the relation between students' perception of their teacher's response (supportive or unsupportive) to their emotional expression and their academic functioning (i.e., mathematics achievement, English language achievement, work habits) moderated by gender and race?

Interaction Between Race and Unsupportive Response

The results from question three indicated that supportive teacher response was not statistically significant in any of the models. Therefore, supportive teacher response was removed from the subsequent regression models. For each outcome variable, the first set of analyses focused on the interaction between race and unsupportive response; the second set of analyses focused on the interaction between gender and unsupportive response. In all models, unsupportive response was mean-centered. Tables 8 through 10 present the results of the hierarchical multiple regression analyses with an interaction between race and unsupportive response.

English Language Achievement. A hierarchical linear regression analysis was conducted to evaluate the interaction between race and unsupportive response on English language achievement (Table 8). In the first block, covariates (gender, attendance, and race) were entered. The results of the first block indicated that the model was statistically significant [$F(4,358) = 8.73$, Adjusted $R^2 = .08$, $p < .001$]. Additionally, the Adjusted R^2 value of .08 suggests that gender, attendance, and race accounts for 8% of the variance in English Language Achievement. Specifically, female students had higher levels of English language achievement than males. Black and Hispanic students had lower levels of English language achievement than White. Students who had higher attendance had higher levels of English language achievement than students who had lower attendance. For the second block, the predictor variable unsupportive response was entered into the analysis. The results of the second block indicated that model was

statistically significant [$F(5, 357) = 8.02$, Adjusted $R^2 = .09$, $p = .03$]. Additionally, the addition of unsupportive response to the first block model accounts for 1% of the variation to English language achievement (Change in $R^2 = .01$). Unsupportive teacher response was significantly associated with predicting English Language Achievement. Specifically, as the average perceptions of unsupportive response decreased by one-point, English language achievement increased ($\beta = -.13$, $p = .03$). For the third block, the interaction between race and unsupportive response was entered. The model was not statistically significant, [$F(7,355) = 5.93$, Adjusted $R^2 = .09$, $p = .70$]. The covariates, unsupportive response, and interaction variable accounted for approximately 9% of the total variance in English language achievement.

Table 8

Results of Hierarchical Multiple Regression Analysis for English Language Achievement:

Interaction Between Race and Unsupportive Response

Variable	Unstandardized B	SE	β	Adj R^2	ΔR^2
Step 1				.08	.09**
Female	.31**	.09	.17		
Attendance	.03*	.01	.12		
Black	-.38**	.14	-.16		
Hispanic	-.38**	.10	-.20		
Step 2				.09	.01*
Female	.28**	.09	.16		
Attendance	.03*	.01	.12		
Black	-.32*	.14	-.14		

Hispanic	-.40**	.10	-.21		
Unsupportive Response	-.13*	.06	-.12		
Step 3				.09	.00
Female	.28**	.09	.16		
Attendance	.03*	.01	.12		
Black	-.31*	.14	-.13		
Hispanic	-.39**	.10	-.21		
Unsupportive Response	-.16	.09	-.15		
Interaction 1	.01	.14	.00		
Interaction 2	.11	.14	.05		

Note. For gender, male was reference group. For race, White was the reference group.

Interaction 1 = unsupportive response x Black. Interaction 2 = unsupportive response x Hispanic.

* $p < .05$. ** $p < .01$

Mathematics Achievement. A hierarchical linear regression analysis was conducted to evaluate the interaction between race and unsupportive response on mathematics achievement (Table 9). In the first block, covariates (gender, attendance, and race) were entered. The results of the first block indicated that the model was statistically significant [$F(4,358) = 7.35$, Adjusted $R^2 = .06$, $p < .001$]. Additionally, gender, attendance, and race account for 6% of the variance in mathematics achievement (Adjusted $R^2 = .06$). Black and Hispanic students had lower levels of mathematics achievement than White students. Students who had higher attendance had higher levels of mathematics achievement than students who had lower attendance. For the second block, the predictor variable, unsupportive response, was entered into the analysis. The results of the second block indicated that model was not statistically significant [$F(5, 357) = 6.06$, Adjusted R^2

= .06, $p = .35$]. Unsupportive teacher response was not significantly associated with predicting mathematics achievement. For the third block, the interaction between race and unsupportive response was entered. The model was not statistically significant [$F(7,355) = 4.66$, Adjusted $R^2 = .06$, $p = .32$]. The covariates, unsupportive response, and interaction term accounted for approximately 6% of the variance in mathematics achievement.

Table 9

Results of Race Interaction Hierarchical Multiple Regression Analysis for Mathematics

Achievement

Variable	Unstandardized B	SE	β	Adj R^2	ΔR^2
Step 1				.06	.07**
Female	.00	.09	.00		
Attendance	.02*	.01	.11		
Black	-.37**	.14	-.16		
Hispanic	-.42**	.10	-.23		
Step 2				.06	.00
Female	-.01	.09	-.01		
Attendance	.02	.01	.11		
Black	-.35*	.14	-.15		
Hispanic	-.43**	.10	-.23		
Unsupportive Response	-.05	.06	-.05		
Step 3				.06	.01

Female	.00	.09	.00
Attendance	.02*	.01	.11
Black	-.30*	.14	-.13
Hispanic	-.40**	.10	-.22
Unsupportive Response	-.05	.09	-.05
Interaction1	-.11	.14	-.06
Interaction2	.12	.14	.06

Note. For gender, male was reference group. For race, White was the reference group.

Interaction 1 = unsupportive response x Black. Interaction 2 = unsupportive response x Hispanic.

* $p < .05$. ** $p < .01$

Work Habits. A hierarchical linear regression analysis was conducted to evaluate the interaction between race and unsupportive response on work habits (Table 10). In the first block, covariates (gender, attendance, and race) were entered. The results of the first block indicated that the model was statistically significant [$F(4,358) = 18.98$, Adjusted $R^2 = .17$, $p < .001$]. Additionally, the Adjusted R^2 value of .17 suggests that gender, attendance, and race accounts for 17% of the variance in work habits. Specifically, female students had higher levels of work habits than males. Black students had lower levels of work habits than White students. Hispanic students had higher levels of work habits than White students. Students who had higher attendance had higher levels of work habits than students who had lower attendance. For the second block, the predictor variable, unsupportive response, was entered into the analysis. The results of the second block indicated that model was statistically significant [$F(5, 357) = 19.81$, Adjusted $R^2 = .21$, $p < .001$]. Additionally, the R^2 change value of .04 associated with this

regression model suggests that the addition of unsupportive response to the first block model accounts for 4% of the variation to work habits. Unsupportive teacher response was significantly associated with predicting work habits. Specifically, as unsupportive responses decreased by one point, the student's work habits increased ($\beta = -.28, p < .001$). For the third block, the interaction between race and unsupportive response was entered. The model was not statistically significant, [$F(7,355) = 14.25, \text{Adjusted } R^2 = .20, p = .62$].

Table 10

Results of Race Interaction Hierarchical Multiple Regression Analysis for Work Habits

Variable	Unstandardized <i>B</i>	SE	β	Adj R^2	ΔR^2
Step 1				.17	.18**
Female	.70**	.10	.33		
Attendance	.03**	.01	.13		
Black	-.52**	.15	-.19		
Hispanic	.8	.011	.04		
Step 2				.21	.04**
Female	.64**	.10	.30		
Attendance	.03*	.01	.12		
Black	-.39**	.15	-.14		
Hispanic	.04	.11	.02		
Unsupportive Response	-.28**	.06	-.22		
Step 3				.20	.00

Female	.64**	.10	.30
Attendance	.03*	.01	.12
Black	-.38*	.16	-.14
Hispanic	.06	.11	.03
Unsupportive	-.34**	.10	-.26
Response			
Interaction1	.05	.15	.02
Interaction2	.15	.16	.06

Note. For gender, male was reference group. For race, White was the reference group.

Interaction 1 = unsupportive response x Black. Interaction 2 = unsupportive response x Hispanic.

* $p < .05$. ** $p < .01$

Interaction Between Gender and Unsupportive Response

Tables 11 through 13 present the results of the hierarchical multiple regression analyses with an interaction between gender and unsupportive response.

English Language Achievement. A hierarchical linear regression analysis was conducted to evaluate the interaction between gender and unsupportive response on English language achievement (Table 11). In the first block, covariates (gender, attendance, and race) were entered. The results of the first block indicated that the model was statistically significant [$F(4,358) = 8.73$, Adjusted $R^2 = .08$, $p < .001$]. Additionally, the Adjusted R^2 value of .08 suggests that gender, attendance, and race accounts for 8% of the variance in English language achievement. Specifically, female students had higher levels of English language achievement than males. Black and Hispanic students had lower levels of English language achievement than White students. Students who had higher attendance had higher levels of English language

achievement than students who had lower attendance. For the second block, the predictor variable unsupportive response was entered into the analysis. The results of the second block indicated that model was statistically significant [$F(5, 357) = 8.03$, Adjusted $R^2 = .09$, $p = .03$]. Additionally, the addition of unsupportive response to the first block model accounts for 1% of the variation to English language achievement (Change in $R^2 = 0.01$). Unsupportive teacher response was significantly associated with predicting English language achievement. Specifically, as the average perceptions of unsupportive response decreased by one-point, English language achievement scores increased ($\beta = -.13$, $p = .03$). For the third block, the interaction between gender and unsupportive response was entered. The model was not statistically significant [$F(6,356) = 6.81$, Adjusted $R^2 = .09$, $p = .39$].

Table 11

Results of Gender Interaction Hierarchical Multiple Regression Analysis for English Language Achievement

Variable	Unstandardized B	SE	β	Adj R^2	ΔR^2
Step 1				.08	.09**
Attendance	.03*	.01	.12		
Black	-.38**	.14	-.16		
Hispanic	-.38**	.10	-.20		
Female	.31**	.09	.17		
Step 2				.09	.01*
Attendance	.03*	.01	.11		
Black	-.32*	.14	-.14		

Hispanic	-.40**	.10	-.21
Female	.28**	.09	.16
Unsupportive Response	-.13*	.06	-.12
Step 3		.09	.00
Attendance	.03*	.01	.12
Black	-.31*	.14	-.13
Hispanic	-.40**	.10	-.22
Female	.28**	.09	.15
Unsupportive Response	-.08	.08	-.07
Interaction	-.10	.11	-.87

Note. For gender, male was reference group. For race, White was the reference group.

Interaction = gender x unsupportive response.

* $p < .05$. ** $p < .01$

Mathematics Achievement. A hierarchical linear regression analysis was conducted to evaluate the interaction between gender and unsupportive response on mathematics achievement (Table 12). In the first block, covariates (gender, attendance, and race) were entered. The results of the first block indicated that the model was statistically significant [$F(4,358) = 6.97$, Adjusted $R^2 = .06$, $p < .001$]. Additionally, gender, attendance, and race account for 6% of the variance in mathematics achievement (Adjusted $R^2 = .06$). There were no differences in mathematics achievement between males and females. Black and Hispanic students had lower levels of mathematics achievement than White students. Students who had higher attendance had higher levels of mathematics achievement than students who had lower attendance. For the second block, the predictor variable, unsupportive response, was entered into the analysis. The results of

the second block indicated that model was not statistically significant [$F(5, 357) = 5.75$, Adjusted $R^2 = .06$, $p = .35$]. Unsupportive teacher response was not significantly associated with predicting mathematics achievement. For the third block, the interaction between gender and unsupportive response was entered. The model was not statistically significant [$F(6,356) = 5.00$, Adjusted $R^2 = .06$, $p = .27$].

Table 12

Results of Gender Interaction Hierarchical Multiple Regression Analysis for Mathematics Achievement

Variable	Unstandardized B	SE	β	Adj R^2	ΔR^2
Step 1				.06	.07**
Attendance	.02*	.01	.11		
Black	-.37**	.13	-.17		
Hispanic	-.42**	.10	-.23		
Female	.00	.09	.00		
Step 2				.06	.00
Attendance	.02*	.01	.11		
Black	-.35**	.14	-.15		
Hispanic	-.43**	.10	-.23		
Female	.00	.09	-.01		
Unsupportive Response	-.05	.06	-.05		
Step 3				.06	.00
Attendance	.02	.01	.10		

Black	-.35*	.14	-.15
Hispanic	-.42**	.10	-.23
Female	-.01	.09	.00
Unsupportive Response	-.11	.08	-.10
Interaction	.12	.11	.08

Note. For gender, male was reference group. For race, White was the reference group.

Interaction = female x unsupportive response

* $p < .05$. ** $p < .01$

Work Habits. A hierarchical linear regression analysis was conducted to evaluate the interaction between gender and unsupportive response on work habits (Table 13). In the first block, covariates (gender, attendance, and race) were entered. The results of the first block indicated that the model was statistically significant [$F(4,358) = 19.98$, Adjusted $R^2 = .17$, $p < .001$]. Additionally, the Adjusted R^2 value of .17 suggests that gender, attendance, and race accounts for 17% of the variance in work habits. Specifically, female students had higher levels of work habits than males. Black students had lower levels of work habits than White students, while Hispanic students had higher levels of work habits than White students. Students who had higher attendance had higher levels of work habits than students who had lower attendance. For the second block, the predictor variable, unsupportive response, was entered into the analysis. The results of the second block indicated that model was statistically significant [$F(5, 357) = 19.81$, Adjusted $R^2 = .21$, $p < .001$]. Additionally, the R^2 change value of .04 associated with this regression model suggests that the addition of unsupportive response to the first block model accounts for 4% of the variation to work habits. Unsupportive teacher response was significantly

associated with predicting work habits. Specifically, as the perception of unsupportive response decreased by one point, work habit score increased ($\beta = -.28, p < .001$). For the third block, the interaction between gender and unsupportive response was entered. The model was not statistically significant [$F(6,356) = 16.51, \text{Adjusted } R^2 = .20, p = .65$].

Table 13

Results of Gender Interaction Hierarchical Multiple Regression Analysis for Work Habits

Variable	Unstandardized <i>B</i>	SE	β	Adj R^2	ΔR^2
Step 1				.17	.18**
Attendance	.03**	.01	.11		
Black	-.52**	.16	-.18		
Hispanic	.80	.12	.05		
Female	.70**	.10	.33		
Step 2				.21	.04**
Attendance	.03*	.01	.12		
Black	-.39**	.15	-.14		
Hispanic	.04	.11	.02		
Female	.64**	.10	.30		
Unsupportive Response	-.28**	.06	-.22		
Step 3				.20	.00
Attendance	.03*	.01	.12		
Black	-.40**	.15	-.14		
Hispanic	.04	.11	.02		

Female	.64**	.10	.30
Unsupportive Response	-.30**	.09	-.24
Interaction	.06	.12	.03

Note. For gender, male was reference group. For race, White was the reference group.

Interaction = female x unsupportive response

* $p < .05$. ** $p < .01$

CHAPTER V: DISCUSSION

The purpose of my study was to examine students' perceptions of their teacher's emotion socialization practices within the classroom setting among fourth- and fifth grade students. I had three main objectives in my study. First, I investigated whether students' perceptions of their teacher's response differed based on student gender and race. Second, I examined the way in which supportive and unsupportive responses by teachers were associated with academic achievement outcomes. Third, I explored whether there was an interaction between the students' perceptions of their teacher's response and the student's gender and race on student academic functioning.

My study focus was aimed at contributing to the social-emotional learning research with a specific focus on the students' perception of their teacher's response to their emotional expression for middle childhood. An improved understanding of teachers' emotion socialization practices is necessary as schools continue to stress the importance of social-emotional learning, which, in turn, contributes to student academic achievement (Fairless et al., 2021). The components that make up social-emotional learning are centered around self-awareness, self-management, responsible decision-making, a teacher's explicit instruction of emotional skills, a

positive school environment, and the relationships between the student and adults within the school setting (Fairless et al., 2021).

Valiente and colleagues (2020) developed a heuristic model describing emotion-related socialization within the classroom setting. The authors suggest the significance of the classroom environment and teachers as active agents for socializing emotions for students. Within the model, the relationship quality between a teacher and student was associated with student academic functioning and teachers as socializing agents. The article also suggested future studies on how student characteristics interact with the constructs of emotion-related interactions with teachers, student academic-related outcomes, and classroom context. The Valiente model depicts bidirectional relationships between each construct and the researchers suggest the association between the socialization agent and outcomes may be moderated by emotion-related interactions, classroom context, and student characteristics. I used the emotion socialization process of response that has been highly researched within the home setting with parents and analyzed the application of the same socialization processes in the school setting by teachers using the Valiente model. Specifically, I studied the emotion-related interactions between teacher and students, analyzing the teacher's reactions to students' emotional displays and student academic outcomes. My findings suggested that student characteristics were associated with emotion-related interactions with their teacher and that students' perceptions of their teachers' responses to students' emotional displays were associated with student academic-related outcomes.

Previous research that focused on emotion socialization within the classroom often used self-reported teacher perceptions of socialization and response to student emotions (Curby et al., 2021). However, extant studies lack the assessment of the students' perception of the teacher's response. Generally, teachers' perceptions of the student-teacher relationship were the best

predictor of teacher-rated outcomes, while students' perceptions of the student-teacher relationship were best at predicting student-rated outcomes (Rey et al., 2007). My research is crucial to begin to add students' perceptions to the socialization process for middle childhood aged children, within the school environment, as students are the ones who interpret and determine how to act on the response. My study addressed the important call by Valiente and colleagues (2020) to explore how the socialization processes of students' perceptions of their teachers' responses to students' emotional displays within the classroom setting were associated with student characteristics and academic functioning. The findings provide teachers, school psychologists, and school administration specific information on how students' perceptions of supportive and unsupportive response to their emotional expressions differ on student characteristics and are associated with student academic outcomes.

Student Characteristics and Students Perceived Response

I examined two types of teacher responses to student emotion expression: supportive response and unsupportive response. Consistent with findings from previous research (Fabes et al., 2008; Poulou et al., 2022), the correlation between the two types of responses was small. The small correlation indicates that supportive and unsupportive responses are not on a continuum, but rather the relation between the two appeared to be orthogonal. That is, a student may perceive high or low levels of both supportive and unsupportive responses, possibly because the teacher response may depend on the type of emotion that the student expressed. For example, a teacher may provide a punitive response for student displays of anger and a supportive response for student displays of sadness. As students express a range of emotions in the classroom setting, they could receive both supportive and unsupportive responses in relation to the emotion they express. My first two research questions focused on how a student's individual characteristics,

gender and race, were associated with the students' perceptions of their teacher's response to their emotional expression and the findings are discussed below.

Gender. I hypothesized that male students perceive their teachers to use more unsupportive responses than female students and the hypothesis was supported. Males found their teachers to use significantly more unsupportive responses to their emotional expression than female students. Interestingly, my findings appeared to be similar to emotion socialization processes used by caregivers. Parent emotion socialization research has suggested that parents may endorse specific gender roles and rules about emotion expression and then participate in gendered emotion socialization. Specifically, some researchers have reported caregivers tend to discourage negative emotional expression in males (Brody, 2000), whereas males received more unsupportive responses from their caregivers when expressing sadness and anger compared to females (Thomassin et al., 2019). Furthermore, fathers have been found to attend (i.e., showed verbal, behavioral, or emotional response) more to males' expression of anger compared to females (Chaplin et al., 2005). My findings on students' perceptions of teacher emotion socialization are parallel to parental emotion socialization, suggesting that teachers may also subscribe to gender role socialization for negative emotional expression for male students as they may use more unsupportive responses towards males.

Findings for unsupportive response being higher for male students is consistent with extant student-teacher relationship literature related to gender. Hajovsky and colleagues (2017) found that the teacher's perception of the relationship quality indicated that male students have more conflict than female students. Furthermore, teachers reported that males have higher levels of externalizing behavior than females (Chaplin & Aldao, 2013; Silver et al., 2005; Stipek & Miles, 2008). Thus, if teachers are perceiving male students as engaging in more disruptive

behaviors and they have a more conflictual relationship with male students, the teacher may be more likely to engage in minimizing or punishment responses for the male student's emotional expression than female students.

The consistent finding of males reporting unsupportive responses used by their teacher and teacher's reporting more conflict in the relationship brings to question: how can teachers form high-quality relationships with male students that are lower in conflict and higher in perceived support? Conflict is found to be more stable (Hajovsky et al., 2017) and teacher-reported conflict in the student-teacher relationship has been related to disruptive behaviors, off-task behaviors, negative emotional interactions, and difficult classroom/behavior management (Zendarski et al., 2020). Teachers find these behaviors challenging to manage and may engage in more negative and conflictual responses in comparison to children who do not exhibit these behaviors (Klassen & Tze, 2014). Punishment and minimization may be perceived by the teacher as a simpler solution and in the short term, a supportive strategy. For example, when a student is angry, the student is removed from the classroom to regulate their emotions, requiring minimal intervention from the teacher. However, the punishment strategy is maladaptive for the next time the student is angry, as they were not given any insight into how to develop future emotional regulation skills when angry. Helping teachers avoid unsupportive responses may in turn help decrease the conflict between male students and teachers.

The second hypothesis for this question was developed based on previous the student-teacher relationship research that consistently finds female students have higher closeness with their teachers than male students. Thus, females were believed to tend to perceive their teachers as using more supportive responses compared to males. However, my hypothesis regarding gender differences for supportive responses was not supported. Researchers have reported

relationships between students and teachers reveal differences in warmth and conflict based on the student's gender (Hamre & Pianta, 2001; Saft & Pianta, 2001). In addition, research has suggested caregivers respond to children's emotions differently by gender such that caregivers often encourage expression of more positive emotions (Klimes-Dougan et al., 2007) and discuss emotions more with girls than boys (Thomassin et al., 2019). My findings were in contrast with studies by Ahn (2006), Raver (2003), and Bailey and colleagues (2016) who found that an emotionally supportive learning environment aided in creating and maintaining emotion regulation for students and led to more positive relationships between female students and their teacher.

Key differences between these studies, such as who was the informant (e.g., teacher vs. student) and how the supportive response was measured (e.g., directly teaching emotions vs. students' perceptions of their teacher's response), may be related to divergent findings. Often the student-teacher relationship is measured by the teacher's report. Previous empirical findings suggest that teacher judgements and biases are associated with their perception of the student-teacher relationship. Furthermore, if teachers are rating their use of supportive and unsupportive responses, the data may suffer from social desirability. Research indicates a lack of congruence between teachers and students regarding their perceptions of the student-teacher relationship (Mantzicopoulos & Neuharth-Pritchett, 2003; Poulou, 2017). The discrepancy between student and teacher perception of the relationship has been explained by Spilt and colleagues (2010) who argue teachers' psychological functioning influenced their perception of the relationship while student's reports are associated with trust and warmth of the relationship. My findings of no difference between the use of supportive responses for males or females may therefore be related to student's being the informants as opposed to teachers.

An additional difference between previous research and my study was the way emotional support was measured. For example, Ahn (2006) measured teacher support as directly teaching and explaining the causes and consequences of emotions to children, while Bailey and colleagues (2016) measured an emotionally supportive learning environment by using research observations to code for positive climate, teacher sensitivity, and regard for student perspectives dimensions. Thus, the difference in findings may be related to my study using the emotion socialization process of response compared to previous studies measuring emotional support through the socialization process of direct teaching and modeling.

Another speculation as to why my findings did not differ in supportive response for males and females, may be more optimistic. Specifically, although the student-teacher relationship may be higher in closeness for females than males, teachers may understand the importance of supportive responses and are responding similarly to both males and females. Nicaise and colleagues (2007) conducted a study on student perceived feedback from their teachers (i.e., performance successes with praise, non-reinforcement, reinforcement combined with technical instruction and performance errors with mistake-contingent encouragement, ignoring mistakes, corrective instruction, punishment, and corrective instruction combined with punishment) within the school setting of a physical education class. Findings indicated that students found that their teachers did not differ in praise for good performance or time spent with the student based on student gender. However, similar findings on teacher support by gender were not supported by others (Rautanen et al., 2021; Wentzel et al., 2017;). Specifically, Rautanen and colleagues (2021) found female students perceived more emotional support (i.e., respect, empathy, and care) as well as problem-focused support (i.e., information that helps in achieving learning goals) from their teacher compared to males. My unsupported hypothesis may be related to previous studies

that analyzed emotional support using a lens for academic achievement or direct emotional skills teaching, while my study focused on the emotion socialization process. Clarifying how students' emotional expressions are responded to in the classroom setting should be a continued area of research. Specifically, research should focus on determining whether adults' responses to a student's emotion is a helpful way to socialize emotion regulation skills for students.

Race. The second research question focused on racial differences in students' perceptions of their teacher's response to student emotional expression. Due to divergent findings about racial differences on the student-teacher relationship, the question was examined without a directional hypothesis. Racial differences were found for both supportive and unsupportive responses.

Findings indicate that Hispanic students perceived their teachers as using significantly less supportive responses than African American and White students. Reese and colleagues (2014) conducted an observational study on Kindergarten to second-grade students in a school district that was predominately Latino (94%), with a focus on emotional support by teachers for Latina/o students. They found that Latina/o teachers were more likely than non-Latina/o teachers to engage in interactions with students that helped to create supportive classroom environments where students were open to ask questions, request explanation, approach the teacher with needs or concerns, and take a more active role in their own learning. Latina/o teachers were more likely than non-Hispanic teachers to use the children's home language as a resource, not simply for clarifying concepts but for establishing mutually respectful and warm interpersonal relationships. Overall, emotional support ratings were higher, as rated by the research assistants, for Latina/o teachers compared to non-Latina/o teachers. Reese and colleagues (2014) indicate that non-Hispanic teachers may not provide responses in ways that Hispanic students perceive as

supportive. The different perceptions Hispanic students hold may similarly apply to emotion socialization practices. Specifically, perceptions on how Hispanic students feel supported by teachers to their emotional expression might differ compared to African American and White students.

Similarly, previous research has found Hispanic students perceive support and caring by their teacher within the classroom differently than African American or White students. Cooper (2014) interviewed 33 racially diverse students to examine the role of high school students' perceptions of the student-teacher relationship through the lens of teacher caring as both a virtue and relation. Caring as a relation was defined as a relationship in which the student perceives that the teacher knows them as an individual due to a relational exchange between the teacher and student. By contrast, caring as virtue described relationships in which students consider a teacher to "be understanding" by nature, even if they have not experienced an exchange in which the teacher appeared to know them individually. Cooper found that Latino students were more likely to perceive their relationship with teachers as containing either no care or caring as virtue compared to Black and mixed-race students who perceive caring as relation. Furthermore, they found Latino students tended to experience academic care rather than personal care, while Black and White students were split equally between academic and personal care. Similarly, Garza (2008) examined Latino and White high school students' perceptions of teacher behaviors that convey caring and found the student's priority of what they valued as caring was different based on race. Specifically, scaffolding during teaching was the highest valued action for Latino student, while actions that reflect a kind teacher disposition were the least valued. Interestingly, what was least valued as caring by Latino students (actions that reflect a kind disposition) was valued most by White students. Similarly, Garrett and colleagues (2009) conducted a study on

student's perceptions of teacher support and found that Latino students valued academic support nearly twice as much as a teacher's personality while White students appeared to value these constructs at a similar level. The above findings indicate that Hispanic students value academic support while White students value both academic and personal support. Thus, Hispanic students may be perceiving less supportive response by their teacher to their emotional expressions as previous research continues to find Hispanic student value academic support compared to emotional support.

Regarding unsupportive responses, African American students report significantly higher levels of teacher unsupportive response compared to White and Hispanic students. Literature on student-teacher relationship quality across student race is inconclusive regarding racial differences associated with the student-teacher relationships. Some studies have found that White students report closer student-teacher relationships than students of color (Thompson & McDonald, 2016; Yeager et al., 2017), while others report no racial differences in students' perceptions of relationship quality (Murray et al., 2008). My findings are consistent with Yeager and colleagues (2017), who found that Black students reported lower levels of teacher trust, which negatively impacted the student-teacher relationship quality compared to White students. Their findings also indicated that as Black students mature, their awareness of teacher bias and practical unfairness in the classroom were negatively associated with their trust in their teacher. As students mature into middle childhood, teacher biases may be more prominent and negatively associated with student-teacher relationship quality, leading to higher perceived student unsupportive responses.

Research has often measured negative student-teacher relationships using the attachment theory, where negative student-teacher relationships were comprised of low closeness and high

conflict (Pianta, 2001). However, researchers continue to redefine the student-teacher relationship quality (McGrath & Van Bergen, 2015). The student-teacher relationship is bidirectional, and each member defines whether and how the relationship is beneficial to them. Liu and colleagues (2018) measured positive and negative student-teacher relationships according to both the student's and teacher's own perceptions and evaluations of benefit and harm. Findings suggested that African American students were more likely to describe their relationship with their teacher through negative representations, such as poor teaching practices, than White students. My research focused on students' perceptions of teacher responses to their emotion expression in the classroom, and my findings seem aligned with the literature on racial differences in the student-teacher relationship. That is, African American students tend to describe their relationship with teachers as negative interpretations, and the findings of current study similarly indicated that students perceived more unsupportive responses to emotion expression from their teacher.

Teacher Responses to Student Emotions and Academic functioning

I hypothesized that students who perceived their teachers as using more unsupportive responses would be associated with lower academic functioning and the hypothesis was generally supported. Specifically, unsupportive responses were significantly and negatively associated with English language achievement and work habits. The magnitude of association was larger for work habits than for English language achievement, and the effect sizes were small. In contrast to the results for English language achievement and work habits, the association between unsupportive response and mathematics achievement was not significant.

Previous research indicates that students perceived instructional and emotional support were linked to academic functioning, such as engagement and academic achievement (Klem &

Connell, 2004). However, supportive and unsupportive responses have low correlation, indicating those two types of responses are not the opposite ends of a continuum. Scant research is available that focuses on the specific domain of unsupportive response and academic functioning. Thus, conclusions from previous literature cannot be drawn on why the unsupportive response was significantly associated with English language achievement but not with mathematics achievement. One explanation may be that students who perceived unsupportive responses from their teacher were more dysregulated. When a punitive response is given such as the student being sent to the office, the student then spends more time outside of the classroom setting. Similarly, when a minimization response is given such as the teacher tells the student not to make such a big deal out of something, the response may exacerbate the student's negative emotions or increase internalizing the emotions (i.e., increase thinking or anxiety related to the emotional expression). In these situations, both unsupportive responses would lead to students receiving less instructional time or engagement, impacting the student's ability to gain essential instruction. Using the assumption that unsupportive responses lead to less academic instruction, one would continue to contemplate why unsupportive responses only had a significant finding on English language achievement and not mathematics achievement.

One speculation on why the difference only existed for English language arts may be related to instructional support. Donaldson et al., (2017) examined teaching practices across different track levels (i.e., low track and high track). Results indicated math classes were found to have higher quality instructional support for both content understanding and analysis and problem-solving than English classes. Thus, whether students are missing educational time in both English language and mathematics, instructional support may play a more important role than emotional support in mathematics.

Unsupportive responses were also negatively associated with work habits. Specifically, students who perceived teachers as more unsupportive were found by the teacher to engage in poorer work habits. Extensive research indicates that emotion regulation is related to academic engagement (Klem & Connell, 2004) and academic achievement (Clore & Huntsinger, 2009; Pekrun & Linnenbrink-Garcia, 2012). Maladaptive emotion regulation may interfere with the student's willingness to be involved in school, engaged in learning activities, and work towards academic goals (Skinner et al., 2009). Students who have lower emotion regulation (e.g., negative affect, mood lability, expression of emotions, emotional self-awareness) display more academic difficulties and lower achievement on standardized assessments (Graziano et al., 2007; Mattar et al., 2020). Academic engagement (e.g., paying attention, being prepared, responding to teachers' directions and questions) and work habits (e.g., following procedures, using time wisely, keeping materials organized) are both behaviors and approaches to successful learning in the classroom.

It could be speculated that work habits could mediate the relationship between teacher response and academic achievement. Previous research found that students who had more conflict with their teachers in Kindergarten had lower academic achievement and poorer work habits through middle school (Hamre & Pianta, 2001). Similarly, research has found that indirect effects of the student-teacher relationship on academic functioning have been mediated by academic engagement (Decker et al., 2007; Hughes et al., 2008). If students are perceiving unsupportive responses from their teachers, it may lead to further dysregulation, which in turn results in poorer work habits and lower academic achievement. The mediation of work habits on students' engagement and academic functioning should be further examined in future studies.

My hypothesis that a teacher's perceived supportive responses to a student's emotional expression were associated with academic achievement was not supported. Surprisingly, parental research on emotion socialization finds supportive responses, such as problem-solving and validating emotional expression, were associated with children's emotional knowledge and development (Denham, 2007). Specifically, parents who help their children problem solve when expressing a negative emotion are thought to foster the development of skills that contribute to the management of experiencing and expressing negative emotion in the future (Eisenberg et al., 1998). Effective regulation of negative emotions has been associated with adaptive outcomes, including academic, social, and emotional competence (Hyson, 2004; Kostelnik et al., 2015).

One explanation as to why supportive responses were not associated with academic achievement may be due to academic achievement being associated with multiple variables (i.e., effortful control, parental involvement, socioeconomic status, and peer support) and there may have been mediating variables that were not analyzed in my study. Swanson and colleagues (2014) conducted a longitudinal study on parental socialization for students in Kindergarten to predict first graders' effortful control, which was expected to be related to second-grade math achievement. They found a nonsignificant path from parents' responses at Kindergarten to achievement in second grade; however, effortful control fully mediated the relation between parents' responses and later student academic achievement. The mediation of effortful control suggested that parents' responses to their children's negative emotional expressions were associated with effortful control and effortful control was associated with academic functioning. Furthermore, Tao and colleagues (2022) did a meta-analysis with 71 articles on student's perceived teacher support, student engagement, and academic achievement. Findings revealed a

small to moderate correlation between teacher support (academic, autonomy, emotional, and mixed) and academic achievement.

Parental research on emotion socialization found similar weak and inconsistent correlations between supportive socialization processes of contingency, modeling, and direct teaching (Denham & Kochanoff, 2002; McDowell & Parke, 2005). The weak association may reflect the complexity of academic achievement and the numerous other variables that may impact student achievement. Future research on the relations between emotion socialization and academic functioning should examine mediating variables such as effortful control, parental involvement, and peer support.

Furthermore, teacher emotional support has been measured in a variety of ways. For example, emotional support has been identified as teachers allowing students' autonomy which increases students' emotional regulation and engagement (Bailey et al., 2016). Direct teaching of emotions is another way emotional support has been studied with the outcome on how well students could identify emotions (Ahn, 2005). My study used teacher responses to measure emotional support and how it is related to academic functioning. The difference in the measurement of emotional support and the outcome variables may indicate that instructional support is more prominent in academic functioning than emotional support.

An additional explanation of why supportive response was not indicative of academic functioning may be the way academic achievement was measured in my study. Specifically, standardized tests tend to deviate from specific knowledge taught in the classroom and are meant to assess students' higher order skills (Ladd & Lauen, 2010), while course exams given within the classroom are related to daily instruction from the teacher in the classroom setting. Kashy-Rosenbaum and colleagues (2018) examined the role of classroom emotional climate on

students' academic achievement. Specifically, students reported on positive and negative emotions experienced at school and the perceived emotional support from their teacher which were then associated with the student's grade point average. Findings revealed that higher perceived emotional support by the teacher was associated with higher student grade point average. If emotional support is contributing to a student's adaptive emotion regulation skills, the emotion regulation skills would allow them to remain in the classroom setting to receive all provided instructional material. Thus, future studies should continue to explore whether emotional support is associated with course exams or grade point averages as compared to standardized assessments.

Finally, I investigated whether the relation between teacher's unsupportive responses to student's emotional expression and academic achievement was moderated by student's race and gender. The moderation analysis addressed whether the associations between the teacher's unsupportive response and academic achievements are similar across gender and race. If teachers are more likely to be unsupportive towards students based on their individual characteristics, these students may be at a disadvantage to learn adaptive emotional regulation skills to remain in the classroom and be engaged in academic material. The interaction question was analyzed as an exploratory analysis and no significant paths were supported. Specifically, student characteristics of gender and race did not change the strength of the relationship between unsupportive response and academic achievement. In other words, the way students perceive their teacher's response affects the academic outcome variable in the same way regardless of student's individual characteristics. My study used student perceptions of the teacher and student characteristics of gender and race. However, previous research that has examined the interaction used different informants (e.g., teacher perception and student characteristics or student perception and teacher

characteristics) and have found an interaction (Murray et al., 2008; Roorda et al., 2020). My findings highlight how the teacher response to the student's emotional expressions may be better accounted for through the student-teacher relationship than the student's characteristics of race and gender. Positive social relationships in the classroom setting can provide important opportunities to increase academic motivation and academic functioning (Wentzel et al., 2017).

Within all the hierarchical regressions, attendance was entered as a covariate as research indicated that attendance was a key predictor of academic achievement (Cutuli et al., 2013). Attendance also plays an important role in the student-teacher relationship and school connectedness. Specifically, students with positive student-teacher relationships report feeling more connected to school (Rey et al., 2007) and have higher attendance rates compared to students with negative student-teacher relationships. Furthermore, students who perceive low levels of teacher support report wanting to avoid school (Murray et al., 2008) and have been found to have more absences from school (Davis & Lease, 2007). Within all regressions (English language achievement, mathematics achievement, and work habits) predicting academic functioning, attendance was significantly associated with each. Specifically, the higher a student's attendance rate was, the higher their achievement was. The findings were consistent with past data suggesting that higher attendance patterns predicted higher academic functioning for students (Chang & Romero, 2008; Morrissey et al., 2014).

Implications for School Psychology Research and Practice

As children's emotion regulation is associated with academic achievement, it is fundamental to understand how to continue to improve and build the social-emotional research that has been developed for the school setting. Currently, schools continue to develop social-emotional curricula to better improve the student-teacher relationship, direct teaching of

emotional skills, and enhance the overall school environment. Furthermore, teachers serve as a secure base and are influential in the emotion socialization process and emotional development for students (Verschuere & Koomen, 2012). The lack of association between supportive response and academics does not mean that supportive response is not important. Rather my findings suggested further investigation regarding potential mediating variables (engagement, motivation, effortful control, parental involvement, peer support) to increase reliability and provide information on how to best support students emotional regulation and development.

My findings suggest adverse effects of student perceived unsupportive responses by teachers to student academic functioning. Hoffmann and colleagues (2020) discuss practical steps for promoting emotion regulation for both teachers and students. They proposed a model which included (a) a teacher's ability to regulate their own emotions, (b) building the teacher's emotional competencies (recognizing emotions, understanding the causes and consequences of emotions, labeling emotions with a nuanced vocabulary, expressing emotions adaptively, and regulating emotions effectively), and (c) extending the emotional regulation teaching outside of the explicit instruction (i.e., when a student is upset) and incorporating it into every aspect of their teaching. Specifically, the first process of Hoffmann's model may be a focus for future education for teachers to gain insight into their own social-emotional functioning, using the Valiente (2020) model. Valiente and colleagues argue that teachers' stress, emotion, self-regulation, and mental health all impact their socialization abilities. It is fundamental that teachers are aware of the four factors due to the association between the factors and a teacher's social-emotional functioning. In turn, a teacher's social-emotional functioning is directly associated with their responses to students' emotional displays. This may be helpful in teachers

gaining insight into their own emotional regulation and allowing the teacher to use less unsupportive responses with students.

Furthermore, I found that teachers were perceived significantly differently based on the student's race. The racial gap in student perceptions of teachers' responses to student emotions might be narrowed by increasing cultural knowledge for teachers on students of color. Specifically, it might be important for teachers to identify and implement practices that students of color find supportive. Specifically, Hispanic students reported significantly lower levels of supportive responses by a teacher than African American and White students, while African American students reported significantly more unsupportive responses by the teacher than Hispanic and White students. Due to a majority of the teachers within our sample identifying as White, these findings were consistent with previous research that has suggested teachers' expectations about desirable classroom behavior are informed by their own values and beliefs, which can shape their perceptions of student behavior in the classroom setting (Split et al., 2012). According to the National Center for Education Statistics in 2017 – 2018, approximately 80% of teachers in the United States were White, non-Hispanic. Hispanic students might perceive lower levels of supportive responses due to different cultural practices regarding emotion expression and responses. African American students might perceive higher levels of unsupportive responses due to different cultural interpretations of schooling and teacher care, thus leading to poorer quality student-teacher relationships.

Findings highlight the importance of avoiding unsupportive responses to student's emotional expression, such as minimization or punishment. If teachers rely on using these unsupportive responses, students often miss essential academic material due to being sent to the office or being dysregulated, negatively impacting their ability to be engaged and learn. Future

professional training would continue to build awareness and skills for teachers to be able to regulate their own emotions, increase their confidence and competence to teach and scaffold emotion regulation skills for students in all aspects of the school day, and identify the student's current developmental level for appropriate instruction (Hoffmann et al., 2020). Professional development developed on unsupportive responses of punishment and minimization by teachers may be perceived as an easier and less resource intensive option, however, educating teachers on the negative implications of using the unsupportive responses is vital.

Limitations and Future Direction

There are study limitations worth noting regarding the interpretation of results and future directions pertaining to the study design, including limitations in participant selection, measurement, informant, and student participation. Participants for my study were not randomly selected and were recruited as a convenience sample from a specific area (i.e., the Midwest) which limits generalizability. Research design limitations included lack of counter-balancing items and constructs developed primarily based on Western theoretical modeled questionnaires, which should be considered. Additionally, data was collected from one rater for several constructs (i.e., only students rated their teacher's use of responses to their emotional expression, one teacher rated student's work habits). Many of the constructs were single informant which may reflect rater perception rather than actual behavior. Using more than one rater, or having a researcher observe the interactions, may provide clarity on the objective responses of the teacher and the subjective perceptions by the student. For example, if students are perceiving their teacher as unsupportive, identifying the teacher's objective behavior that was directed toward the student and perceived as an unsupportive response would be important in developing supportive responses for all students. Adding informants such as having the teacher, student, and parent

answer questions on the same construct to compare would increase the validity. For example, parents complete a questionnaire on how they respond to their child's emotional expression and children rate their perceptions of their parent's response, in addition to teacher and student responses. The response information could be compared to the data collected in the classroom, and it may provide insight into consistency or discrepancies between the data. To address these limitations, and any others which were inadvertently unidentified, future research recommendations are outlined below.

First, socialization and academic achievement are extremely complex research topics and often have many confounding variables that are associated with the outcome variables. Although several demographic variables (gender, attendance, and race) were included as covariates, the socioeconomic status of the student was not. For example, race and social class have been found to negatively be associated with academic achievement (Georges et al., 2012) and are important variables to consider when examining academic achievement. Additionally, family involvement, student emotion regulation, and peer support may also impact a student's academic achievement. Furthermore, data collected in school settings is nested data. For example, students are nested in classrooms and classrooms are nested in school settings. Thus, future research conducted in the school settings should consider the nested impact and use hierarchical linear modeling to account for student-level, classroom-level, and school-level factors for student academic functioning. Future research should continue to build off these findings and continue to explore the other confounding variables and nesting data that may impact academic achievement of students.

Furthermore, the academic achievement variable from the data set was provided as Advanced, Proficient, Basic, or Below Basic. Although the data provides a broad measure on student's academic abilities, future research would benefit from using numerical scores for

academic achievement, which might offer more variability than an ordinal scale of achievement. Future studies should also use both standardized assessment and classroom course evaluations, such as grade point averages. Additionally, academic-related outcomes are complex allowing numerous potential mediations. Future research should explore whether a student's work habits mediate the relation between teacher response and students' academic achievement.

Lastly, given the insignificant relationship between the student's perception of a teacher's supportive response to their emotions and academic achievement, future studies should further explore the relationship between supportive responses, student emotion regulation, and academic achievement. Previous research finds associations between student emotion regulation and social, emotional, and academic outcomes within the school setting. Continued research on emotion socialization in the classroom settings would benefit from a longitudinal structure, where students' emotion regulation is measured to identify if there is an association between the student's perceptions of the teacher's emotion socialization process with the student's emotion regulation development. Parental research on emotion socialization found parents who are more supportive to a child's negative emotional expression support the child in their own emotional expression. Ramakrishnan and colleagues (2019) found that parental supportive and unsupportive responses to children's negative emotional expression are associated with adult emotional functioning. Specifically, fathers' supportive responses to negative emotions in childhood was indirectly associated with less young adult distress through less young adult negative emotional experience. While mothers' supportive responses to negative emotions in childhood was indirectly associated with greater young adult life satisfaction through greater young adult positive emotional experience. Research continues to show the benefits of academic and emotional support for academic functioning and social development; thus, it is unclear why a

teacher's supportive response was not predictive of academic functioning and should continue to be explored.

The convergence of evidence from the current and previous studies suggests the importance of future research aimed at furthering the understanding of the emotion socialization processes that occur in the classroom setting and the association with the student-teacher relationship and academic functioning. In my study, students perceived teachers using unsupportive responses, such as punishment and minimization, more often for males and African American students. Furthermore, unsupportive responses were associated with English language achievement and work habits for students. Findings related to student's perceptions of teachers' unsupportive responses to students' emotions suggest adverse academic effects when students perceive they are not supported. Emotionally unsupportive responses by teachers to student's emotions may be contributing to maladaptive emotion regulation strategies for students and negative student-teacher relationship.

Supportive responses were reported less often by Hispanic students. Furthermore, supportive responses were not found to be associated with academic functioning. It could be that supportive responses play a more prominent role in social and behavioral outcomes compared to academic functioning. Previous research findings indicate supportive emotional responses are associated with higher social interactions, positive relationships, and emotion regulation development (Ahn, 2006; Kostelnik et al., 2015). Future research should continue to explore whether supportive emotional responses are associated with student outcomes outside of social outcomes within the school setting.

Overall, the findings reviewed above suggest that teachers play an important role in responding to student's emotional expression. Specifically, emotionally unsupportive responses

perceived by students have negative associations with academic functioning. Future research should continue to investigate whether the relation of supportive response and academic functioning is related to the student-teacher relationship, instructional support, academic engagement, or motivation. In conclusion, providing fewer unsupportive responses for students in the education setting can potentially reduce students' dysregulated emotion and behavior. When students successfully manage their emotions and create a positive student-teacher relationship, they are likely to increase academic motivation, engagement, and achievement. My study increased information on emotion socialization literature from students' perceptions of their teacher's response to student's outcomes within the classroom setting. Future research should continue to explore the emotion socialization processes within the school setting and how the supportive and unsupportive processes are associated with student emotion regulation, the student-teacher relationship, and academic functioning.

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APPENDIX A

Student Survey

My Feelings and Teachers

Instructions: We are going to ask you how you typically think and feel. Again, your honest answer is the best answer. Please circle how true each statement is for you.

When I get **too excited** about something/someone, my teacher:

	Not at all True	Slightly True	Moderately True	Mostly True	Very True
1. Yells at me for being too excited.	1	2	3	4	5
2. Asks me what I'm excited about.	1	2	3	4	5
3. Tells or shows me ways to calm down.	1	2	3	4	5
4. Tells me not to make such a big deal out of nothing.	1	2	3	4	5

When I get **angry** at something or someone in school, my teacher:

	Not at all True	Slightly True	Moderately True	Mostly True	Very True
1. Threatens to punish me (leave the room, send to office, call parents).	1	2	3	4	5
2. Encourages me to talk about my feelings.	1	2	3	4	5
3. Helps me think of how to solve the problem.	1	2	3	4	5
4. Tells me I'm overreacting.	1	2	3	4	5

When I get **sad or cry** because someone/something upsets me, my teacher:

	Not at all True	Slightly True	Moderately True	Mostly True	Very True
1. Gets angry or yells at me.	1	2	3	4	5
2. Asks me to talk about what is bothering me.	1	2	3	4	5
3. Helps me think of ways to feel better.	1	2	3	4	5
4. Tells me I'm making a big deal out of nothing.	1	2	3	4	5

Teacher Survey

Direction:

There are TWO parts in the packet. The *first* part is about your demographic information as well as your beliefs about children’s emotions and behaviors. The *second* part is rating of emotions, behavior, and school reasoning for each participating child. We included a list of participating children for you to complete the second part.

PART 2: Please complete the following questions for each participating child. Answer each question with only one answer. *Give your best guess* to questions you are not sure about the child. Please refer to the list of participating children.

Work Habits: Please indicate how good the child is at the following.

Child Initial:

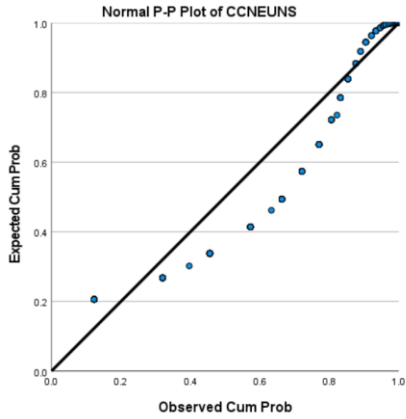
This child...

	Very Poor	Poor	Acceptable	Good	Very Good
1. Follows classroom procedures	1	2	3	4	5
2. Works well independently	1	2	3	4	5
3. Works neatly and carefully	1	2	3	4	5
4. Uses time wisely	1	2	3	4	5
5. Completes work promptly	1	2	3	4	5
6. Keeps materials organized	1	2	3	4	5

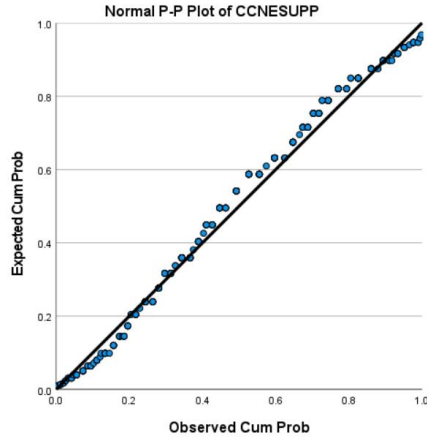
Appendix B

MANOVA Assumptions

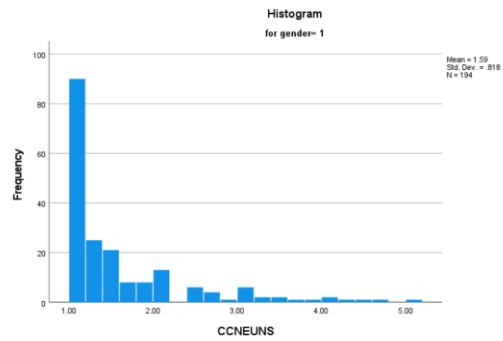
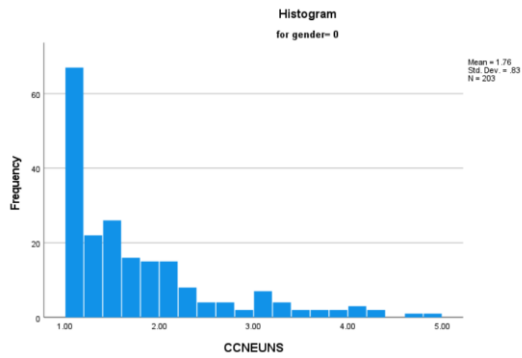
P-P plot for unsupportive response



P-Plot for supportive response

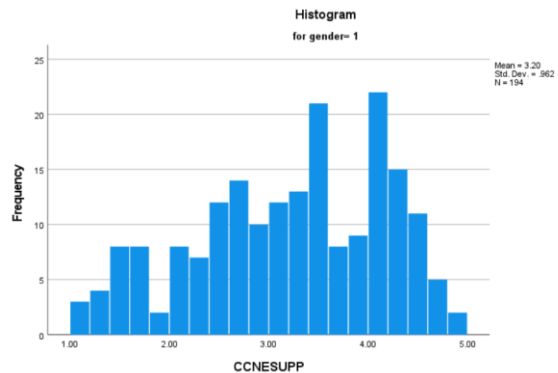
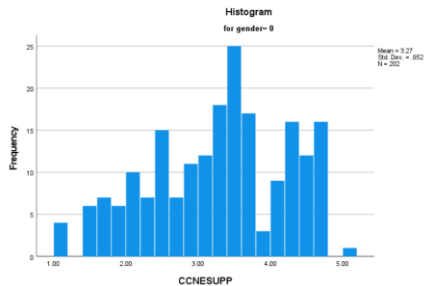


Histogram for unsupportive response and male female

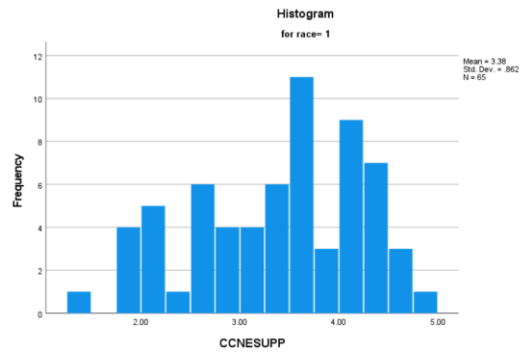
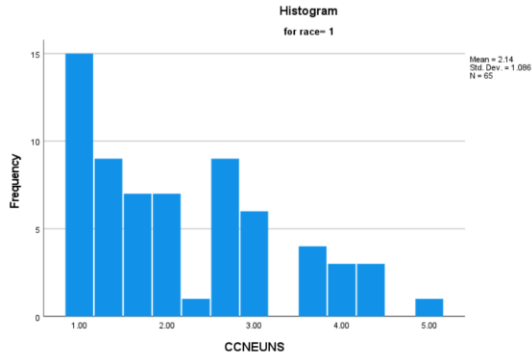


Histogram from unsupportive and

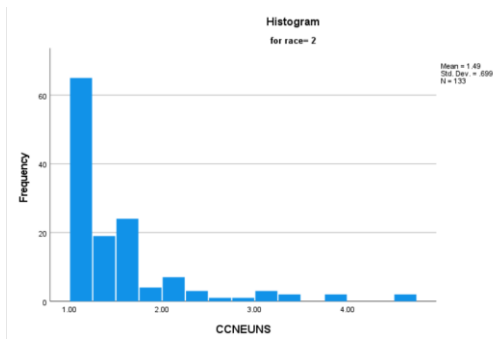
Histogram for supportive response and male Histogram for supportive response and female



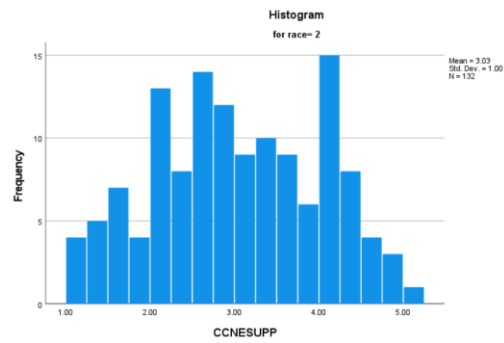
Histogram for unsupportive and African American Histogram for supportive and African American



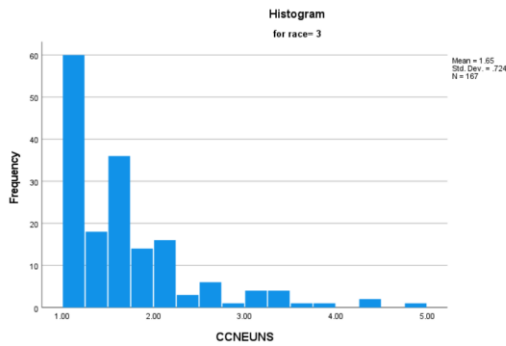
Histogram for unsupportive and Hispanic



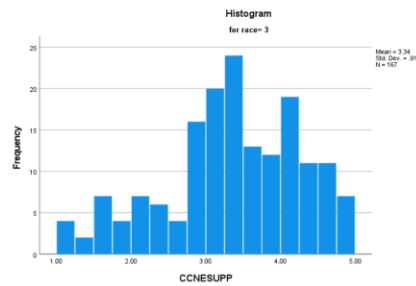
Histogram for supportive and Hispanic



Histogram for unsupportive and White

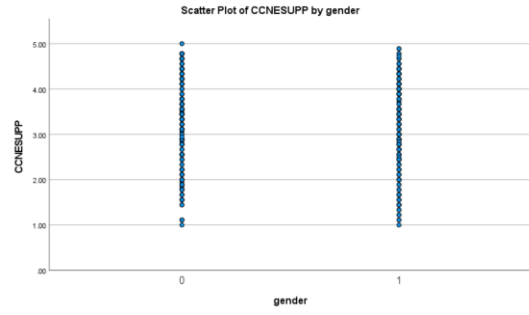
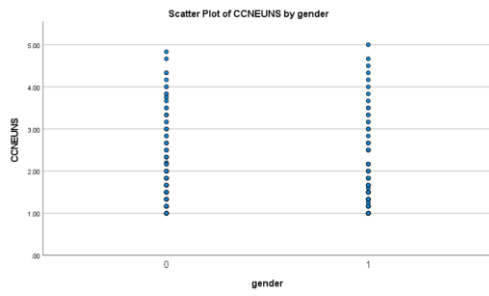


Histogram for supportive and White



Scatterplot for unsupportive and gender

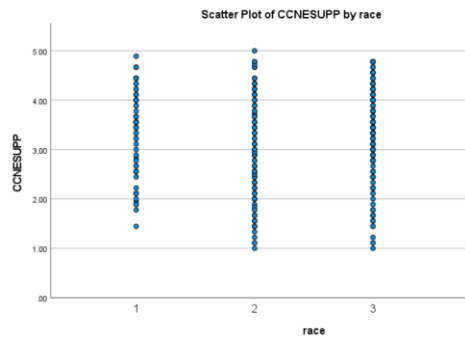
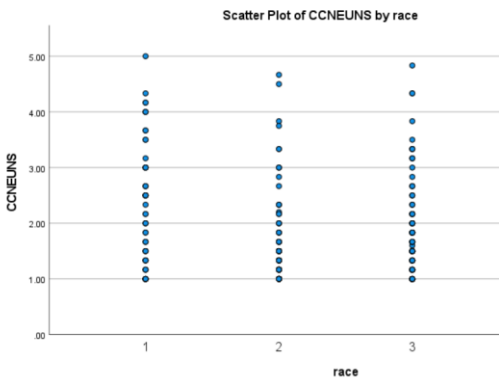
Scatterplot for supportive and gender



0 = Male. 1 = Female.

Scatterplot for unsupportive and race

Scatterplot for supportive and race



1 = African American. 2 = Hispanic. 3 = White.

Appendix C

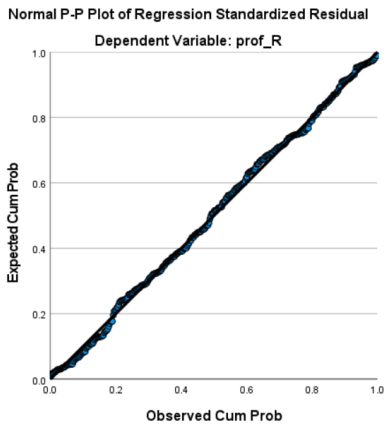
Multiple Regression Assumptions

The following presents data for visual inspection of the multiple regression assumptions of normality and homoscedasticity.

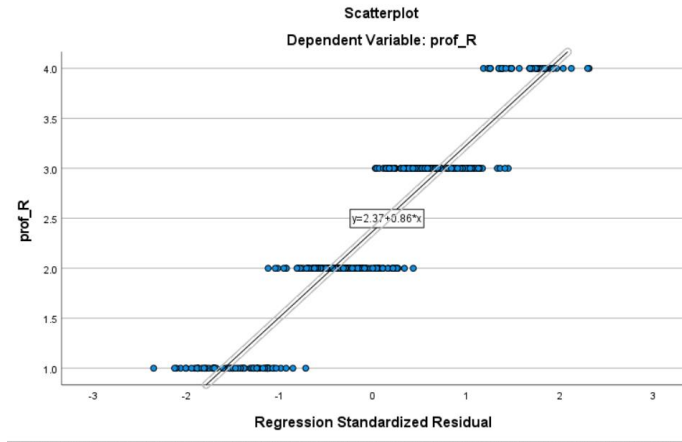
Research Question 3

- a) Hierarchical multiple regression – English Language Achievement

Normality

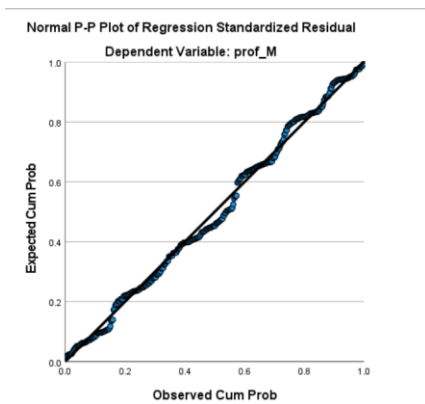


Homoscedasticity

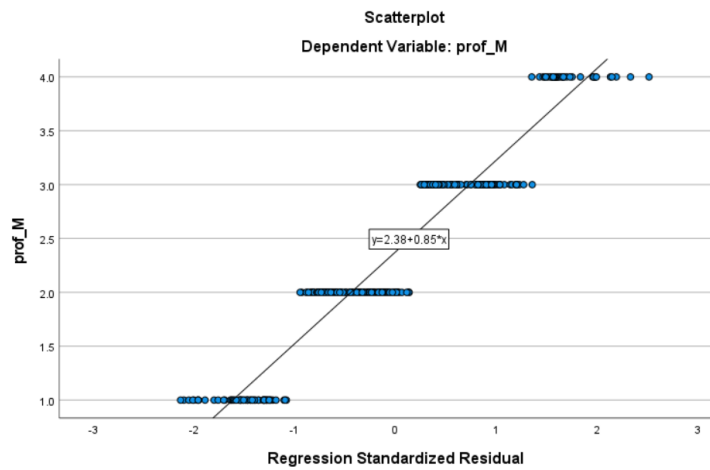


- b) Hierarchical multiple regression – mathematics achievement

Normality

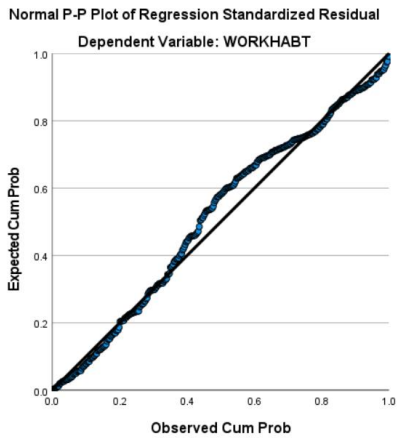


Homoscedasticity

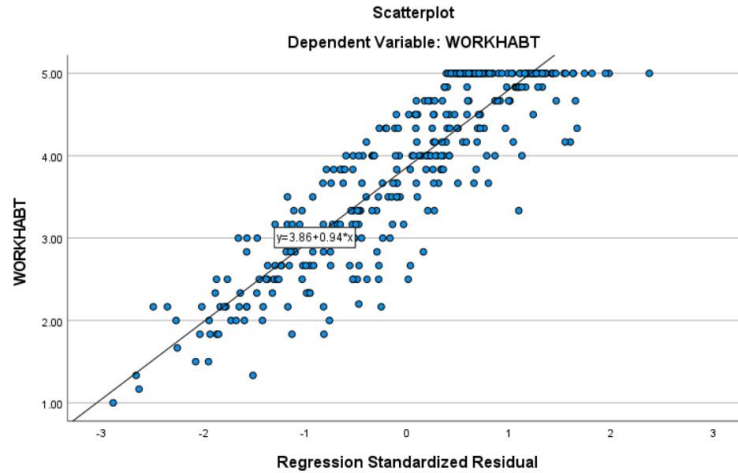


c) Hierarchical multiple regression – Work Habits

Normality



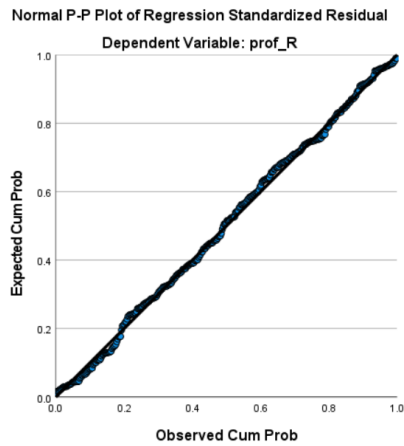
Homoscedasticity



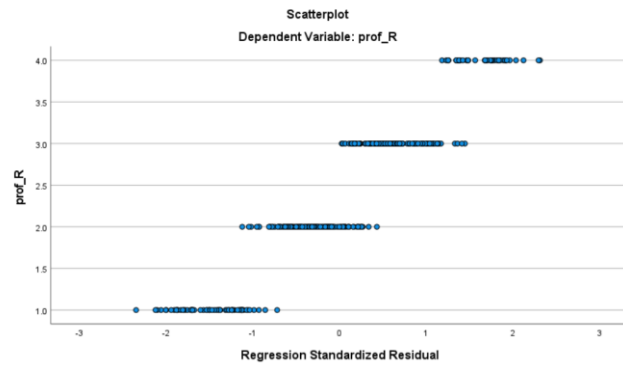
Research Question 4

a) Hierarchical multiple regression with race interaction– English Language Achievement

Normality



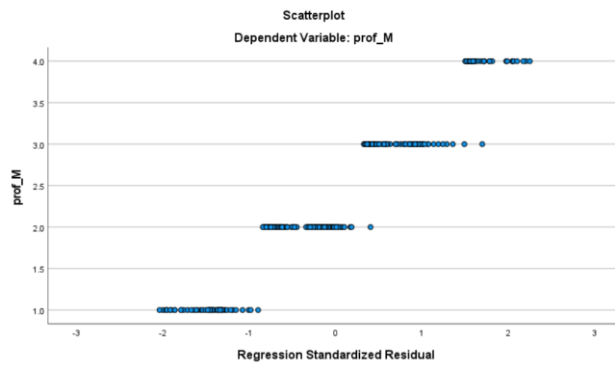
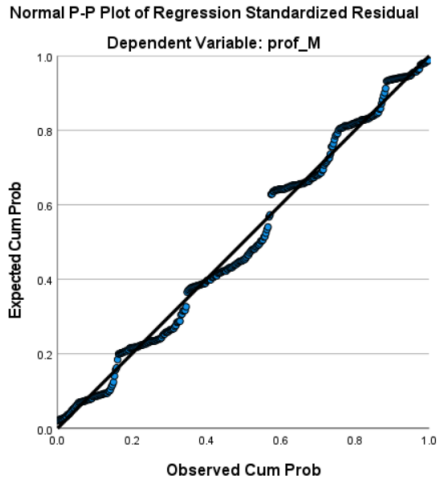
Homoscedasticity



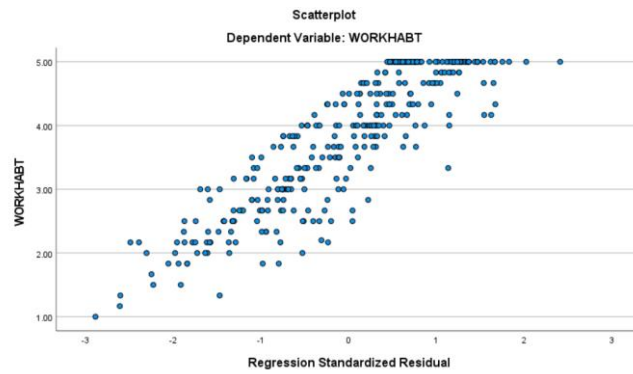
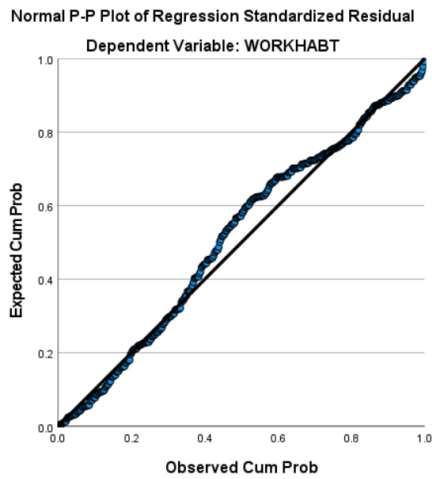
b) Hierarchical multiple regression with race interaction– mathematics achievement

Normality

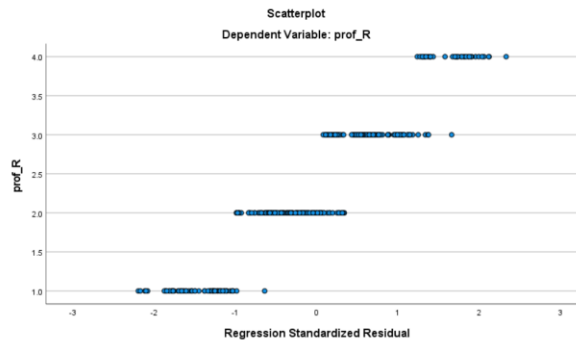
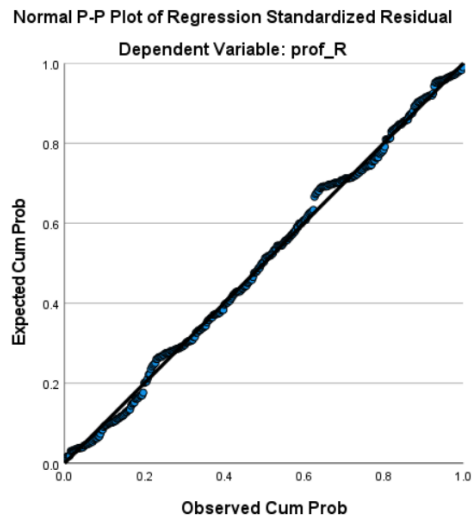
Homoscedasticity



- c) Hierarchical multiple regression with race interaction– Work Habits
Normality Homoscedasticity

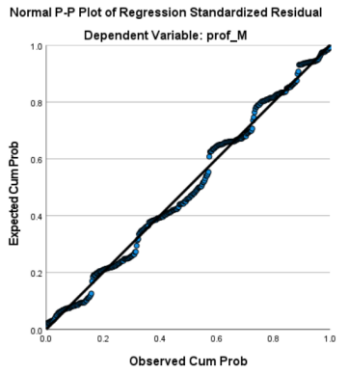


- d) Hierarchical multiple regression with gender interaction– English Language Achievement
Normality Homoscedasticity

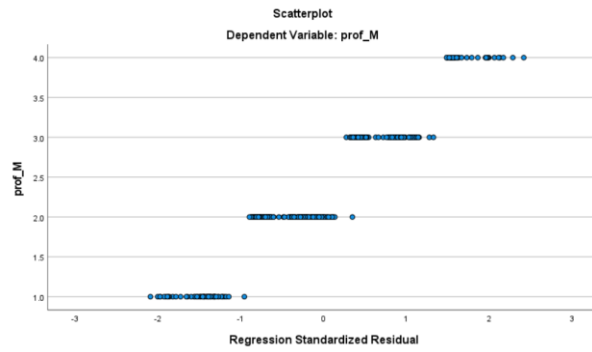


- e) Hierarchical multiple regression with gender interaction– mathematics achievement

Normality

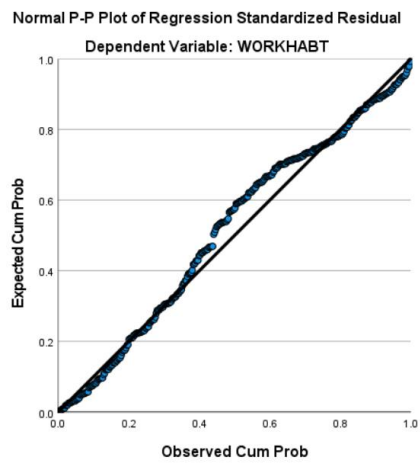


Homoscedasticity



f) Hierarchical multiple regression with gender interaction– Work Habits

Normality



Homoscedasticity

