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Anxiety and Social Withdrawal Among Children: Associations with Emotion Awareness and Emotion Regulation Strategy Use at the Intra- and Interpersonal Levels

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**ANXIETY AND SOCIAL WITHDRAWAL AMONG CHILDREN:
ASSOCIATIONS WITH EMOTION AWARENESS AND
EMOTION REGULATION STRATEGY USE AT THE
INTRA- AND INTERPERSONAL LEVELS**

by

JaNae E. Teer

A Dissertation Submitted in
Partial Fulfillment of the
Requirements for the Degree of

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August 2021

ABSTRACT

ANXIETY AND SOCIAL WITHDRAWAL AMONG CHILDREN: ASSOCIATIONS WITH EMOTION AWARENESS AND EMOTION REGULATION STRATEGY USE AT THE INTRA- AND INTERPERSONAL LEVELS

by

JaNae E. Teer

The University of Wisconsin-Milwaukee, 2021
Under the Supervision of Professor Kyongboon Kwon, PhD

Anxiety and social withdrawal are two frequently experienced internalizing conditions among children. These early-onset challenges are associated with numerous maladaptive outcomes in the academic, social, and psychological domains (Levitt & Merrill, 2009; Long, 2018; Sanchez et al., 2018; Shernoff et al., 2017). While identifying anxious and socially withdrawn children in the classroom is difficult as symptoms generally occur internally, distinguishing between the conditions is perhaps more challenging as the two are closely associated, oftentimes overlapping constructs (Barzeva et al., 2019; Rubin et al., 2009). Particularly, it is unclear whether anxiety and social withdrawal are similarly or differently associated with key emotion regulation-related processes. While ineffective regulation of emotions is consistently linked to the development and maintenance of internalizing conditions in children (Bender et al., 2012; Kranzler et al., 2016; Penza-Clyve & Zeman, 2002; Sendzik et al., 2017), the association to key components is much less understood especially at the interpersonal level. To address this challenge, the researcher examined anxiety and social withdrawal through the lens of emotion awareness and emotion regulation strategy use at the intra- and interpersonal levels. Study participants were 398 fourth- and fifth-grade children (*M*

age = 10.3) and their classroom teachers. Self-report was used to assess anxiety, intra- and interpersonal emotion awareness, as well as the use of intrapersonal adaptive and maladaptive strategies. Teacher-report was used to measure social withdrawal while peer-report was used to assess classmates' use of interpersonal supportive and unsupportive strategies.

In general, anxiety related to *intrapersonal* emotion regulation-related processes while social withdrawal related to *interpersonal* processes. More specifically, anxiety significantly associated with poorer intrapersonal emotion awareness and greater use of adaptive strategies to regulate one's own emotions. Comparatively, social withdrawal significantly associated with poorer awareness of others' emotions and less use of interpersonal supportive and unsupportive emotion regulation strategies.

The researcher's findings indicate anxiety and social withdrawal can be distinguished from each other regarding their associations with intra- versus interpersonal emotion awareness and emotion regulation strategy use. The information may assist teachers, school psychologists, and other school personnel in more timely and accurate identification and treatment (e.g., emotion regulation skill building) for children experiencing these challenges in the classroom setting.

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ANXIETY AND SOCIAL WITHDRAWAL AMONG CHILDREN: ASSOCIATIONS WITH EMOTION AWARENESS AND EMOTION REGULATION STRATEGY USE AT THE INTRA- AND INTERPERSONAL LEVELS

Presently, schools are inundated with children experiencing various mental health challenges responsible for decreased well-being, discomfort, distress, and impaired functioning in the home, school, and community settings (Hu et al., 2014; Levitt & Merrell, 2009). These challenges frequently manifest during the elementary school years and often linger into adolescence and adulthood (National Association of School Psychologists [NASP], 2016; Sanchez et al., 2018; Stoiber & DeSmet, 2010). Although not an exhaustive list, common and oftentimes comorbid conditions include anxiety, depression, and attention deficit/hyperactivity disorder (Centers for Disease Control and Prevention [CDC], 2020; Levitt & Merrell, 2009; Mathews et al., 2016; Rossen & Cowan, 2015). Associated long-term effects include poor social functioning, decreased educational attainment, diminished overall quality of life, and the increased risk for the development of other mental health challenges (Levitt & Merrill, 2009; Long, 2018; Sanchez et al., 2018; Shernoff et al., 2017). Consequently, timely preventative efforts, accurate identification, and the implementation of appropriate intervention services are essential (Rossen & Cowen, 2015; Shernoff et al., 2017; Taras & Young, 2004).

Mental Health in Schools

Although youth mental health services are distributed over a variety of systems and contexts (e.g., primary care clinics and child welfare systems), historically, schools have served as the predominant provider. Relative to other settings, schools are typically the most accessible and are often perceived more positively by families as the number of barriers to potential identification and treatment are reduced (e.g., treatment costs, medical insurance issues, scheduling conflicts, and transportation problems; Rossen & Cowan, 2015; Sanchez et al., 2018).

However, addressing mental health challenges in the educational setting can be especially challenging particularly concerning the identification of children experiencing internalizing conditions (Langley et al., 2010; Rothi` et al., 2008; Stoiber & DeSmet, 2010). Relative to *externalizing* mental health conditions, detection of *internalizing* conditions by an outside observer is notoriously difficult as associated symptoms often occur within the child and are generally not disruptive (Merrell & Gueldner, 2010; Levitt & Merrell, 2009). Hence, these problems frequently go unnoticed and, inevitably, untreated (Rothi` et al., 2008).

Anxiety and Social Withdrawal

The current study focuses on two frequently encountered internalizing challenges in the classroom environment: anxiety and social withdrawal. *Anxiety* is defined as “a state of negative emotional arousal, often accompanied by a concern about potential future threat that results in distress or impairment” (Mathews et al., 2016, p. 162). At a clinical level, anxiety includes several different disorders including social anxiety disorder, generalized anxiety disorder, and panic disorder (American Psychiatric Association [APA], 2013; American Psychological Association [APA], 2019). While *social withdrawal* is not considered a diagnosable disorder, it is best conceptualized as an “umbrella term” for various forms of behavioral solitude (Rubin et al., 2009; Barzeva et al., 2019); these forms include social disinterest, behavioral inhibition, anxious solitude, shyness, social reticence, and social phobia (Rubin & Barstead, 2014). Regardless of form, the solitude is voluntary and consistent, both temporally and across experiences, and is derived from different underlying motivations or etiologies in the presence of known or unknown peers (Barzeva et al., 2019, p. 145; Rubin & Coplan, 2010; Rubin et al., 2009; Rubin et al., 2018). In the current study, as defined by Ladd and colleagues (1996), the term social withdrawal refers to “self-imposed solitude” and was assessed using items reflective

of a child's tendency to "distance themselves from peers or pursue solitary rather than social activity in peer contexts" (p. 1010).

Similarities

Anxiety and social withdrawal are closely associated constructs; both are generally indicative of social and emotional difficulties, can largely impact a child's development and functioning, and are frequently correlated with similar negative adjustment outcomes such as impairments in school performance and interpersonal relationships (Ladd et al., 1999; Levitt & Merrill, 2009; Rubin & Burgess, 2001). Further, anxiety and social withdrawal are frequently characterized as internalizing conditions involving symptoms of overcontrol (e.g., shyness, nervousness, excessive worry, and inhibition; Carthy et al., 2010; Rubin et al., 2009). These symptoms manifest as children often attempt to maintain control over their internalized emotions and/or cognitions (Levitt & Merrill, 2009; Rubin et al., 2018). Rubin and colleagues (2009) described the relationship between the two constructs as "transactional and cyclical in nature" (p. 146). That is, anxious children frequently engage in socially withdrawn behavior as avoidance is the predominant maintenance factor of anxiety (Hofmann, 2014; Rubin et al., 2009). If the withdrawal helps decrease the anxiety, the behavior is then negatively reinforced and likely to reoccur (Rubin & Burgess, 2001). Comparatively, when a socially withdrawn child refrains from interaction with peers, critical social skill development is impeded which can lead to the development of anxiety and other impairments (e.g., poor self-esteem and decreased well-being; Eisenberg et al., 2000; Levitt & Merrell, 2009). However, although experiencing increased levels of anxiety can place children at greater risk for social withdrawal and vice versa, not all anxious children are withdrawn and not all withdrawn children are anxious (Barzeva et al., 2019).

Differences

Anxiety and social withdrawal clearly overlap with one another, but the constructs are nonetheless distinct (Barzeva et al., 2019). While anxiety is recognized as an internalizing state or trait (Renzi, 2018), depending on the situation and context, social withdrawal has “many faces” (Rubin et al., 2009, p. 134) as its categorization varies throughout the literature ranging from an internalizing condition to an emotion regulation strategy to a symptom of numerous mental health conditions (e.g., anxiety; Levitt & Merrell, 2009; Rubin & Burgess, 2001; Rubin et al., 2009). Further, unlike anxiety, social withdrawal’s definition and significance remain ambivalent among researchers and clinicians. The construct also lacks diagnostic criteria and its own etiology and prognosis in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; Rubin et al., 2009). Additionally, and perhaps most importantly, in social contexts such as the school classroom, social withdrawal is observable and therefore relatively more accessible to others (e.g., teachers and peers) as compared to anxiety (Arab et al., 2016; Zhang et al., 2015). While anxiety may be inferred through socially avoidant behaviors such as social withdrawal, it is oftentimes less visible and more difficult for others to recognize (Bystritsky et al., 2013; Layne et al., 2006). Moreover, at times, an anxious child may not exhibit social withdrawal and, vice versa, a socially withdrawn child may not feel anxious. In other words, rather than withdrawing, an anxious child may solicit social support or exhibit overdependence on teachers and peers as a means of coping (Hofmann, 2014) whereas a withdrawn child may seek solitude because they feel sad rather than anxious (Levitt & Merrell, 2009; Rubin & Burgess, 2001; Zhang et al., 2015).

Based on a review of empirical research, a distinction between the two constructs is supported (Table 1). Although the studies differed by design (e.g., utilization of different reporters and/or measures), the correlations between anxiety and social withdrawal were

generally small to medium (ranging from $r = .05$ to $.37$; Barzeva et al., 2019; Biggs et al., 2012; Erath et al., 2007, Gazelle et al., 2009; Gullone et al., 2006). In their investigation of temporal sequencing and the strength of the effects between *self*-reported anxiety and *self*- and *parent*-reported social withdrawal over time, Barzeva and colleagues (2019) found small to medium correlations ranging from $r = .02$ to $.35$. Similarly, Biggs and colleagues (2012) identified a small correlation between *self*-reported anxiety and *self*-reported social withdrawal ($r = .19$) while Erath and colleagues (2007) determined a small correlation ($r = .22$) between *self*-reported anxiety and *teacher*-reported social withdrawal. As additional evidence of the constructs' distinction, the Personality Inventory for Youth's Social Withdrawal scale's convergence with the State-Trait Anxiety Inventory was medium ($r = .37$; Gullone & Ollendick, 2006).

Table 1

Correlation between anxiety and social withdrawal

Study	Sample	Anxiety measures	Social withdrawal measures	r	Effect size
Barzeva et al., 2019	$n = 2,772$ T1: $M = 11.11$ years $SD = 0.55$ T2: $M = 13.44$ years $SD = 0.61$ T3: $M = 16.21$ years $SD = 0.72$	Revised Children's Anxiety and Depression Scale (RCADS; self-report)	Youth Self-Report (YSR); Child Behavior Checklist (CBCL; parent-report)	Self-report T1: $r = 0.33$ T2: $r = 0.35$ T3: $r = 0.33$ Parent-report T1: $r = 0.08$ T2: $r = 0.06$ T3: $r = 0.05$	Small to medium
Biggs et al., 2012	$n = 214$ $M = 13.1$ years $SD = .73$	Social Anxiety Scale for Children-Revised	Child Behavior Checklist (CBCL; parent-report)	$r = 0.19$	Small

		(SASC-R; self-report)			
Erath et al., 2007	<i>n</i> = 84 Sixth- and seventh-grade students (<i>M</i> and <i>SD</i> not provided)	Social Anxiety Scale for Adolescents (SAS-A; self-report)	Child Behavior Scale (CBS; teacher- report); Social Health Profile (SHP; teacher- report)	<i>r</i> = 0.22	Small
Gazelle et al., 2009	<i>n</i> = 192 (subset <i>n</i> = 76 children and their parents) <i>M</i> = 8.70 years <i>DS</i> = 0.53	Social Phobia and Anxiety Inventory for Children (SPAI-C; self-report); Anxiety Disorders Interview Schedule- Child and Parent Versions (ADIS-C/P; self- and parent- reports)	Peer nominations	30% of socially withdrawn children met diagnostic criteria for social anxiety disorder; 15% of socially withdrawn children met diagnostic criteria for generalized anxiety disorder	N/A

Based on the aforementioned information, understanding the difficulty educators might encounter in accurately identifying and treating anxious and socially withdrawn children is

justified. To address this challenge, analyzing the conditions through the lens of emotion regulation may be useful as effective emotion regulation is deemed essential to healthy development in childhood (Djambazova-Popordanoska, 2016).

Emotion Regulation

Emotion regulation is a broad and multidimensional construct defined as the “process by which individuals modify their emotional experiences, expressions, and physiology and the situations eliciting such emotions in order to produce appropriate responses to the ever-changing demands posed by the environment” (Aldao, 2013, p. 155). The process can be intrapersonal (regulation of one’s own emotions) or interpersonal (regulation of others’ emotions; Gross, 2014). Regardless of type, emotion regulation is characterized by three common and consistent components: awareness, goals, and strategies. Awareness is cognizance of one’s own emotions or the emotions of others, the goal is what a child hopes to achieve (e.g., improve affect) in an emotional situation, and strategies are the ways or means to achieving the regulation goal (e.g., cognitive reappraisal; Barthel et al., 2018; Gross, 1998; Gross & Jazaieri, 2014; Sendzik et al., 2017).

As children develop, emotion regulation becomes increasingly vital as it is correlated with various enhanced skills including thinking, working memory, attending, and reasoning (Fried, 2011). Youth more successful at managing emotions tend to exhibit a better understanding of themselves and their world which often leads to increased positive outcomes including improved mental and physical health, and the ability to adjust socially (e.g., initiate and maintain relationships with peers) and function quickly and appropriately in unpredictable or aversive situations (Djambazona-Popordanoska, 2016). Comparatively, ineffective or underdeveloped emotion regulation can inhibit the learning process and is generally associated

with less than optimal, often maladaptive outcomes such as poor interpersonal functioning, impaired cognition, memory and attention; decreased motivation, distress, and increased risk for the development of other mental health problems (Aldao et al., 2010; Barthel et al., 2018; Berking & Wupperman, 2012; Crocetti et al., 2009; Djambazona-Popordanoska, 2016; Fabes et al., 2002; Fried, 2011; Koole, 2009).

While substantial evidence supports the association between difficulties with emotion regulation and the development and maintenance of internalizing mental health conditions in children (Bender et al., 2012; Kranzler et al., 2016; Penza-Clyve & Zeman, 2002; Sendzik et al., 2017), the relation to specific emotion regulation-related components (e.g., emotion awareness, regulation strategies) is less clear particularly regarding interpersonal functioning (Sendzik et al., 2017). Thus, two of the three components, emotion awareness and the use of emotion regulation strategies at both the intra- and interpersonal levels, are the foci of the current study. These two components, along with the goal, are considered essential for effective emotion regulation (Gross & Jazaieri, 2014).

Emotion Awareness and Emotion Regulation Strategy Use

Emotion awareness is conceptualized as the “cognitive ability to perceive, describe, and differentiate one’s own emotional experiences [intrapersonal] and those of others [interpersonal]” (Sendzik et al., 2017, p. 688; Penza-Clyve & Zeman, 2002). Emotion awareness is believed to increase an individual’s range of accessible regulation strategies and flexibility of use of these strategies; *emotion regulation strategies* are described as ways to manage one’s own emotions (intrapersonal) or the emotions of others (interpersonal) and serve as the means to achieving the intended goal of the emotional experience (Gross & Jazaieri, 2014; Schäfer et al., 2017).

While not sufficiently understood, intrapersonal challenges in emotion awareness and the use of emotion regulation strategies are associated with various negative outcomes (Kranzler et al, 2016; Penza-Clyve & Zeman, 2002). For instance, children with low emotion awareness often struggle to appropriately identify essential information for safeguarding oneself from harm (Eastabrook et al., 2014). Further, differentiating emotions when experiencing more than one emotion simultaneously (e.g., feeling both angry and sad when arguing with a friend) is oftentimes problematic and can impact a child's ability to respond effectively (e.g., appropriately alter one's behavior or goal) in emotionally-challenging situations (Eastabrook et al., 2014). This includes the ineffective identification and use of emotion regulation strategies when attempting to cope with one's adverse emotions (intrapersonal) or the emotions of others (interpersonal) (Eastabrook et al., 2014; Sendzik et al., 2017).

Concerning intrapersonal and interpersonal emotion regulation strategy use, several adaptive/maladaptive (intrapersonal) and supportive/unsupportive (interpersonal) strategies exist. Adaptive and supportive strategies are strategies used to improve or down regulate one's negative emotions or the emotions of others, respectively, and are typically associated with favorable long-term outcomes (e.g., improved academic, social, and psychological functioning; Carthy et al., 2010; National Institute of Mental Health [NIMH], 2018). Conversely, maladaptive or unsupportive strategies generally worsen the emotional experience (one's own or others') and are correlated with adverse long-term outcomes (e.g., impaired academic functioning and the decreased ability to attend and learn; Schäfer et al., 2017; Huberty, 2010). When children consistently fail to effectively utilize appropriate strategies in accordance with the environment, the development of negative emotions (e.g., sadness, anger, and fear) is more likely which can lead to intrapersonal (e.g., feeling insecure) and interpersonal difficulties (e.g., feeling

misunderstood or unsupported by parents, teachers, or peers). Interpersonal difficulties can then result in children refraining from socialization with others, withdrawing and avoiding situations where failure is possible, or choosing to engage in easy rather than difficult tasks (Aldao et al., 2010; Barthel et al., 2018; Bender et al., 2012; Djambazona-Popordanoska, 2016; Huberty, 2010).

Study Purpose

A limited number of researchers have examined anxiety and social withdrawal and their associations to *intrapersonal* emotion awareness and emotion regulation strategy use, and even fewer have considered these components within the interpersonal realm. Consequently, the available literature is largely insufficient. Therefore, the overarching goal of the current study is to examine anxiety and social withdrawal through the lens of emotion awareness and emotion regulation strategy use at the intra- and interpersonal levels. Ultimately, the researcher hopes to identify specific intra- and interpersonal characteristics of children experiencing these internalizing challenges to better equip educators with useful knowledge for identification and treatment in the classroom. For example, although both conditions are associated with maladaptive social functioning, perceiving others' emotions (interpersonal emotion awareness) may be more challenging for socially withdrawn children relative to anxious children due to their preference for solitude and subsequent reduced interactions with peers (Robin & Burgess, 2001). In addition, from a preventative standpoint, the information might also be helpful as teachers, school psychologists, and other school staff can teach students specific techniques or skills (e.g., adaptive intrapersonal or supportive interpersonal emotion regulation strategies) to proactively safeguard against the development and pervasiveness of anxiety and social withdrawal (Hannesdottir & Ollendick, 2007).

Research Questions and Hypotheses

The subsequent research questions and hypotheses guided the current study.

Research Question #1

How do self-reported anxiety and teacher-reported social withdrawal relate to a child's awareness of their own emotions (intrapersonal)?

Hypothesis #1. After controlling for gender, age, and race, the researcher hypothesizes anxiety and social withdrawal will positively and significantly relate to poor intrapersonal emotion awareness such that children who report more anxiety or children perceived by their teachers as more socially withdrawn will endorse poorer awareness of their own emotions. While the research is limited concerning the association between anxiety and intrapersonal emotion awareness, the findings support a significant association between the two constructs (Sendzik et al., 2017); thus, the same is predicted for the current study. Comparatively, research examining the association between social withdrawal and intrapersonal emotion awareness is scarce and the sole reviewed study did not find a correlation between the two constructs (Penza-Clyve & Zeman, 2002). Even so, the researcher predicts a significant association between social withdrawal and intrapersonal emotion awareness based on the broader literature concerning difficulties with emotion regulation. Emotion regulation is consistently implicated in the development and maintenance of internalizing mental health conditions among children (Bender et al., 2012; Kranzler et al., 2016; Penza-Clyve & Zeman, 2002; Sendzik et al., 2017), and emotion awareness is a critical and essential component of emotion regulation (Gross & Jazaieri, 2014; Sendzik et al., 2017; Suveg et al., 2009). Further, children who struggle to effectively regulate their emotions are oftentimes less attuned to their own functioning (Fried, 2011). Thus, demonstration of poorer emotion awareness seems likely for socially withdrawn children.

Research Question #2

How do anxiety and social withdrawal relate to a child's awareness of others' emotions (interpersonal)?

Hypothesis #2. After controlling for gender, age, and race, the researcher hypothesizes anxiety will not significantly associate with interpersonal emotion awareness. Research examining the association is highly limited and inconsistent. One study's researchers found a weak, partial association (Lahaye et al., 2010) while the other study's researchers found no association (Rieffe et al., 2008). On the contrary, the researcher hypothesizes a positive and significant association between social withdrawal and interpersonal emotion awareness such that children rated as more socially withdrawn by their teachers will endorse poorer awareness of others' emotions. Socially withdrawn children more frequently and consistently avoid interactions with their peers and therefore experience fewer social learning opportunities (Rubin & Coplan, 2010; Oh et al., 2008; Rubin et al., 2018; Wichmann et al., 2004). Hence, their poorer awareness of their peers' emotions is more likely.

Research Question #3a

How do anxiety and social withdrawal relate to a child's use of adaptive intrapersonal emotion regulation strategies?

Hypothesis #3a. After controlling for gender, age, and race, the researcher hypothesizes anxiety and social withdrawal will each negatively and significantly associate with adaptive strategy use to regulate others' emotions. That is, children who report more anxiety and teachers who rate students as more socially withdrawn will endorse significantly less use of adaptive strategies to regulate their own emotions. Although research examining the association between anxiety and emotion regulation strategy use is limited, it nonetheless supports a negative and

significant association between the two constructs (Suveg et al., 2009; Suveg & Zeman, 2004). Regarding the relation between social withdrawal and intrapersonal emotion regulation strategy use, research has not been conducted. Therefore, the hypothesis is based on a broader examination of the emotion regulation literature as referenced above. Children experiencing internalizing challenges (e.g., social withdrawal) often ineffectively regulate their emotions (Bender et al., 2012; Gross & Jazaieri, 2014; Sendzik et al., 2017) and, because strategy use is an essential component of emotion regulation (Gross & Jazaieri, 2014; Sendzik et al., 2017), socially withdrawn likely utilize significantly fewer adaptive strategies to regulate their own emotions.

Research Question #3b

How do anxiety and social withdrawal relate to a child's use of maladaptive intrapersonal emotion regulation strategies?

Hypothesis #3b: After controlling for gender, age, and race, anxiety and social withdrawal are predicted to positively and significantly associate with the use of maladaptive strategies to regulate their own emotions. That is, children who report more anxiety and children perceived as more socially withdrawal by their teachers will endorse greater use of maladaptive strategies. Again, while research examining the association between anxiety and intrapersonal maladaptive emotion regulation strategy use is limited, the findings support a positive and significant association (Suveg et al., 2009; Suveg & Zeman, 2004). Concerning the association between social withdrawal and maladaptive strategy use, research has not been conducted. Therefore, the hypothesis is based on the aforementioned premise. That is, children experiencing internalizing challenges (e.g., social withdrawal) generally struggle to effectively regulate their emotions (Bender et al., 2012; Gross & Jazaieri, 2014; Sendzik et al., 2017) and, because

strategy use is a critical component of effective emotion regulation, socially withdrawn children likely demonstrate greater use of maladaptive strategies to regulate their own emotions (Gross & Jazaieri, 2014; Sendzik et al., 2017).

Research Question #4a

How do anxiety and social withdrawal relate to a child's use of supportive interpersonal emotion regulation strategies?

Hypothesis #4a. After controlling for gender, age, and race, the researcher hypothesizes anxiety and social withdrawal will each negatively and significantly relate to supportive interpersonal emotion regulation strategy use. Specifically, children who report more anxiety and children rated by their teachers as more socially withdrawn will use fewer supportive strategies to regulate others' emotions, per peers' perceptions. Again, while the research examining anxiety and social withdrawal and each condition's relation to supportive interpersonal emotion regulation strategy use is highly limited or nonexistent, deficits in emotion regulation and the link to the development and maintenance of internalizing conditions (e.g., anxiety and social withdrawal) in children is well established (Bender et al., 2012; Kranzler et al., 2016; Penza-Clyve & Zeman, 2002; Sendzik et al., 2017). Thus, because strategy use is a key component of emotion regulation, negative and significant associations are predicted. Further, both anxious and socially withdrawn children often struggle interpersonally. Anxious children can be overly dependent and highly reactive (Carthy et al., 2010; Crocetti et al., 2009; Zhang et al., 2015) whereas socially withdrawn consistently avoid interactions with their peers and consequently experience fewer social learning opportunities (Rubin & Coplan, 2010; Oh et al., 2008; Rubin et al., 2018; Wichmann et al., 2004). Hence, these children may struggle or, perhaps, maintain no desire to utilize supportive strategies in an interpersonal context.

Research Question #4b

How do anxiety and social withdrawal relate to a child's use of unsupportive interpersonal emotion regulation strategies?

Hypothesis #4b. After controlling for gender, age, and race, anxiety is predicted to positively and significantly associate with unsupportive strategy use to regulate others' emotions. Specifically, children who report more anxiety will exhibit greater use of unsupportive interpersonal strategies as reported by their peers. Again, although the research is scarce, anxious children tend to struggle with interpersonal interactions as they often become emotionally reactive or hyper-aroused (Carthy et al., 2010; Crocetti et al., 2009). Thus, it seems likely they would demonstrate greater use of unsupportive strategies in regulating their peers' emotions. Regarding social withdrawal, a negative and significant association is predicted. That is, children perceived by their teachers as more socially withdrawn, will use fewer unsupportive strategies to regulate others' emotion, per peer report. Although both anxious and socially withdrawn children experience deficits in interpersonal functioning, socially withdrawn children more frequently and consistently avoid interactions with their peers (Rubin & Coplan, 2010; Oh et al., 2008; Rubin et al., 2018; Wichmann et al., 2004). Thus, these children likely have limited ability and/or desire to interact with their peers to provide any type of strategy to regulate their emotions (Carthy et al., 2010; Crocetti et al., 2009; Zhang et al., 2015).

Theoretical Frameworks of Intra- and Interpersonal Emotion Regulation

Under the emotion regulation umbrella, two related yet distinctly different types exist: *intrapersonal* emotion regulation and *interpersonal* emotion regulation. Over time, intrapersonal emotion regulation has received substantially greater research attention than interpersonal emotion regulation. In recent years; however, researchers have placed greater emphasis on the

latter arguing that because humans are social beings, emotion regulation rarely occurs in isolation and is therefore heavily influenced by personal relationships and the assistance of others (Barthel et al., 2018). Therefore, to better understand emotion regulation and its specific components of emotion awareness and strategy use, it is essential to review the most influential and/or comprehensive existing models (Fried, 2011).

Intrapersonal Emotion Regulation

Throughout the extant literature, James Gross's (1998) process model appears to be the most dominant (Gross, 2014). The model is comprised of five different components: (1) selecting and (2) modifying the emotional situation, (3) attending to the situation, (4) modifying one's thinking and cognitive processing, (5) and modulating the response (Barthel et al., 2018; Gross, 1998). More specifically, (1) an emotional situation presents itself, (2) the child decides whether to modify it in accordance with its emotional impact, (3) and then identifies which component of the situation to focus upon. (4) Next, the component is interpreted, and meaning is designated to it. (5) Finally, the child's response is implemented. Of the model's components, Gross (1998) considers steps one through four as regulation and the fifth and final component as action (Barthel et al., 2018).

In accordance with Gross's (1998) framework, several heavily researched strategies are identified as integral to intrapersonal emotion regulation. These strategies are typically categorized as antecedent-focused or response-focused; the category depends on the stage at which the emotion is regulated (Barthel et al., 2018). Antecedent-focused ("regulation before action") strategies transpire prior to the full activation of the emotional response and include components 2, 3, and 4 as described above (Barthel et al., 2018, p. 204). Comparatively, response-focused ("regulation based on one's response") strategies occur after the initiation of

response tendencies and are aimed at changing or modulating one's emotional expression or experience (component 5; Barthel et al., 2018, p. 204; Gross, 1998; Hofmann, 2014).

In addition, the strategies, which are categorized as adaptive or maladaptive, can be further distinguished by *type* of regulation. In Kovac's (2000) conceptualization of intrapersonal emotion regulation strategies via the Feelings and Me-Child (FAM-C) questionnaire, the author differentiated adaptive and maladaptive strategies by categorizing each strategy into one of three domains: behavioral/physical, social-interpersonal, and cognitive (Bylsma et al., 2016; Dochnal et al., 2019; Tamás et al., 2007). Specific intrapersonal strategies include cognitive reappraisal, emotional suppression, acceptance, rumination, problem solving, and avoidance (Barthel et al., 2018; Gross, 1998).

Adaptive Strategies. Cognitive reappraisal, acceptance, and problem solving are typically considered adaptive, antecedent-focused strategies and generally serve as protective factors in the development of mental health problems (e.g., anxiety or social withdrawal). Cognitive reappraisal involves mental reframing in which a person views one's circumstances differently than their initial perceptive, typically transitioning from a negative or threatening perspective to a non-threatening one. Acceptance necessitates restricting oneself from changing a situation by perceiving the situation non-judgmentally whereas problem solving entails the ability to brainstorm and plan in an effort to alter or take charge of the circumstances (Aldao et al., 2010; Barthel et al., 2018).

Maladaptive Strategies. Conversely, emotional suppression, rumination, and avoidance are commonly identified as response-focused, maladaptive strategies and are theorized risk factors for the development of mental health problems (Aldao et al., 2010; Hofmann, 2014). When utilizing suppression, a child blocks out the uncomfortable or negative emotions and

situations rather than properly attending and responding whereas rumination involves continuously thinking about a situation without identifying and determining any sort of action plan to improve it. Lastly, avoidance, which can be active or passive, includes the complete evasion of a situation or experiencing the situation within an exceptionally low stress/safe environment (e.g., in the presence of a safety person such as a parent or friend; Aldao et al., 2010; Barthel et al., 2018; Gross, 1998; Hofmann, 2014).

Although the sheer volume of intrapersonal emotion regulation research has expanded substantially, Gross's (1998) two-decade old model remains an influential and dominant intrapersonal framework. However, as indicated above, the framework does not examine the social processes involved in emotion management and is primarily focused on six intrapersonal strategies often utilized in solitude (Barthel et al., 2018; Zaki & Williams, 2013). Therefore, in consideration of the fundamental social nature of human beings, better conceptualizing *interpersonal* emotion regulation is essential (Barthel et al., 2018; Hofmann, 2014; Hoffman et al., 2016; Niven et al., 2009).

Interpersonal Emotion Regulation

While intrapersonal emotion regulation represents one's processes and strategies to regulate one's *own* emotional experiences and expressions, interpersonal emotion regulation is a much broader, dynamic process involving developmental and cultural factors at both the individual and social levels (Barthel et al., 2018; López-Pérez et al., 2016; Niven et al., 2012; Williams et al., 2018; Zaki & Williams, 2013). Two types of interpersonal emotion regulation exist, intrinsic and extrinsic; the type is dependent on the intended target of the emotion regulation experience. That is, intrinsic interpersonal emotion regulation involves an experience in which a child seeks social assistance to manage their *own* emotions whereas extrinsic

regulation is the solicitation of social interaction to manage *another* child's emotions (Zaki & Williams, 2013). For example, in the classroom context, acting as social agents, children often play a reciprocal role in interpersonally regulating emotions. They seek the assistance of others (e.g., teachers or peers) in regulating their own emotions (e.g., asking the teacher for problem-solving assistance; intrinsic) while also providing supportive (e.g., providing a hug or lending an ear to an in-need peer) or unsupportive (e.g., telling the child they are making a big deal out of nothing) strategies to others (extrinsic; Morris et al., 2007; Niven et al., 2009). The current study is focused on extrinsic regulation of peers' emotions.

While development of emotion regulation has its origins in the family context, beyond this environment, extrinsic interpersonal emotion regulation occurs continuously in a variety of other social settings (e.g., home, school, and neighborhood) as well as *by* and *with* a wide array of people (e.g., teachers, peers, neighbors, and strangers; Niven et al., 2009). As such, in recent years, although multiple interpersonal emotion regulation frameworks have come to fruition (e.g., Zaki and Williams, 2013), Niven and colleagues' (2009) model will be subsequently reviewed as it provides a comprehensive and systematic framework while yielding an idyllic structure to examine developmental differences in social settings (Barthel et al., 2018; López-Pérez et al., 2016).

Strategy Factors and Categories. Niven and colleagues' (2009) interpersonal emotion regulation model explores social processes by classifying 378 distinct strategies into a common framework (López-Pérez et al., 2016). The classification system is organized within a hierarchical manner and uses two factors to differentiate the strategies: (1) affect improving verses affect worsening and (2) engagement verses relationship-oriented. The first factor distinguishes each strategy according to its motive, that is, whether it is intended to improve or

worsen one's emotional state whereas the second factor focuses on the method with which the motive is achieved. In other words, whether the social agent's (child A) strategy includes or excludes the target child (child B) in regulating their (child B) emotional experience. Stemming from these two distinct factors are four main strategy categories which include both motive and means: improve affect/ positive engagement (e.g., child A listens to child B vent), worsen affect/negative engagement (e.g., child A complains about child B's actions to make child B feel worse about a situation), improve affect/acceptance (e.g., child A demonstrates care and compassion toward child B), and worsen affect/rejection (e.g., child A ignores child B). Of the 378 identified strategies, 199 were identified as affect-improving and 179 were categorized as affect-worsening (Niven et al., 2009).

The Coping with Children's Negative Emotions Scale (CCNES; Fabes et al., 2002) is used to assess the use of extrinsic interpersonal emotion regulation strategies. More specifically, adolescents rate their parents' responses to their (adolescents') negative emotional expression (e.g., sadness, anger) based on common, hypothetical, emotion-eliciting situations (e.g., "When my parents see me becoming angry at a close friend, they usually..."). Possible responses are divided among six different supportive and unsupportive strategy categories: Distress Reactions, Punitive Reactions, Expressive Encouragement, Emotion-Focused Responses, Problem-Focused Reactions, and Minimization Reactions (Fabes et al., 2002). For the current study, the CCNES was adapted to measure the child participants' extrinsic interpersonal emotion regulation strategy use via a peer nomination method divided among two subscales: Supportive and Unsupportive. The supportive strategies are intended to improve affect whereas the unsupportive strategies generally worsen affect (Niven et al., 2009).

Literature Review

Anxiety in Children

At both the clinical and nonclinical levels, anxiety is one of the most pervasive mental health conditions in the United States among children (Johnson, 2016; Killu et al., 2016; Pekrun et al., 2002). Over the past decade, youth diagnoses increased significantly (Child Mind Institute [CMI], 2018), and although estimates vary by source, recent research indicates lifetime prevalence rates greater than 30% (Lebowitz & Omer, 2013; Mathews et al., 2014; Wagner, 2019). Further, the median age of onset has decreased substantially over time: 11 years of age in 2005 as compared to 6 years of age in 2019 (Moran, 2016; Wagner, 2019). It is important to consider the possible impact of recall bias as these statistics are typically determined based on retrospective accounts. Nonetheless, these findings are deeply concerning. Even so, anxiety is critical to human functioning as it serves as a “biological warning system” (Essau & Ollendick, 2013, p. 17), and, when adaptive, can be an especially ordinary and expected life experience particularly during distinct developmental periods (Huberty, 2010). Specifically, anxiety allows for an enhanced human response (Essau & Ollendick, 2013) including quick evaluation and appropriate reaction when confronted with situations requiring emotional arousal and alertness (e.g., dangerous or threatening situations; Essau et al., 2013; Huberty, 2010; Mathews et al., 2016).

In the early years of life, infancy through one’s preschool years, although the presence of an anxiety *disorder* is quite uncommon, experiencing adaptive levels of anxiety is both developmentally appropriate and oftentimes necessary (e.g., a toddler exhibiting separation anxiety when their mother leaves the room; Huberty, 2010). Until the age of eight or so, anxiety is generally correlated with specific, identifiable situations (e.g., stranger anxiety when confronted with an unfamiliar person or situation); however, as children progress through

childhood and into adolescence, anxiety is not only more pervasive, but the source of such distress is increasingly abstract and often connected to a social situation or experience (e.g., changing schools or arguing with close friends; Huberty, 2010). These changes are largely due to developing cognition. For example, a situation previously perceived as frightening (e.g., encountering strangers) no longer causes fear or worry and, vice versa, a prior experience interpreted as benign (e.g., dispute with a peer or friend) may now feel distressing (Essau et al., 2013). Yet, anxiety can quickly transition from normal and adaptive to abnormal and maladaptive at which a clinical level of impairment is reached. An anxiety disorder classification is typically justified when the anxiety persists for an extended period of time (NIMH, 2018), when its intensity is inconsistent with the actual threat or danger of the experience and occurs during innocuous situations, when it creates distress for the child and their family, and impedes one's social, academic, and psychological functioning (Huberty, 2010; Mathews et al., 2014; Moran, 2016; NIMH, 2018).

In recent decades, the etiological and phenomenological understanding of anxiety in children has advanced substantially (Kerns et al., 2014). It is well documented that clinically and subclinically anxious children frequently endorse negative, intense, and unpleasant emotional experiences (Carthy et al., 2010). They also endure excessive and intensified feelings of fear, hopelessness, anger, worry, irritability, unease, and nervousness, as well as increased physiological symptoms (e.g., sweating, increased heart rate, skin flushing, stomachaches, and headaches) and sleep difficulties (Carthy et al., 2010; CDC, 2020; Jacob et al., 2014; Killu et al., 2016; Zhang et al., 2015). Over time, anxious children frequently encounter challenges with self-esteem, well-being, and emotional functioning (e.g., problems with emotion regulation; Gross, 2011; Jacob et al., 2014; Kerns et al., 2014; Lebowitz & Omer, 2013).

Additionally, anxious children often engage in maladaptive social functioning as they struggle to successfully initiate interactions and maintain friendships in the classroom setting (Huberty, 2010; Killu et al., 2016; Mathews et al., 2016). When confronted with a situation perceived as threatening or dangerous, they often engage in intensified emotional reactivity, become hyper-aroused and, once upset, find it challenging to calm down (Carthy et al., 2010; Crocetti et al., 2009). Consequently, anxious children often seek the assistance of others and become over dependent on others (e.g., teachers or peers) to alleviate these negative emotions and to increase feelings of safety and comfort (Zhang, 2015). However, these children also tend to demonstrate reserved or avoidant behavior (e.g., social withdrawal) which can be especially problematic as initiation of social interactions is often averted for fear of rejection or teasing by their classmates (Huberty, 2010; Jacob et al., 2014; Killu et al., 2016). Additionally, peers typically interpret this behavior as aversive due to negative misperceptions of mental health problems (Jacob et al., 2014). Relative to their nonanxious counterparts, anxious children are more often disliked, stigmatized, neglected, and excluded which can lead to loneliness and overall lack of social satisfaction (Jacob et al., 2014). It is therefore essential to examine non-clinical samples, which is the focus of the current study, as anxiety at subclinical levels can be impairing and is consistently linked to maladaptive outcomes (Huberty, 2020; Levitt & Merrell, 2010).

Gender Differences

Based on much of the extant literature, gender differences exist; girls are at significantly greater risk than boys for developing anxiety (Bender et al., 2012; Eastabrook et al., 2014; Lewinsohn et al., 1998; APA, 2019). According to Lewinsohn and colleagues (1998), girls as young as 6-years-old experience anxiety two times more frequently than boys, and this

imbalance is believed to continue throughout the lifespan (APA, 2019). However, a few researchers noted alternative findings. Huberty (2010) suggested a similar rate of anxiety development among boys and girls throughout elementary school with a significant divergence between genders occurring in adolescence. However, other researchers cited the importance of considering girls' increased willingness to acknowledge internalizing problems relative to boys which might contribute to the discrepancy (Suveg & Zeman, 2004). Nonetheless, anxiety is predominantly perceived as more prevalent among girls than boys (Bender et al., 2012).

Anxiety and Emotion Awareness

While problems with emotion awareness in children are associated with various internalizing conditions such as anxiety, the relation is not sufficiently understood. Few existing studies examined the child population (Eastabrook et al., 2014; Sendzik et al., 2017) as the majority of the extant literature is focused on young adults (e.g., college students) or adolescents (Eastabrook et al., 2014; Sendzik et al., 2017). Therefore, to increase understanding of the association between anxiety and poor emotion awareness, Sendzik and colleagues (2017) performed a meta-analytic review examining the relationship among nonclinical youth. The researchers divided the studies into two categories based on the participants' average age: children (< 12 years old) and adolescents (> 12 years old). Only child findings were reviewed as the current study examines fourth- and fifth-grade youth (M age = 10.31). To refrain from methodological heterogeneity and the reduction of generalizability, all studies used validated self-report measures to assess the constructs in nonclinical participant samples (Sendzik et al., 2017). Notably, the researchers neglected to explicitly differentiate between intra- and interpersonal emotional awareness. Therefore, the findings are organized by type of emotion awareness in the subsequent narrative.

Intrapersonal Emotion Awareness

To examine the correlation between intrapersonal emotion awareness challenges and symptoms of anxiety, Sendzik and colleagues (2017) used Pearson's product-moment correlation coefficient r to represent the effect size of the cross-sectional studies. The constructs were measured via several different scales e.g., Screen for Child Anxiety Related Disorders (SCARED), Multidimensional Anxiety Scale for Children (MASC), and the Emotion Awareness Questionnaire 30 (EAQ30; Sendzik et al., 2017). Based on the findings, intrapersonal emotion awareness (as previously defined) and anxiety were positively and significantly associated (medium effect size, $r = .42$); that is, children who experienced poorer intrapersonal emotion awareness exhibited increased levels of anxiety. Results of the longitudinal study were reported narratively; Kranzler and colleagues (2016) assessed children's emotion awareness and the relation to anxiety every three months over the course of a year. Based on the results, poor emotion awareness significantly predicted increased levels of anxiety over time (Kranzler et al., 2016; Sendzik et al., 2017). Further, only three of the childhood studies assessed the influence of gender on the association between intrapersonal emotion awareness and anxiety; however, no significant gender differences were found among participants which indicates intrapersonal emotion awareness is similarly related to anxiety for both boys and girls (Kranzler et al., 2016; Penza-Clyve & Zeman, 2002; Zeman et al., 2002).

Interpersonal Emotion Awareness

As evidenced above, most of the existing research is focused on intrapersonal as opposed to interpersonal emotion awareness even though both types are critical to children's adaptive social and emotional functioning (Rieffe et al., 2008). Of the available childhood anxiety studies, only two assessed interpersonal emotion awareness via the EAQ30's Attending to Others'

Emotions subscale (Lahaye et al., 2010; Rieffe et al., 2008). Specifically, this subscale measures children's interest in others' emotions and was used in the current study's assessment of the construct. First, Lahaye and colleagues (2010) examined the association between interpersonal emotion awareness and anxiety to assess the validity of the EAQ30 among a small sample ($n = 90$) of French-speaking children (M age = 11.8 years). As a result, the researchers identified a partial negative and weak correlation between interpersonal emotion awareness and anxiety. That is, children who reported poorer interpersonal emotion awareness also endorsed more anxiety; however, not at a significant level (Lahaye et al., 2010). Rieffe and colleagues (2008) also assessed the relation between interpersonal emotion awareness and anxiety via the authors' validity evaluation of the EAQ30 using a larger sample ($n = 403$) of children (M age = 10.8 years) in the Netherlands. Based on the results, the researchers did not find an association between interpersonal emotion awareness and anxiety (Rieffe et al., 2008), and neither study examined gender differences.

Anxiety and Emotion Regulation Strategy Use

Similar to the aforementioned studies examining emotion awareness and anxiety, a very limited number of researchers have explored the association between anxiety and intrapersonal emotion regulation strategy use among nonclinical child samples. Studies examining the relation between anxiety and interpersonal strategy use are nonexistent as most of the extant literature is focused on the young adult or adolescent populations. However, the aforementioned study by Suveg and colleagues (2009) will be reviewed. In addition, Suveg and Zeman's (2004) study involving a clinical child sample will be reviewed as the extant literature is extremely limited.

Within the previously reviewed study performed by Suveg and colleagues (2009), the researchers also investigated fourth- and fifth-grade elementary school children's (M age = 10.3

years) self-report of “emotion regulation coping” (similar to emotion regulation strategy use) described as “culturally appropriate methods of managing emotion experiences” (p. 225). The researchers used the Emotion Regulation Coping subscale which examines adaptive strategies to regulate emotions (e.g., “I try to calmly deal with what is making me feel mad”). The subscale is included within the Sadness and Anger versions of the Children’s Emotion Management Scale (CEMS; Suveg et al., 2009, p. 225). Based on the analyses, as the researchers predicted, a positive and significant relation between deficits in intrapersonal emotion regulation strategy use (“emotion regulation coping”) and anxiety among children was found (Suveg et al., 2009). Gender differences were not examined.

Suveg and Zeman (2004) assessed emotion regulation strategy use among clinically anxious youth. Utilizing a small sample of fourth- and fifth-grade students (*M age*=10.1 years), the researchers examined the children’s self-reported use of intrapersonal regulation strategies to manage their negative emotions (anger and sadness) regarding inhibition (“I get sad inside but I don’t show it”), dysregulated expression (“I say mean things to others when I am mad”), and emotion regulation coping (“When I am feeling sad, I do something totally different until I calm down” (Suveg & Zeman, 2004). Significant main effects were found for dysregulated expression and inhibition; that is, children diagnosed with an anxiety disorder endorsed increased dysregulated expression as compared to the nonanxious controls. Lastly, concerning adaptive coping, anxious children reported significantly lower levels as compared to nonanxious children. This also held true for anxious girls relative to anxious boys (Suveg & Zeman, 2004). Overall, children with higher levels of anxiety exhibited difficulties in adaptive coping (e.g., the use of emotion regulation strategies).

Social Withdrawal in Children

Childhood social withdrawal, relative to childhood anxiety, has received significantly less research attention, and conceptually, is not well understood as its definition lacks consensus amid persistent inconsistencies and disagreements in the field. Prior to the 1970s, the construct was perceived very differently than it is presently. Researchers argued it had minimal relevance or significance concerning child maturation including the development of social and emotional skills (e.g., the initiation and maintenance of friendships; Rubin, et al., 2006; Rubin et al., 2009). More specifically, researchers and practitioners believed social withdrawal was not predictive of maladjustment later in life (Rubin & Coplan, 2010; Rubin et al., 2009; Rubin et al., 2018). However, these perceptions were based on flawed research (e.g., researchers utilized samples comprised of high-risk clinical participants and used instruments without documented validity to assess the behavior; Rubin et al., 2009). As time and research has progressed; however, a degree of clarity has come to fruition, and the construct is now recognized as highly relevant to youth development (Oh et al., 2008; Rubin et al., 2009; Rubin et al., 2018).

As an umbrella term, social withdrawal encompasses various *forms* of behavioral solitude. These forms (social disinterest, behavioral inhibition, anxious solitude, shyness, social reticence, and social phobia) manifest as early as toddlerhood (Rubin & Barstead, 2014) and are derived from different internal sources or motivations (e.g., self-perceived problems with interpersonal skills and relationships; Rubin & Coplan, 2010; Rubin et al., 2009). While social disinterest stems from an internal preference for solitude and is oftentimes considered both normal and adaptive (Rubin & Burgess, 2001), perhaps even benign (Doey et al., 2014), the latter five forms (behavioral inhibition, anxious solitude, shyness, social reticence, and social phobia) are motivated by poor regulation of negative internalized emotions and indicative of underlying social-emotional difficulties (Rubin & Coplan, 2010; Rubin et al., 2009; Rubin et al.,

2018). Nonetheless, researchers have found that regardless of form, children's solitary behavior is often perceived by others, particularly parents, teachers, and peers, as progressively dysfunctional (Bowker & Rubin, 2009; Rubin et al., 2018). Further, researchers have characterized the condition as moderately stable in childhood though to early adolescence with increased association to mental health problems (e.g., anxiety and depression) and maladjustment (e.g., psychosocial problems) throughout development (Oh et al., 2008).

Socially withdrawn children are perhaps best described as individuals who “[bother] themselves rather than others” (Morris et al., 1954, p. 743; Oh et al., 2008; Rubin et al., 2009). These children generally encounter significant obstacles and can experience profound suffering due to their avoidance of social interaction with peers in the classroom (Rubin & Burgess, 2001). Although they may desire socialization, various underlying deficits (e.g., low self-esteem or poor social skills) often interfere and drive them to the periphery of social situations (Booth-LaForce & Oxford, 2008; Oh et al., 2008; Zhang et al., 2015). Thus, due to a lack of peer experiences and social learning opportunities, social withdrawal is correlated with multiple maladaptive outcomes such as loneliness, friendlessness, peer rejection and exclusion, decreased well-being, victimization, and the development of other mental health conditions (Rubin & Coplan, 2010; Oh et al., 2008; Rubin et al., 2018; Wichmann et al., 2004). Socially withdrawn children also frequently experience challenging emotions particularly fear, anxiety, and wariness and are generally less assertive than their non-withdrawn peers. For instance, when attempting to achieve a social goal, withdrawn children often utilize indirect strategies which are subsequently ignored or rejected by their counterparts (Rubin et al., 2018) and, upon rejection, they often resign themselves, change their goals, or submit to an alternative peer proposal (Rubin et al., 2018).

Consequently, socially withdrawn children are generally perceived by their peers as passive, acquiescent, and easily manipulated (Rubin et al., 2018).

Gender Differences

Comparing differences among socially withdrawn boys and girls in late elementary school is somewhat challenging due to the scant and, perhaps, muddled research (Doey et al., 2014; Rubin et al., 2009). Further, it is important to consider several variables including the form of withdrawal (e.g., behavioral inhibition and anxious solitude), the source or motivation (e.g., fear or wariness in unfamiliar social situations), the child's individual characteristics (e.g., temperament), cultural and contextual factors, and, perhaps most importantly, social norms (e.g., socially withdrawn girls perceived less negatively than boys; Rubin & Coplan, 2010; Rubin & Barstead, 2014). According to Rubin & Barstead (2014), differences among boys and girls begin to emerge in late childhood/adolescence with girls demonstrating social withdrawal more frequently than boys. However, some researchers suspect this difference might be due to bias in reporting; that is, girls are more likely to divulge or self-report their internalizing problems to a greater extent than boys (Doey et al., 2014; Rubin & Barstead, 2014).

Social Withdrawal and Emotion Awareness

While the relation between anxiety and emotion awareness in children has received some, albeit, inadequate attention, it appears the association between social withdrawal and emotion awareness has garnered even less. Broadly, poor emotion regulation is an identified deficit among socially withdrawn children (Rubin & Coplan, 2010); however, each specific emotion regulation component's (e.g., emotion awareness, emotion regulation strategy use) contribution is relatively unclear (Halberstadt et al., 2001; Penza-Clyve & Zeman, 2002). Based on a thorough review of the extant literature, empirical study focused on the relation between social

withdrawal and intrapersonal or interpersonal emotion awareness in children is limited or nonexistent. As an exception, in Penza-Clyve & Zeman's (2002) study, the authors assessed social withdrawal via a peer nomination method to further validate the EESC as social and emotional functioning are strongly associated. The fourth- and fifth-grade child participants were provided a list of their classmates' names and tasked with rating each child on four socially withdrawn behaviors; examples include "Likes to be alone a lot," and "Is afraid to join in a group" (Penza-Clyve & Zeman, 2002). Poor intrapersonal emotion awareness was measured via self-report using the Poor Awareness subscale of the EESC. Due to a lack of empirical evidence connecting social withdrawal and intrapersonal emotion awareness, the authors did not expect to find a significant association between the two which was confirmed (Penza-Clyve & Zeman, 2002). Although the authors examined the influence of gender, a significant difference between boys and girls was not found.

Social Withdrawal and Emotion Regulation Strategy Use

Extant literature examining children's social withdrawal and the specific use of emotion regulation strategies to manage their own emotions (intrapersonal) and the emotions of others (interpersonal) is essentially nonexistent. Moreover, emotion regulation is generally examined as a singular construct rather than dissected into its individual components (e.g., emotion awareness, regulation strategy use). For instance, in Rubin and colleagues' (2010) review of empirical research concerning social withdrawal in children and adolescents, the authors found that relative to their typically functioning counterparts, socially withdrawn children tend to express increased negative emotions (sadness or anger; Bowker & Rubin, 2009; LaFreniere & Dumas, 1992) and ineffectively regulate these emotions upon encountering challenging interpersonal situations. In addition, similar yet different constructs were assessed such as coping

and social support. While coping and social support encompass emotion regulation, these constructs are broader and typically involve stress reduction over an extended period of time (Burgess et al., 2006; Dixon-Gordon et al., 2015). For example, Burgess and colleagues (2006) performed a study assessing the impact of relationship context (friend or unfamiliar peer) on the coping strategies of shy/withdrawn fifth- and sixth-grade boys and girls (M age =10.79 years) in response to difficult social situations. It is therefore evident that additional research specifically studying the relation between social withdrawal and regulation strategies at both the intra- and interpersonal levels is necessary.

Research Gaps

Based on a review of the available research, several gaps are evident. First, most studies examining anxiety and social withdrawal and their relation to emotion awareness and emotion regulation strategy use at the intra- and interpersonal levels utilize adult and adolescent samples rather than child participants. While these studies are nonetheless important, it is inappropriate to apply these findings to youth in middle childhood as children are susceptible to various influences on their emotion regulation abilities including maturation factors (e.g., developing cognition), inexperience due to age, environmental aspects (e.g., reliance on adults), and gender socialization (Eschenbeck et al., 2007; Suveg et al., 2009). Further, this development period is critical for emotion regulation maturation (Zeman et al., 2006; Hofmann, 2014) which is intimately connected to a child's social and emotional, academic, and psychological functioning (Kranzler et al., 2016; Penza-Clyve & Zeman, 2002). The current study will therefore focus specifically on children in middle childhood.

Next, emotion regulation is most often examined as a broad process, and a substantial amount of research dedicated to its role in the development and maintenance of mental health

conditions exists (Bender et al., 2012; Kranzler et al., 2016; Penza-Clyve & Zeman, 2002; Sendzik et al., 2017). However, even though specific components (e.g., emotion awareness and strategy use) are involved and integral to adaptive regulation and, ultimately, children's social and emotional functioning (Gross & Jazaieri, 2014), emotion awareness and emotion regulation strategy use are largely neglected particularly at the interpersonal level. This is problematic as children consistently use each type to manage their emotions and the emotions of others (Barthel et al., 2018). Thus, it is perhaps more beneficial to study intra- and interpersonal emotion awareness and emotion regulation strategy use in isolation so as to provide a more in-depth, nuanced, and critical understanding of their associations to anxiety and social withdrawal in children. This will allow for clearer conceptualization of the conditions thereby leading to more accurate identification of anxious and socially withdrawn children and the increased implementation of appropriate interventions in the classroom (Suveg et al., 2009).

In addition, based on the few existing child studies, researchers largely assessed anxiety, social withdrawal, and emotion regulation components (e.g., emotion awareness and strategy use) from the perspectives of the self and parent; teacher and peers were relatively less utilized despite their key role as an observer of children's behavior in the classroom (Bender et al., 2012; Eschenbeck et al., 2007; Mathews et al., 2014). Although this is not unusual as self-report is deemed most appropriate in assessing internalizing conditions (Suveg et al., 2009), including additional outside informants (e.g., teachers and peers) is considered optimal and helps to broaden conceptualization of the participants' functioning, as well as increase the findings' validity (Kerns et al., 2014; Suveg et al., 2009). Further, it is important to consider the potential bias associated with self-report as respondents may struggle to accurately recall their past feelings and behaviors (Bender et al., 2012; Essau & Ollendick, 2013). While the current study

heavily relied on self-report of child participants, peer and teacher informants were also utilized to expand conceptualization of students' functioning via more informed results. More specifically, self-report was used to assess anxiety, intrapersonal emotion awareness, and intrapersonal emotion regulation strategy use, both adaptive and maladaptive. Teacher-report was used to measure social withdrawal, and peer-report was used to assess interpersonal emotion regulation strategy use, both supportive and unsupportive.

Lastly, the impact of race is largely neglected from the children's emotion regulation research. Although race was examined as a covariate in the preliminary analyses, the construct was not adequately explored by many of the emotion regulation-focused studies referenced throughout the current study. For instance, Rieffe and colleagues (2008) included the age and gender of their participants in their revision of the Emotion Awareness Questionnaire-30 (EAQ30) but failed to describe the racial composition as did López-Pérez and colleagues (2016) in their exploration of developmental differences in children's interpersonal emotion regulation. Further, many researchers utilized samples comprised predominantly of White children: Birmaher and colleagues (1999) assessed 190 children in their creation of the Screen for Childhood Anxiety Related Emotional Disorders-Child Version (SCARED-C) of which 71% were White. Likewise, in their initial validation of the Emotion Expression Scale for Children (EESC), Penza-Clyve and Zeman utilized a sample of 208 fourth- and fifth-grade children comprised of 95% White children ("European American heritage," p. 541). Similarly, in their creation of the Child Behavior Checklist (CBC), Ladd and colleagues (1996) utilized a 73% White participant sample. Most concerning; however, is the researchers' failure to address race beyond the description of their sample (e.g., discussing the potential problems associated with a

predominantly White sample or describing the impact race might have on emotional functioning in children).

The effect of race was also largely neglected in several other studies including meta-analyses. For instance, Sendzik and colleagues (2017) failed to mention or examine race within their review of 21 studies focused on emotion awareness in depressive and anxious children and adolescents. Comparably, in their review of 35 studies assessing emotion regulation strategies in depressive and anxious youth, Schäfer and colleagues (2016) neglected to discuss the implications nor did they include the racial composition of each study's participants. In their exploration of emotion regulation in children with anxiety disorders, Suveg and Zeman (2004) also did not include a description of their participants' race. Therefore, it appears race is insufficiently researched in the assessment of emotional constructs even though, due to various factors (e.g., cultural, socioeconomic, etc.), children of different racial groups likely experience variable emotional development and functioning (e.g., regulating their emotions) relative to other racial groups.

Method

Participants

The current study's sample was comprised of 398 fourth- (40.5%) and fifth-grade (59.5%) students (48.7% female) and 22 general education teachers (90.9% female) from eight public and public charter elementary schools located in a Midwestern metropolitan area. The average age of the student participants was 10.31 years ($SD = .641$, range 9 to 12-years-old). Concerning race, 42.2% of students were White, 33.4% were Hispanic, 16.3% were Black, and 8% were from other racial groups (Asian, Native American, etc.). Classrooms were generally homogenous in racial composition e.g., comprised primarily of Hispanic students (e.g., 69% or

95%), Black students (e.g., 95% or 100%), or White students (e.g., 67% or 79%). The majority of teachers were White (86.4%) with average teaching experience of 10.55 years ($SD = 10.75$).

Procedures

The Institutional Review Board of the respective university approved the study procedures (IRB number: 19.A.182). To recruit potential participants, the researchers made initial contact with multiple school districts (via email or phone) throughout the area (university's city and surrounding suburbs). Once districts expressed interest, meetings were held to review the study and each district's potential involvement. Next, meetings with interested principals were scheduled and held; an executive summary detailing the research including its risks and benefits was provided. Meetings with prospective teachers were then conducted to further discuss the study including their participation and their students' participation. Because the present study utilized a peer nomination procedure, a 65% student participation rate per classroom was necessary to reliably assess peer relations. Further, per inclusion criteria, enrollment in grade four or five at one of the participating schools was required.

The research team also obtained active parent and teacher consent as well as student assent; each form indicated participation could be withdrawn at any point without incurring any sort of penalty. The parent consent form included an introductory cover letter listing the lead researcher's contact information to allow parents direct access to ask questions and voice concerns. A Spanish-speaking graduate student's contact information was also included to better accommodate Spanish-speaking parents. Parent forms were sent home via students' home/school communication folders. Parents were instructed to indicate their decision (mark "yes" or "no") regarding their child's participation and asked to return the form via the same modality. Teachers

were also required to sign a consent form to participate whereas students were asked to sign an assent form following an oral and written explanation of the study.

During the spring semester of 2019, two research team members visited the classrooms at a specified, convenient time (per teacher) to group administer the student questionnaires. One researcher read the questionnaire aloud as the children followed along and individually responded to the items; the second researcher wandered about the classroom to aid the students (e.g., answer questions). For the peer nomination items, students were provided a roster of their participating classmates. Each participant was assigned a unique number which the students were instructed to use in lieu of their classmates' names; students were asked to refrain from discussing their responses with their peers.

The children were allowed ample time to complete the questionnaire (approximately 60 minutes); additional time was provided when necessary. Throughout the administration, the classroom teacher remained in the classroom while non-participating students were asked to engage in a silent activity at their desk/table (e.g., reading, drawing, etc.). Once completed, questionnaires were collected and subsequently relocated to a secure location at the respective university; each child's name (written on the cover) was removed and replaced with an identification number to help maintain student confidentiality. In addition, because student responses were entered into a computerized data system, a password-encrypted protection program was utilized to further ensure security.

For absent student participants, the researchers collaborated with each child's teacher to arrange a make-up date and time; one researcher returned as scheduled to administer the survey in person. As compensation, all students, regardless of participation, were given a stationary gift (e.g., notebook and pencil).

Teachers completed a questionnaire for each participating student at their convenience, on average, within two weeks (teachers were given a designated due date) following the administration of the student questionnaire. Each questionnaire required approximately 4-5 minutes to complete (approximate total of 1.5 to 2 hours for all students per classroom). As compensation, teachers received a monetary honorarium for their time.

Measures

Demographic Characteristics

Demographic information was gathered regarding gender, age, and race. Data on participants' gender and race were categorical (participants were asked to select from one of multiple categories) while data on participants' age were continuous. Categorical demographic response data were dummy coded. Male children were used as the reference group for gender and Black children were used as the reference group for race.

Self-Report

Multiple self-report measures were utilized to assess students' personal perceptions regarding various aspects of their functioning. While the reliability and validity varied by assessment (Conijn et al., 2019), children's self-report is considered a useful tool and is generally regarded as reliably- and validly-sound when an age-appropriate instrument is utilized (Maag & Rutherford, 1986; Varni et al., 2020).

Anxiety. The Screen for Childhood Anxiety Related Emotional Disorders-Child Version (SCARED-C; Birmaher et al., 1999) was used to assess children's anxiety. The SCARED is described as an excellent child anxiety screening tool with solid reliability and validity among both clinical and nonclinical groups (Birmaher et al., 1999; Carthy et al., 2010; Runyon et al., 2018). The screener is appropriate for children ages nine to 18 and is comprised of 41-items

divided among five different factors: Panic Disorder or Significant Somatic Symptoms, Generalized Anxiety Disorder (GAD), Separation Anxiety Sense of Coherence, Social Anxiety Disorder (SAD), and Significant School Avoidance (Arab et al., 2016; Birmaher et al., 1999; Carthy et al., 2010). Each factor demonstrates strong internal consistency with a Cronbach's alpha (α) reliability range of 0.78 to 0.87 (Birmaher et al., 1999).

The current study utilized the GAD scale's nine items; example items include "I worry about other people liking me" and "People tell me I worry too much" (see Appendix for full list of items for all scales used in the study). While use of a SAD scale might seem like a more appropriate choice to assess anxiety among children in a social setting (i.e., classroom), the availability of no-cost anxiety scales was limited. Therefore, after a review of available anxiety scales' psychometric properties, the SCARED-C appeared most appropriate, and although the SCARED-C includes a SAD scale, the SAD items are focused on interactions with unfamiliar people (e.g., I feel nervous with people I don't know well" (Birmaher et al., 1999). Since the participants spent the majority of the school day with the same group of students and because the children assessed one another's functioning late in the school year (March 2019), it is unlikely they were unfamiliar with one another when the questionnaire was administered. Thus, the SAD items were not appropriately aligned to the study's goals and therefore the GAD items were utilized.

For the current study, children responded to items using a five-point rating scale (1 = *not at all true*, 5 = *very true*) to indicate the truth of each statement. The average for the nine items was calculated with higher scores indicative of higher levels of anxiety. Cronbach's α for the current sample was .86.

Intrapersonal Emotion Awareness. The Emotion Expression Scale for Children (EESC) was adapted to assess students' intrapersonal emotion awareness (Penza-Clyve & Zeman, 2002). The EESC is a 16-item self-report measure designed to examine specific aspects of emotion expression, Poor Awareness ($\alpha = .83$; Penza-Clyve & Zeman, 2002) and Expressive Reluctance, among children 9- to 12-years-old. The Poor Awareness subscale, which was utilized in the current study, is an intrapersonal measure used to better comprehend a child's difficulty in labeling their own internal emotions (intrapersonal emotion awareness). Concerning convergent validity, the subscale correlated positively to inhibition and dysregulation and negatively to adaptive coping of sadness and anger (Penza-Clyve & Zeman, 2002).

Five items were utilized in the current study; examples include "I often don't know how I'm feeling" and "People tell me I should talk about my feelings more often." Children responded to items using a five-point rating scale (1 = *not at all true*, 5 = *very true*). The average for the five items was calculated with higher scores indicative of higher levels of poorer awareness of their own emotions. Cronbach's α for the current sample was .64. While this is perhaps not ideal, the reliability of this scale is not unusual. Researchers reported lower reliabilities (e.g., range of .50 to .53; von Salisch & Zeman, 2018; Zeman et al., 2018) when measuring emotion-related constructs as emotions are more challenging to accurately assess.

Interpersonal Emotion Awareness. The Emotion Awareness Questionnaire-30 (EAQ30; Rieffe et al., 2008) is a self-report scale designed to assess emotion awareness among children ages 9-16 years. The measure is comprised of 30 items divided among six subscales: Differentiating Emotions, Bodily Awareness, verbal sharing, Acting Out Emotions, Attending to Others' Emotions, and Analyses of Emotions. The Attending to Others' Emotions subscale ($\alpha = .65$; Rieffe et al., 2008) was adapted for the current study to examine children's interest in

others' emotions (interpersonal emotion awareness). Example items include "I don't want to know how my friends are feeling" and "If a friend is upset, I try to understand why" (Rieffe et al., 2009). Children responded to items using a five-point scale (1 = *not at all true*, 5 = *very true*). Two items were reverse coded (e.g., "I don't want to know how my friends are feeling") so that higher scores indicated a higher level of interpersonal emotion awareness; the average for the five items was then calculated. Cronbach's α for the current study scale was .70.

Intrapersonal Emotion Regulation Strategy Use. To assess children' use of strategies to regulate their negative emotions (e.g., sad, grumpy, or upset), the Feelings and Me-Child (FAM-C) questionnaire was adapted for the current study (Kovacs, 2000). The FAM-C is a 54-item measure comprised of two subscales: Adaptive (32 items) and Maladaptive (22 items) emotion regulation strategies (Dochnal et al., 2019), and is appropriate for children ages seven to 17 (Tamás et al., 2007). Adaptive strategies are used to improve or down regulate one's negative emotions while maladaptive strategies generally worsen a child's emotional experience. Further, the Adaptive ($\alpha = .89$) and Maladaptive subscales ($\alpha = .87$) reflect three types of regulatory strategy domains including behavioral/physical, social-interpersonal, and cognitive (Dochnal et al., 2019; Tamás et al., 2007).

Nine adaptive and nine maladaptive items were used for the current study. To complete the scales, participants were provided a list of statements describing cognitive, behavioral, or social strategies frequently utilized by children to regulate their negative emotions (sad, grumpy, or upset). An example item within the Adaptive Strategy scale includes "I think of something fun," and an example maladaptive strategy is "I shut down" (Kovacs, 2000). Children were asked to respond to each item via a five-point rating scale to indicate the truth of each statement (1 = *not at all true*, 5 = *very true*). The average for each of the scale's nine items was calculated

with higher scores indicative of higher levels of adaptive or maladaptive strategy use.

Cronbach's α was .78 for the Adaptive strategy scale and .80 for the Maladaptive strategy scale.

Teacher-Report

Social Withdrawal. To assess children's social withdrawal, the Child Behavior Scale (CBS; Ladd et al., 1996) was utilized. The CBS assesses internalizing and externalizing behaviors as well as peer relations among children (ages 5- to 13-years-old) in the educational setting (Ladd et al., 2009). The scale is considered a reliable and valid measure and is comprised of 35 items divided among six subscales: Aggressive with Peers, Hyperactive-Distractible, Asocial with Peers, Anxious-Fearful, Prosocial with Peers, and Excluded by Peers (Ladd et al., 2009). For the current study, the researcher focused on the Asocial with Peers ($\alpha = .89$) subscale which measures children's chosen solitude in the presence of their classmates (Ladd et al., 1996). Concerning construct validity, the subscale correlated withdrawn behavior subscale of the Achenbach's Teacher Report Form (TRF; Ladd et al., 2009).

Six items were utilized for the current study; examples include "Prefers to play alone" and "Keeps peers at a distance." Teachers completed the assessment for each student using a five-point scale (1 = *never true*, 5 = *almost always true*). The average for the six items was calculated with higher scores indicative of higher levels of social withdrawal. Reliability (α) for the current sample was .93

Peer Nominations

Interpersonal Emotion Regulation Strategy Use. To measure students' use of strategies to assist their peers' in regulating their (peers') negative emotions (e.g., sad or angry), a peer nomination procedure was utilized. A similar procedure was previously validated by Masten and colleagues (1985) in the development of the authors' Revised Class Play peer assessment. For

the current study, students nominated up to five of their participating classroom peers who best fit the listed description for each of the six items (e.g., “When I get angry at something or someone, these classmates threaten or yell at me”). The items, divided among two scales including Supportive (two items) and Unsupportive (four items), were adapted from the previously described CCNES which assesses adolescents’ perception of their parents’ responses to their (adolescents’) negative emotions (Fabes et al., 2002). Additional example items include “When I get sad or cry, these classmates ask me what is bothering me” (supportive) and “When I get sad or cry, these classmates get angry or upset with me” (unsupportive). The total number of nominations each child received indicated the extent to which they used supportive or unsupportive strategies to regulate peers’ negative emotions. The number of nominations per child was summed and then standardized ($M = 0$, $SD = 1$) by classroom size (participants only) to control for size differences. The average was taken for each scale; average of two items for the Expressive Engagement (supportive) scale and average of four items for the Unsupportive Response scale. Cronbach’s α for the Expressive Engagement scale was .88 and .78 for the Unsupportive Response scale.

The study’s constructs, measures and reports are summarized below (Table 2).

Table 2

Study constructs, measures, and reporters

Study Constructs	Measures	Reporter
Independent variables		
Anxiety	Screen for Childhood Anxiety Related Emotional Disorders-Child Version (SCARED-C; Birmaher et al., 1999)	Self
Social withdrawal	Child Behavior Checklist (CBS; Ladd et al., 1996)	Teacher

Dependent variables

Intrapersonal emotion awareness	Emotion Expression Scale for Children (EESC; Penza-Clyve & Zeman, 2002)	Self
Interpersonal emotion awareness	Emotion Awareness Questionnaire-30 (EAQ30; Rieffe et al., 2008)	Self
Intrapersonal adaptive emotion regulation strategy use	Feelings and Me-Child (FAM-C; Kovacs, 2000)	Self
Intrapersonal maladaptive emotion regulation strategy use	Feelings and Me-Child (FAM-C; Kovacs, 2000)	Self
Interpersonal supportive emotion regulation strategy use	Peer nominations	Peer
Interpersonal unsupportive emotion regulation strategy use	Peer nominations	Peer

Results

Preliminary Analyses

The researcher utilized IBM SPSS Statistics 27 to perform the subsequently described analyses for each of the four research questions. Listwise deletion was utilized for missing data; that is, a case was eliminated from the analysis if a value was missing for a variable in the model. Across the study variables, missing cases were minimal ranging from 0 to 4%.

The means, standard deviations, and zero-order correlations among the study variables are presented in Table 4. The correlation between anxiety and social withdrawal was very small and negative ($r = -.04$) which indicates each construct is distinct from each other.

Effects of demographic variables were examined regarding gender, age, and race. Gender differences were found. As compared to boys, girls endorsed significantly greater anxiety ($r = .22, p < .01$), poorer intrapersonal emotion awareness ($r = .15, p < .01$; higher scores indicative of poorer awareness), better interpersonal emotion awareness ($r = .18, p < .01$), greater use of adaptive intrapersonal strategies ($r = .13, p < .05$) and maladaptive intrapersonal strategies ($r =$

.13, $p < .05$), greater use of supportive interpersonal strategies ($r = .32, p < .01$), and less use of unsupportive interpersonal strategies ($r = -.15, p < .01$). To analyze the effect of race, an analysis of variance (ANOVA) was performed (Table 3) to compare the means among Black, Hispanic, and White children. Based on the results, no age and race effects were found. Thus, a post hoc analysis for race was not conducted. Further, because these two covariates were generally not related to the dependent variables, age and race were not included in the primary analyses.

Table 3

Effect of race (Black, Hispanic, and White) on study variables

Variables	<i>F</i> (2, 322)	<i>p</i>
1. Anxiety	1.44	.24
2. Social Withdrawal	.25	.78
3. Intrapersonal Emotion Awareness	.04	.96
4. Interpersonal Emotion Awareness	2.14	.12
5. Intrapersonal Adaptive Emotion Regulation Strategy Use	.14	.87
6. Intrapersonal Maladaptive, Emotion Regulation Strategy Use	1.84	.16
7. Interpersonal Supportive Emotion Regulation Strategy Use	.33	.72
8. Interpersonal Unsupportive Emotion Regulation Strategy Use	2.69	.07

Statistical Assumptions

Multiple regression analyses were used to answer the primary research questions. Prior to conducting the analyses, assumptions were checked for (a) linearity, (b) normality, (c) multicollinearity, and (d) homoscedasticity.

Each of the models was visually inspected for linearity using probability-probability (P-P) plots and scatterplots. 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 (see appendix for each model's plot). In addition, the scatterplots were inspected for a curvilinear relationship indicative of a violation of the assumption. Based on these inspections, the forms of the relationship between the predictors (anxiety and social withdrawal) and each of the outcome variable's residuals appear linear, and the assumption is considered met.

To assess for normality, skewness (symmetry or lack thereof) and kurtosis (peakedness or heavy-tailed/light-tailed; Kim, 2013) of each of the variable scales were calculated and analyzed. For large sample sizes (greater than 300 participants), Kim (2013) suggests using the absolute skewness and kurtosis values without consideration of the z values; absolute skewness values greater than 2 and absolute kurtosis values greater than 7 are suggestive of considerable non-normality. Based on a review, the variables' absolute skewness values are less than 2 (ranging from -1.33 to 1.53) and the kurtosis values are less than 7 (ranging from -2.01 to 1.89; Kim, 2013). Thus, the data appear to meet the normality assumption.

To determine whether the data met the assumption of multicollinearity, tolerance and its reciprocal, variance inflation factor (VIF), values were examined (Howell, 2002). The tolerance value for anxiety was 0.93 and 1.00 for social withdrawal which are both higher than the recommended value of 0.20. Further, the VIF values for anxiety and social withdrawal were 1.10 and 1.00, respectively, which are both less than the recommended value of 10. Therefore, multicollinearity is not a concern, and the assumption is considered met.

To determine homoscedasticity of the regression models, scatterplots of the residuals versus each dependent variable were visually inspected for equal distribution. Based on these inspections, the homoscedasticity assumption appears to be met for each model.

Multiple Linear Regression Analyses

Multiple linear regression analyses were used to determine the manner in which anxiety and social withdrawal were associated with intra- and interpersonal emotion awareness, intrapersonal emotion regulation strategy use (adaptive versus maladaptive) and interpersonal emotion regulation strategy use (supportive versus unsupportive). Further, when evaluating anxiety as a predictor variable, social withdrawal was controlled for and vice versa. In addition, the researcher isolated the association with dependent variables for each independent variable through the calculation and analysis of semi-partial correlations. Semi-partial correlations aid in understanding importance of the independent variables in predicting the dependent variables. To calculate the unique variance, semi-partial correlations were squared and subsequently multiplied by 100. Participants' gender was also controlled for in the analyses (Table 4).

Table 4*Means, standard deviations, and correlations of study variables*

Variable	1	2	3	4	5	6	7	8	9	10	M/(SD)
1. Anxiety	--	-.01									2.86(.47)
2.Social Withdrawal	-.04	--									9.33(4.19)
3.Poor Intrapersonal Emotion Awareness*	.48**	.02	--								2.74(.49)
4.Interpersonal Emotion Awareness	.07	-.19**	.00	--							4.34(.42)
5.Intrapersonal Adaptive Emotion Regulation Strategy Use	.49**	-.01	.46**	.00	--						3.01(.38)
6.Intrapersonal Maladaptive Emotion Regulation Strategy Use	.12*	-.10	.18**	.31**	-.17**	--					2.61(.55)
7.Interpersonal Supportive Emotion Regulation Strategy Use	.00	-.31**	-.09	.26**	-.02	.15**	--				.03(1.83)
8.Interpersonal Unsupportive Emotion Regulation Strategy Use	.00	-.11*	.03	-.03	.06	.07	-.01	--			.01(3.08)
9. Gender	.22**	-.03	.15**	.18**	.13*	.13*	.32**	-.15**	--	--	.49(.50)
10. Age	.00	-.02	-.07	.08	.02	-.07	.03	.02	--	--	10.29(.64)

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

*Note. Higher scores indicative of poorer emotion awareness.

Primary Analyses

Question #1: How do self-reported anxiety and teacher-reported social withdrawal relate to a child's awareness of one's own emotions (intrapersonal)?

For the first research question, the researcher examined the manner in which anxiety and social withdrawal associated with a child's poor awareness of their own emotions (e.g., "When I feel upset, I don't know how to talk about it" and "I often don't know how I'm feeling") while controlling for gender; no gender effect was found (Table 5).

Concerning the associations between the independent variables and poor intrapersonal emotion awareness, anxiety was significantly associated ($\beta = .46, p < .01$) while social withdrawal was not ($\beta = .04, p = .36$). That is, children who endorsed a higher level of anxiety also endorsed poorer awareness of their own emotions. Contrarily, poor emotion awareness of one's own emotions not differ by the degree of teacher-rated social withdrawal (Table 5).

Based on the semi-partial correlations, anxiety ($r_{\text{semi}} = .45$) and social withdrawal ($r_{\text{semi}} = .04$) uniquely accounted for 20% and 0% of the total variance, respectively, in poor intrapersonal emotion awareness. In other words, anxiety accounted for more unique variance than social withdrawal in poor intrapersonal emotion awareness. Results of the regression indicated the model explained 23% (adjusted $R^2 = .23$) of the variance in poor intrapersonal emotion awareness (Table 5).

Table 5

*Multiple regression coefficients of anxiety and social withdrawal on intrapersonal emotion awareness**

Predictors	<i>B</i>	SE	β
Gender (male = 0)	.56	.40	.06
Anxiety	.23	.02	.46**
Social Withdrawal	.04	.05	.04
Adjusted R^2		.23	

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

**Note.* Higher scores indicative of poorer emotion awareness.

Research Question #2: How do anxiety and social withdrawal relate to a child’s awareness of others’ emotions (interpersonal)?

For the second research question, the researcher examined the manner in which anxiety and social withdrawal were associated with a child’s awareness of others’ emotions (e.g., “It is important to know how my friends are feeling” and “If a friend is upset, I try to understand why”) while controlling for gender. A significant gender effect was found; girls endorsed better interpersonal emotion awareness than boys (Table 6).

Concerning the associations between the independent variables and interpersonal emotion awareness, anxiety did not significantly associate with interpersonal emotion awareness ($\beta = .03$, $p = .62$). Comparatively, social withdrawal negatively and significantly associated with interpersonal emotion awareness ($\beta = -.20$, $p < .01$). That is, children perceived by teachers as more socially withdrawn reported poorer awareness of others’ emotions (Table 6).

Based on the semi-partial correlations, anxiety ($r_{\text{semi}} = .03$) and social withdrawal ($r_{\text{semi}} = -.20$) uniquely accounted for 0% and 4% of the total variance in interpersonal emotion

awareness, respectively. In other words, social withdrawal accounted for more unique variance than anxiety in interpersonal emotion awareness. Results of the regression indicated the model explained 6% (adjusted $R^2 = .06$) of the variance in interpersonal emotion awareness (Table 6).

Table 6

Multiple regression coefficients of anxiety and social withdrawal on interpersonal emotion awareness

Predictors	<i>B</i>	SE	β
Gender (male = 0)	.89	.29	.16**
Anxiety	.01	.02	.03
Social Withdrawal	-.12	.03	-.20**
Adjusted R^2		.06	

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

Research Question #3a: How do anxiety and social withdrawal relate to a child’s use of adaptive strategies to regulate their own emotions (intrapersonal)?

For part a of the third research question, the researcher examined the manner in which anxiety and social withdrawal were associated with a child’s use of adaptive strategies to regulate their own emotions (e.g., “I listen to happy music” and “I try to help others with something”). Gender was controlled for in the analyses; no effect was found (Table 7).

Concerning the associations between the independent variables and intrapersonal adaptive emotion regulation strategy use, anxiety significantly associated with adaptive strategy use ($\beta = .47, p < .01$) to regulate one own emotions whereas social withdrawal did not ($\beta = .01, p = .82$). That is, children who reported higher levels of anxiety also reported more use of adaptive strategies to regulate their own emotions. Comparatively, adaptive intrapersonal strategy use did not differ by the degree of teacher-rated social withdrawal (Table 7).

Semi-partial correlations indicated anxiety uniquely accounted for 21% ($r_{\text{semi}} = .46$) of the total variation in intrapersonal adaptive emotion regulation strategy use while social withdrawal uniquely accounted for 0% ($r_{\text{semi}} = .01$) of the variation. Specifically, anxiety accounted for more unique variance than social withdrawal in adaptive intrapersonal emotion regulation strategy use. Results of the regression indicated the model explained 22% of the variance (adjusted $R^2 = .22$) in adaptive strategy use to regulate one's own emotions (Table 7).

Table 7

Multiple regression coefficients of anxiety and social withdrawal on intrapersonal adaptive emotion regulation strategy use

Predictors	<i>B</i>	SE	β
Gender (male = 0)	.47	.73	.03
Anxiety	.42	.04	.47**
Social Withdrawal	.02	.08	.01
Adjusted R^2		.22	

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

Research Question #3b: How do anxiety and social withdrawal relate to a child's use of maladaptive strategies to regulate their own emotions (intrapersonal)?

For part b of the third research question, the researcher examined the manner in which anxiety and social withdrawal associated with a child's use of maladaptive strategies to regulate their own emotions (e.g., "I think things will never get better" and "I throw, kick, or hit something"). Gender was controlled for in the analyses. A significant effect was found; girls reported greater use of maladaptive strategies to regulate their own emotions than boys (Table 8).

Concerning the associations between the independent variables and maladaptive intrapersonal emotion regulation strategy use, anxiety ($\beta = .11$, $p = .05$) and social withdrawal

were not significant associated ($\beta = -.08, p = .11$). That is, maladaptive strategy use to regulate one's own emotions did not differ by the degree of self-reported anxiety nor teacher-rated social withdrawal (Table 8).

Semi-partial correlations indicated anxiety uniquely accounted for 1% ($r_{\text{semi}} = .10$) of the total variation in maladaptive intrapersonal emotion regulation strategy use while social withdrawal uniquely accounted for 0% ($r_{\text{semi}} = -.08$). Results of the regression indicate the model explained 3% of the variance (adjusted $R^2 = .03$) in maladaptive strategy use to regulate one's own emotions (Table 8).

Table 8

Multiple regression coefficients of anxiety and social withdrawal on intrapersonal maladaptive emotion regulation strategy use

Predictors	<i>B</i>	SE	β
Gender (male = 0)	1.70	.83	.12*
Anxiety	.09	.05	.11
Social Withdrawal	-.15	.10	-.08
Adjusted R^2		.03	

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

Research Question #4a: How do anxiety and social withdrawal relate to a child's use of supportive strategies to regulate others' emotions (interpersonal)?

For part a of the fourth research question, the researcher examined the manner in which anxiety and social withdrawal were associated with a child's use of supportive strategies to regulate others' emotions (e.g., "When I get angry at something or someone, these classmates ask me to talk about my feelings" and "When I get sad or cry, these classmates ask me what is bothering me"). Gender was controlled for in the analyses; a significant effect was found. As

perceived by their peers, girls used significantly more interpersonal supportive strategies to regulate others' emotions than boys (Table 9).

Concerning the associations between the independent variables and supportive strategy use to regulate others' emotions, social withdrawal ($\beta = -.32, p < .01$) negatively and significantly associated with supportive strategy use while anxiety did not ($\beta = -.08, p = .07$). That is, children perceived by their teachers as more socially withdrawn used fewer supportive strategies to regulate others' emotions as reported by their peers; however, supportive strategy use to regulate others' emotions did not differ by the degree of self-reported anxiety (Table 9).

Semi-partial correlations indicated anxiety uniquely accounted for 1% ($r_{\text{semi}} = -.09$) of the total variation in supportive interpersonal emotion regulation strategy use while social withdrawal uniquely accounted for 10% ($r_{\text{semi}} = -.32$). Specifically, social withdrawal accounted for slightly more unique variance than anxiety in supportive interpersonal emotion regulation strategy use. Results of the regression indicated the model explained 19% of the variance (adjusted $R^2 = .19$) in supportive strategy use to regulate others' emotions (Table 9).

Table 9

Multiple regression coefficients of anxiety and social withdrawal on interpersonal supportive emotion regulation strategy use

Predictors	<i>B</i>	SE	β
Gender (male = 0)	1.18	.18	.32**
Anxiety	-.02	.01	-.08
Social Withdrawal	-.13	.02	-.32**
Adjusted R^2		.19	

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

Research Question #4b: How do anxiety and social withdrawal relate to a child's use of unsupportive strategies to regulate others' emotions (interpersonal)?

For part b of the fourth research question, the researcher examined the manner in which anxiety and social withdrawal were associated with a child's use of unsupportive strategies to regulate others' emotions (e.g., "When I get angry at something or someone, these classmates get angry or upset with me" and "When I get sad or cry, these classmates tell me I'm making a big deal out of nothing"). Gender was controlled for in the analyses, and a significant effect was found. As perceived by their peers, girls used significantly fewer unsupportive interpersonal strategies than boys (Table 10).

Concerning the associations between the predictor variables and unsupportive strategy use to regulate others' emotions, anxiety is not a significant predictor ($\beta = .02, p = .75$). On the contrary, social withdrawal negatively and significantly ($\beta = -.13, p < .05$) associated with use of unsupportive strategies to regulate others' emotions. That is, children perceived by teachers as more socially withdrawn reportedly used fewer unsupportive strategies to regulate others' emotions, per peer report. Unsupportive strategy use; however, did not differ by degree of self-reported anxiety (Table 10).

Semi-partial correlations indicated anxiety uniquely accounted for 0% ($r_{\text{semi}} = .02$) of the total variation in unsupportive strategy use to regulate others' emotions while social withdrawal uniquely accounted for 2% ($r_{\text{semi}} = -.13$). Results of the regression indicated the model explained 3% of the variance (adjusted $R^2 = .03$) in unsupportive strategy use to regulate others' emotions (Table 10).

Table 10

Multiple regression coefficients of anxiety and social withdrawal on interpersonal unsupportive emotion regulation strategy use

Predictors	<i>B</i>	SE	β
Gender (male = 0)	-.88	.32	-.15**
Anxiety	.01	.02	.02
Social Withdrawal	-.09	.04	-.13*
Adjusted R^2		.03	

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

Summary of Results

In summary, anxiety and socially withdrawal associated quite differently with the emotion regulation-related variables. More specifically, at the *intrapersonal* level, children experiencing more anxiety reported poorer awareness of their own emotions but also endorsed greater use of adaptive strategies to regulate their negative emotions (e.g., sad, grumpy, or upset). At the interpersonal level, anxiety was not significantly associated with emotion awareness or strategy use. In regard to social withdrawal, at the *intrapersonal* level, the associations were not significant. Contrarily, at the *interpersonal* level, children rated as more socially withdrawn by their teachers endorsed poorer awareness of others' emotions and reportedly used fewer supportive and unsupportive strategies to regulate others' emotions, per peers' perceptions.

Discussion

The researcher examined self-reported anxiety and teacher-rated social withdrawal and their associations to emotion awareness and emotion regulation strategy use at the intra- and interpersonal levels among fourth- and fifth-grade children. Pursing an improved understanding

of the associations is necessary as many children experience anxiety and social withdrawal early in life, and these challenges often persist into adolescence and adulthood (NASP, 2016; Sanchez et al., 2018; Stoiber & DeSmet, 2010). Therefore, the researcher aimed to more clearly conceptualize the two conditions to provide teachers, school psychologists, and other school personnel specific information to aid in the identification and treatment of anxious and socially withdrawn children in the classroom. First, the researcher determined the relation between anxiety and social withdrawal as the two are often perceived as overlapping and/or indistinct constructs (Barzeva et al., 2019). Next, multiple regression analyses were performed to examine the manner in which anxiety and social withdrawal were associated with emotion awareness and emotion regulation strategy use at the intra- and interpersonal levels. Semi-partial correlations were also calculated and analyzed to more specifically understand the importance of anxiety and social withdrawal and their associations to each dependent variable. The effects of demographic variables including gender, age, and race were also examined.

Distinction Between Anxiety and Social Withdrawal

Although anxiety and social withdrawal overlap with one another, the two constructs are nonetheless distinct (Barzeva et al., 2019). Anxious children often worry excessively; they worry about how they are perceived by others and whether or not they are liked by their peers or as good as their peers. They not only worry about the present but the past and future as well (Birmaher et al., 1999). Comparatively, socially withdrawn children prefer solitude, keep peers at a distance, and withdraw from activities involving others (Ladd et al., 1996). While anxious children may withdraw from social situations and socially withdrawn children may feel anxious, the constructs are not synonymous. For the current study, the researcher used self-report to measure participants' level of anxiety as symptoms often occur internally and can be difficult to

assess by an outside observer (Merrell & Gueldner, 2010; Levitt & Merrell, 2009). Thus, children themselves are likely better informants than others (e.g., teachers or parents). Conversely, socially withdrawal is more accessible to outside observers (Arab et al., 2016; Zhang et al., 2015) and is often assessed via peer nominations or teacher report (Gazelle, 2010). Hence, the researcher utilized teachers to rate social withdrawal among children. Based on the researcher's findings, the correlation between anxiety and social withdrawal was very small ($r = -.04$). As compared to the previously referenced empirical studies which supported a distinction between the two constructs (Barzeva et al., 2019, Biggs et al., 2012; Erath et al., 2007; Gullone & Ollendick, 2006), the effect size was generally smaller. However, it is important to consider rater effect as the interrater agreement between children and their teachers regarding social-emotional problems, particularly of an internalizing nature, is typically small (Poulou, 2017). Because the current study measured and compared self-reported anxiety and teacher-reported social withdrawal, the correlation encompasses differing perspectives in distinguishing the two constructs.

Perhaps of greater importance were the associations of anxiety and social withdrawal with the emotion regulation-related variables. In general, results indicated anxiety related to *intrapersonal* emotion regulation-related processes whereas social withdrawal related to *interpersonal* emotion regulation-related processes. These results are subsequently described in greater depth.

Anxiety and Intrapersonal Emotion Awareness and Emotion Regulation Strategy Use

Consistent with the researcher's hypothesis as well as the extant literature, at the intrapersonal level, children experiencing higher levels of anxiety reported poorer awareness of their own emotions. Interestingly; however, these children reported more use of adaptive

strategies (e.g., take a break) to regulate their negative emotions but did not endorse greater use of maladaptive strategies (e.g., shut down). These findings were unexpected and seem incongruent with prior research which suggested children experiencing anxiety were more inclined to use maladaptive strategies to regulate their emotions. Although parent-report was used to assess anxiety and self-report was used to assess emotion regulation strategy use in a clinical sample, Suveg and Zeman (2004) found children with anxiety disorders used strategies less flexibly and adaptively. Aldao and colleagues (2010) found similar results among participants of varying ages. In their meta-analytic review of emotion regulation strategy use across various psychopathologies, the researchers determined a stronger and consistent association between anxiety and greater use of maladaptive rather than adaptive strategies (Aldao et al., 2010). Further, in their meta-analytic review of emotion regulation strategy use among depressed and anxious adolescents (13- to 18-years-old), Schäfer and colleagues (2017) determined anxious youth more frequently used maladaptive rather than adaptive strategies to regulate their emotions. Because emotion awareness is a critical component in the regulation process (Barthel et al., 2018; Gross, 1998; Gross & Jazaieri, 2014; Sendzik et al., 2017), greater use of adaptive strategies does not seem plausible without adequate awareness of one's own emotions.

In light of these findings, it is important to consider the informant as anxiety, intrapersonal emotion awareness, and intrapersonal adaptive and maladaptive strategy use were self-reported by the child participants. Thus, if awareness of their own emotions is poor, their perceptions regarding use of adaptive and maladaptive strategies may not be especially accurate. An additional possibility is that the children's reading of the questionnaire's items might have ignited different thinking processes which may have led to various insights or knowledge

integration thereby altering their responses (Taber, 2018). Further, the discrepancy may be accounted for by age. The current study's sample consisted of fourth- and fifth-grade children (M age = 10.3) whereas Schäfer and colleagues' (2017) study used slightly older, adolescent participants. Perhaps adolescents are more inclined to exhibit greater use of maladaptive strategies to regulate their emotions or report use of such strategies as compared to younger children.

Anxiety and Interpersonal Emotion Awareness and Emotion Regulation Strategy Use

At the *interpersonal* level, the association between anxiety and emotion awareness was non-significant. This is consistent with the researcher's hypothesis as well as the extant literature. Although limited to just two studies, researchers did not find significant associations between the two constructs (Lahaye et al., 2010; Rieffe et al., 2008). Therefore, although anxious children struggle interpersonally (e.g., struggle to initiate and maintain friendships), can become overly dependent on others, and exhibit intense emotional reactivity during social interactions (Carthy et al., 2010; Crocetti et al., 2009), they do not appear to demonstrate poorer awareness of others' emotions as compared to their typically functioning counterparts. Perhaps this is because anxious children are more interactive than socially withdrawn children and are thus exposed to the emotions of others more regularly. Further, they are oftentimes hyper-vigilant in regard to others and their environment (e.g., emotional state of others; Carthy et al., 2010; Crocetti et al., 2009; Erath et al., 2007).

Regarding supportive and unsupportive strategy use to regulate others' emotions, significant associations with anxiety were not found; anxious children did not use fewer supportive or more unsupportive strategies to regulate others' emotions to a significant degree, based on peer perceptions. These findings were inconsistent with the researcher's hypotheses as

it seems anxious children would struggle to effectively support their peers in regulating their (peers') emotions as interacting socially with others is often challenging. Because the extant literature is heavily focused on intra- rather than interpersonal strategy use, results cannot be compared to empirical research. Therefore, overall, results indicate anxiety is not associated with regulatory efforts at the interpersonal level.

Social Withdrawal and Intrapersonal Emotion Awareness and Emotion Regulation

Strategy Use

Although inconsistent with the researchers' hypotheses, based on the current study's results, social withdrawal did not significantly associate with the assessed intrapersonal constructs of emotion awareness and adaptive and maladaptive emotion regulation strategy use. Based on the sole existing study examining the relation between social withdrawal and awareness of one's own emotions, the researchers did not find an association between the two constructs (Penza-Clyve & Zeman, 2002). Nonetheless, for the current study, the researcher predicted a significant association based on the broader literature examining deficits in emotion regulation and the consistent link to the development and maintenance of internalizing challenges in children (Bender et al., 2012; Kranzler et al., 2016; Penza-Clyve & Zeman, 2002; Sendzik et al., 2017). Consequently, because emotion awareness is a critical component of emotion regulation, it seems sensible for children experiencing internalizing challenges such as social withdrawal to demonstrate poorer awareness of their own emotions to a significant degree. That is, ineffective emotion regulation can negatively affect numerous areas of functioning including cognitive processes such as attention and memory, as well as motivation and decision making thereby impacting awareness of one's emotional functioning (Fried, 2011).

Additionally, children rated as more socially withdrawn by their teachers did not endorse significantly less use of adaptive strategies or significantly more use of maladaptive strategies to regulate their emotions. These findings were unexpected as the researcher hypothesized significantly less use of intrapersonal adaptive strategies and significantly more use of maladaptive strategies. Because strategy use is a critical component of effective emotion regulation and, as described above, children experiencing internalizing challenges (e.g., social withdrawal) often struggle to effectively regulate their emotions, it seems logical to suspect challenges with intrapersonal adaptive and maladaptive strategy use. Further, due to the passive, acquiescent nature (Rubin et al., 2018) of socially withdrawn children, use of many of the adaptive strategies (e.g., find an activity or project to do, find someone to talk to, or listen to happy music, etc.; Kovacs, 2000) seems unlikely whereas greater use of maladaptive strategies (e.g., think everything is my fault, shut down, think about sad things, etc.; Kovacs, 2000) is more plausible.

Social Withdrawal and Interpersonal Emotion Awareness and Emotion Regulation

Strategy Use

Consistent with the researchers' hypotheses, it appears social withdrawal is primarily related to interpersonal emotion awareness and emotion regulation strategy use. Children rated as more socially withdrawn by their teachers were essentially uninvolved in the regulatory efforts of their peers. In other words, social withdrawal was significantly associated with poorer awareness of others' emotions as well as less use of both supportive and unsupportive strategies to regulate others' emotions, per peer perceptions. These findings seem sensible as the relationship between socially withdrawn children and their typically functioning peers can be cyclical in nature. That is, socially withdrawn children's behaviors (preference for solitude and

avoidance of social interactions, etc.) are often perceived by others as maladaptive which can lead to victimization, rejection, and exclusion by others (Bowker & Rubin, 2009; Rubin & Burgess, 2001; Rubin & Coplan, 2010; Oh et al., 2008; Rubin et al., 2018; Wichmann et al., 2004). In turn, this can create fewer opportunities to develop necessary interpersonal skills to effectively attend to others' emotions. In addition, socially withdrawn children frequently experience challenging emotions (e.g., fear and wariness), are generally less assertive than others, and tend to utilize indirect emotion regulation strategies which are often ignored by their peers (Rubin et al., 2018). Because they are ignored, excluded, and/or rejected, they subsequently withdraw from others. Thus, an underlying factor may be their ineffectiveness in interpersonal aspects of emotional processing and regulation. Therefore, as reported by their peers, less use of adaptive strategies (e.g., ask classmates to discuss their feelings, etc.; Fabes et al., 2002) and more use of maladaptive strategies (e.g., get angry or upset with their classmate, etc.; Fabes et al., 2002) to regulate others' emotions was expected. Consequently, while emotion regulation is typically focused on self-regulation, greater attention by teachers and other staff members must be paid to interpersonal emotion regulation when working with socially withdrawn children.

Effect of Gender

Also worthy of discussion is the effect of gender on emotion awareness and emotion regulation strategy use at the intra- and interpersonal levels. Overall, it appears gender played a significant role at both levels of emotional functioning.

Intrapersonal Domains

In regard to intrapersonal emotion awareness and the use of adaptive strategies to regulate others' emotions, a significant gender effect was found. Per self-report, girls endorsed

significantly greater use of maladaptive strategies to regulate their own emotions as compared to boys. This finding is complex. Overall, it seems plausible for girls to utilize more adaptive means in regulating their own emotions than boys. However, girls are oftentimes more willing than boys to acknowledge their internalizing challenges (Suveg & Zeman, 2004) and, because these findings were based on self-report, this may have been a contributing factor. Moreover, girls are often socialized to a higher degree to allocate greater resources to emotions than boys (Kranzler et al., 2016), thus, perhaps they are more concerned about helping others rather than themselves during this critical developmental period.

Interpersonal Domains

With the interpersonal domain, girls endorsed significantly better awareness of their peers' emotions than boys. Further, girls exhibited greater use of supportive strategies than boys while boys used significantly more unsupportive strategies than girls, as perceived by their peers. These findings were not surprising as girls tend to be more socially skilled than boys (Tan et al., 2018), more interpersonally sensitive (e.g., more attuned to distress in others), and more prosocially engaged with others (Rose and Rudolph, 2006). Further, gender stereotyping may have played a role; children may have assigned more feminine emotions to girls (e.g., happy) and more masculine emotions to boys (e.g., anger) thereby impacting nominations of supportive or unsupportive strategy use (Tuminello & Davidson, 2011).

In summary, anxious children's emotional functioning is consistent in that significant associations were found within the intra- rather interpersonal domains; however, the findings seem contradictory. That is, children experiencing higher levels of anxiety reported poorer intrapersonal emotion awareness yet endorsed significantly greater use of adaptive but not maladaptive strategies to regulate their own emotions. Generally, adequate emotion awareness is

believed to increase a child's range and flexibility of strategy use (Gross & Jazaieri, 2014; Schäfer et al., 2017). These unexpected results may be due, in part, to the nature of self-report. Because anxious children struggle with perceiving, describing, and differentiating their own emotions, their reported use of strategies may be inaccurate. On the other hand, because these children are often anxious and likely require more frequent use of strategies, perhaps they have identified effective ways of regulating their negative emotions over time even without adequate awareness as to how they are feeling.

Concerning *interpersonal* functioning, anxiety did not significantly associate with interpersonal emotion awareness or use of supportive or unsupportive strategies to regulate others' emotions. These findings were also surprising as anxious children generally struggle interpersonally. Perhaps these children are essentially uninvolved in others' regulatory efforts.

Socially withdrawn children's emotional functioning is also consistent in that, as expected, these children demonstrated significant *interpersonal* difficulties yet they did not seem to struggle as expected within the *intrapersonal* realm. Specifically, children rated as more socially withdrawn by their teachers endorsed poorer awareness of their peers' emotions, and reportedly used fewer supportive strategies and more unsupportive strategies to regulate others' emotions, per peer perceptions. *Intrapersonally*, social withdrawal did not significantly associate with poor awareness nor adaptive or maladaptive strategy use.

These findings are important as they reveal specific information about the emotional functioning of anxious and socially withdrawn children. Most notably, these results substantiate the importance of emotion awareness and emotion regulation strategy use among children. Without adequate awareness of one's own emotions (anxious children) and/or others' emotions (socially withdrawn children), effective regulation is unlikely as emotion awareness is a critical

and necessary component in the regulation process. Emotion awareness allows for accurate perception, description, and differentiation of emotions (Barthel et al., 2018; Gross, 1998; Gross & Jazaieri, 2014; Sendzik et al., 2017) and, ultimately, the use of appropriate strategies. Without effective intra- and interpersonal strategy use, which are also essential components of emotion regulation, children are more susceptible to ineffective regulation of emotions. More specifically, these children may maladaptively modify or fail to modify their emotions to meet social and emotional demands within their environment (Suveg et al., 2009) which, over time, can lead to various negative outcomes (Schäfer, 2016; Sendzik et al., 2017).

In addition, girls and boys appear to experience significant variability in their emotion regulation-related functioning. In some areas, they exhibited poorer functioning (e.g., boys use significantly fewer maladaptive strategies to regulate their emotions than girls) whereas in others, they appeared more emotionally attuned (e.g., girls exhibited significantly better awareness of others' emotions as compared to boys). Nonetheless, these challenges likely result in mismatched environment demands (Suveg et al., 2009). For instance, when engaged socially with other children, boys may struggle to accurately perceive and/or differentiate their peers' emotions (e.g., interpret sadness and frustration as anger; Sendzik et al., 2017) and may therefore choose to use an unsupportive strategy (e.g., tell the child they are overreacting) to regulate their emotions even though the situation requires the use of a supportive strategy (e.g., ask the child to talk about their feelings). Consequently, it is essential to consider different components of the emotion regulation process when working with youth experiencing internalizing challenges.

Limitations

The current study was novel in that it examined the differences between anxiety and social withdrawal among children. These differences are often overlooked as the two constructs

are generally perceived as indistinct. The study also examined the constructs' associations to emotion awareness and emotion regulation strategy use at the intra- and interpersonal levels. While the association to emotion regulation as a process is well researched, the literature examining specific emotion regulation-related components is highly limited and inconsistent. Thus, replication of this study is recommended as it may aid in expanding the available literature. Nonetheless, several limitations warrant discussion. Given these limitations, recommendations for future research are included below.

First, although the sample was large and quite diverse, participants were situated within a specific demographic area (Midwest) and, consequently, may not adequately represent the population. Generalizability is therefore in need of consideration in regard to participant ages and demographic characteristics. Replication of the study in different areas of the country would be advantageous so as to utilize a more generalizable sample.

Further, although several demographic variables (gender, age, and race) were included as covariates, socioeconomic status of students was not. Socioeconomic status is an important variable to consider when examining children's mental health and emotional functioning as youth from lower socioeconomic backgrounds generally experience greater mental health challenges and poorer emotional functioning (Appleton et al., 2013; Reiss, et al., 2019).

While the effect of race was examined as a covariate in the preliminary analyses, race was not adequately explored by many of the emotion regulation-focused studies referenced throughout the current study. For instance, Rieffe and colleagues (2008) included the age and gender of their participants in their revision of the Emotion Awareness Questionnaire-30 (EAQ30) but failed to describe the children's racial composition. In the same way, in their exploration of developmental differences in children's interpersonal emotion regulation, López-

Pérez and colleagues (2016) also refrained from mentioning the participants' race. Further, many researchers utilized samples comprised predominantly of White children. Birmaher and colleagues (1999) used 190 children in their creation of the SCARED-C; the sample was 71% White. Likewise, in their initial validation of the Emotion Expression Scale for Children (EESC), Penza-Clyve and Zeman utilized a sample of 208 fourth- and fifth-grade children comprised of 95% White children ("European American heritage," p. 541). Similarly, in their creation of the Child Behavior Checklist, Ladd and colleagues (1996) utilized a 73% White participant sample. Beyond listing the racial composition of the sample, the researchers failed to discuss race any further including discussing the limitations of a predominantly White sample or the impact race might have on emotional functioning in children.

Moreover, Sendzik and colleagues (2017) failed to mention or examine race within their meta-analytic review of 21 studies examining emotion awareness in depressive and anxious children and adolescents. Comparably, in their review of 35 studies examining emotion regulation strategies in depressive and anxious youth, Schäfer and colleagues (2016) did not discuss race including the racial composition of each studies participants. Further, in their exploration of emotion regulation in children with anxiety disorders, Suveg and Zeman (2004) did not include their participants' race. Clearly, race is not sufficiently addressed in the assessment of emotional constructs even though, due to various factors (e.g., cultural, socioeconomic, etc.), children of different racial groups likely experience variable social-emotional development and functioning (e.g., regulating their emotions) relative to other racial groups. Therefore, researchers should not assume measurement of the same construct across racial groups. This is problematic as it unclear how the potential measurement invariance might have affected the results.

Concerning the study's design, because it was correlational in nature, causation could not be implied. Moreover, in regard to the analyses, the data was hierarchical in nature (e.g., students nested in classrooms) yet multiple regression rather than hierarchical analyses were conducted. For future research, the nested structure needs to be accounted for in the analyses.

In an effort to remain cognizant of students' and teachers' time, only one rater provided information per construct (e.g., only children rated their level of anxiety as opposed to teachers also rating students' anxiety). Using more than one rater per construct would not only provide additional information but also more accurate information. It is also important to consider the possible bias of teachers' personal perspectives of students' classroom behavior as it is possible the results may not objectively represent the students' behavior. That is, a teacher might have been more inclined to rate a well-behaved child more positively (e.g., as demonstrating fewer or no socially withdrawn behaviors) and, conversely, a poorly behaved child more negatively (e.g., as demonstrating more socially withdrawn behaviors). For future studies, more than one informant per construct is recommended to more robustly and reliably assess the children's functioning. In addition, consideration should be given to parents as a potential informant as parents are oftentimes highly attuned to their children's functioning.

The peer nomination method has its own limitations. Specifically, children's awareness of their own emotions may affect peer nominations as some children struggle to accurately perceive their peers' use of emotion regulation strategies. For instance, a child may interpret a supportive response negatively rather than positively and vice versa which affects the nomination. However, helpfully, this method allows for the assessment of children's functioning via multiple reporters and, thus, reflects the collective sense of participating peers in the classroom.

The intrapersonal emotion awareness scale's Cronbach's α was .64 which is lower than what is generally considered an acceptable reliability (.70; Taber, 2018) in the social sciences. However, when measuring social-emotional constructs which are often unobservable, reliability lower than .70 does not seem unusual. For instance, in their assessment of anger regulation in adolescents, von Salisch & Zeman (2018) used scales with alphas of .51 and .53. Likewise, Zeman and colleagues (2018) measured children's self-report of sadness and anger regulation using scales with internal consistencies of .50 and .51. Further, some researchers assert Cronbach's alpha is "riddled with problems" and therefore an inappropriate assessment of psychological scales' internal consistency (McNeish, 2018, p. 412). Nonetheless, appropriate steps should be taken to enhance the reliability of utilized measures. For future research, additional items included within the scale will increase its length and may increase its reliability. In addition, conducting a factor analysis may be advantageous so as to help identify and eliminate poorly correlated items. Ultimately, researchers should strive for the highest quality of instruments so as to accurately and validly assess their data (Tavakol, 2011) especially when measuring challenging internalizing constructs (e.g., anxiety).

Lastly, although highly pertinent to understanding children's development and functioning, race has not been explicitly analyzed throughout the emotion regulation literature. Thus, researchers should not assume measurement of the same construct across racial groups. This is problematic, and it is unclear how to evaluate the invariance. Researchers should take careful consideration in analyzing race (e.g., as a moderating variable) in future studies or via other effective and more complex analyses.

Practical Implications

Presently, schools are overwhelmed with students experiencing internalizing challenges; these challenges are even more prevalent amid the ongoing COVID-19 pandemic as children are

confronted with endless uncertainty and unpredictability (Wagner, 2020). According to the Centers for Disease Control and Prevention, children's mental health-related visits to emergency departments in the United States increased by 24% among youth aged 5- to 11-years-old (Leeb et al., 2020). Thus, it is perhaps more important than ever to increase our understanding of anxiety and social withdrawal and their associations to emotion regulation-related components to effectively aid children in the classroom.

The broad process of *intrapersonal* emotion regulation and its relation to mental health challenges in children is well researched. That is, children who struggle to effectively regulate their emotions generally experience difficulties in life including challenges within the academic, social, and psychological domains (Levitt & Merrill, 2009; Long, 2018; Sanchez et al., 2018; Shernoff et al., 2017). Recently; however, greater research attention has been given to the *interpersonal* domain as interpersonal emotion regulation occurs continuously in social settings as well as *by* and *with* a wide array of people (Niven et al., 2009). Thus, understanding how children utilize others (e.g., peers, teachers, parents, etc.) to manage their emotions in addition to self-regulation is essential. Importantly, the current study's findings further support this notion including the necessity and relevance of distinguishing between the two levels.

More specifically, the study's results are pertinent to understanding children's emotional functioning as adequate emotion awareness and strategy use are critical to effective emotion regulation at the intra- and interpersonal levels (Suveg et al., 2009). When children struggle to successfully regulate their emotions, they are at greater risk for learning challenges, familial distress, interpersonal issues, and the development of other mental health challenges, among others (Aldao et al., 2010; Barthel et al., 2018; Berking & Wupperman, 2012; Crocetti et al., 2009; Djambazona-Popordanoska, 2016; Fabes et al., 2002; Fried, 2011; Koole, 2009). While

teachers generally report significant concern for their students' well-being, they oftentimes feel inadequate as they lack specific knowledge and awareness of these complex conditions (Cowell, 2013; Moran, 2016; Stormont, Reinke, & Herman, 2011; Franklin et al., 2011; Moon et al., 2017; Frauenholtz, Mendenhall, & Moon, 2017).

Consequently, the findings are noteworthy in that they not only distinguish anxious and socially withdrawal children via two levels of emotional functioning but further support the necessity of focusing on the different levels rather than lumping them together. For instance, anxiety is primarily related to *intrapersonal* regulatory efforts whereas social withdrawal is associated with *interpersonal* regulation. Teachers, school psychologists, and other school staff can utilize this information to not only identify anxious and socially withdrawn children but to intervene using highly specific characteristics of struggling children. For example, anxious children exhibit poor awareness of their own emotions. In response, teachers can teach self-awareness skills and emotion vocabulary, and help students maintain journals to write about and reflect upon their intrapersonal emotional experiences.

On the contrary, socially withdrawn children appear uninvolved in the emotion regulatory efforts of others. This is problematic as youth frequently rely on one another to navigate challenging emotional situations. In response, teachers and other school personnel must pay acute attention to children seeking solace and avoiding their peers, teach these children about their emotions and the emotions of others (e.g., help students identify and label emotions), and then facilitate opportunities to practice the acquired skills (e.g., use of various supportive strategies such as listening to a friend when they are upset). They can also teach broader skills including those required for social reciprocity (e.g., listening and speaking).

The nuanced information provided by the current study can also be used to assist special education teachers as many children identified for specialized services in the educational setting struggle with anxiety and social withdrawal and, therefore, experience difficulty regulating their emotions. For instance, children with autism spectrum disorder are often anxious. In response, teachers can integrate goals within their Individualized Education Plan to specifically focus on and improve awareness of their own emotions which may better their overall emotional functioning, both intra- and interpersonally.

In addition, a proactive approach may be key as teachers can provide essential knowledge and skills to all students in hopes of preventing the development of internalizing symptoms and challenges. Presently, schools in the United States are highly encouraged to provide social-emotional learning, development, and training (Levitt & Merrell, 2009) for students and staff, per state and federal legislation (Halle & Darling-Churchill, 2016). Thus, perhaps teachers can seamlessly integrate specific social and emotional learning into their curriculum so students can expand their intra- and interpersonal emotional repertoire. For instance, teachers can focus intently on the emotions of characters in assigned readings and discuss how these characters identify and understand emotions and the emotions of others. Teachers can also utilize role-playing opportunities and encourage students to work through challenging social-emotional situations with one another. To provide such learning in the classroom, teachers and other staff members may require professional development specific to children's social-emotional development. Consequently, the information can also be used to inform and develop such trainings to ensure staff are connecting developmental trajectories of social and emotional learning to the foundation of children's emotion regulation processes (Halle & Darling-

Churchill, 2016). These interventions may positively impact children and provide essential skills to help them regulate their emotions and the emotions of others more effectively.

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Appendix A.

Self-Report Measures

Anxiety

Instructions: Tell us how true each statement is for you.

	Not at all True	Slightly True	Moderately True	Mostly True	Very True
1. I worry about other people liking me.	1	2	3	4	5
2. I'm nervous.	1	2	3	4	5
3. I worry about being as good as other kids.	1	2	3	4	5
4. I worry about things working out for me.	1	2	3	4	5
5. I'm a worrier.	1	2	3	4	5
6. People tell me I worry too much.	1	2	3	4	5
7. I worry about what is going to happen in the future.	1	2	3	4	5
8. I worry about how well I do things.	1	2	3	4	5
9. I worry about things that have already happened.	1	2	3	4	5

Intrapersonal Emotion Awareness

Instructions: Children have different feelings about things and themselves. Tell us how true each statement is for you.

	Not at all True	Slightly True	Moderately True	Mostly True	Very True
1. When I feel upset, I don't know how to talk about it.	1	2	3	4	5
2. I often don't know why I'm angry.	1	2	3	4	5
3. Sometimes I just don't have words to describe how I feel.	1	2	3	4	5
4. I often don't know how I'm feeling.	1	2	3	4	5

5. People tell me I should talk about my feelings more often.	1	2	3	4	5
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Interpersonal Emotion Awareness

Instructions: Children have different thoughts about their friends' feelings. Please circle how true each statement is for you.

	Not at all True	Slightly True	Moderately True	Mostly True	Very True
1. It is important to know how my friends are feeling.	1	2	3	4	5
2. I don't want to know how my friends are feeling.	1	2	3	4	5
3. If a friend is upset, I try to understand why.	1	2	3	4	5
4. I don't care about how my friends are feeling inside.	1	2	3	4	5
5. I usually know how my friends are feeling.	1	2	3	4	5

Intrapersonal Emotion Regulation Strategy Use

Adaptive Strategies

Instructions: Below is a list of different things kids do or think when they feel sad, grumpy, or upset. Please circle how true each statement is for you.

When I feel sad, grumpy, or upset...

	Not at all True	Slightly True	Moderately True	Mostly True	Very True
2. I think about what I can do to feel better.	1	2	3	4	5
4. I pray or meditate.	1	2	3	4	5
6. I think of something fun.	1	2	3	4	5
8. I find an activity or project to do.	1	2	3	4	5
10. I take a break.	1	2	3	4	5
12. I listen to happy music.	1	2	3	4	5

14. I find someone to talk to.	1	2	3	4	5
16. I try to help others with something.	1	2	3	4	5
18. I hug someone.	1	2	3	4	5

Maladaptive Strategies

Instructions: Below is a list of different things kids do or think when they feel sad, grumpy, or upset. Please circle how true each statement is for you.

When I feel sad, grumpy, or upset...

	Not at all True	Slightly True	Moderately True	Mostly True	Very True
1. I think about sad things.	1	2	3	4	5
3. I think everything is my fault.	1	2	3	4	5
5. I think things will never get better.	1	2	3	4	5
7. I throw, kick, or hit something.	1	2	3	4	5
9. I scream or yell.	1	2	3	4	5
11. I shut down.	1	2	3	4	5
13. I argue with others.	1	2	3	4	5
15. I yell at people.	1	2	3	4	5
17. I go off to be alone.	1	2	3	4	5

Teacher-Report Measure

Social Withdrawal

Instructions: Please indicate how true each statement is for the child.

This child...

	Never True	Rarely True	Sometimes True	Often True	Almost Always True
3. Prefers to play alone	1	2	3	4	5
6. Likes to be alone	1	2	3	4	5
9. Keeps peers at distance	1	2	3	4	5
12. Is a solitary child; plays alone	1	2	3	4	5
15. Avoids peers	1	2	3	4	5
18. Withdraws from peer activities	1	2	3	4	5

Peer-Report Measure

Interpersonal Emotion Regulation Strategy Use

Supportive Strategies

Instructions: Think about your classmates and decide who fits each description the best.

FIRST, find the person you'd like to choose. NEXT, write down the NUMBER of the person, not the name. You can choose the same person for more than one question. Do NOT choose yourself. You may or may not need all of the blank spaces

6. When I get angry at something or someone, these classmates ask me to talk about my feelings.

9. When I get sad or cry, these classmates ask me what is bothering me.

Unsupportive Strategies

Instructions: Think about your classmates and decide who fits each description the best.

FIRST, find the person you'd like to choose. NEXT, write down the NUMBER of the person, not the name. You can choose the same person for more than one question. Do NOT choose yourself. You may or may not need all of the blank spaces

5. When I get angry at something or someone, these classmates threaten or yell at me.

7. When I get angry at something or someone, these classmates tell me I'm over-reacting.

8. When I get sad or cry, these classmates get angry or upset with me.

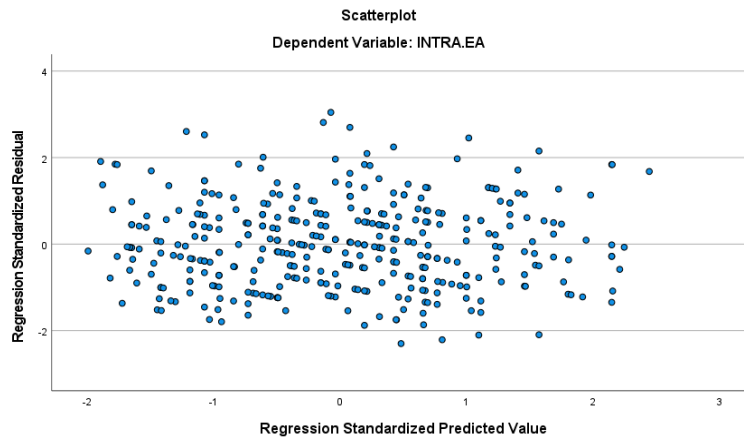
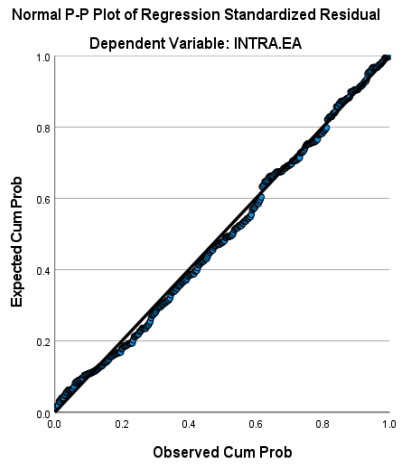
10. When I get sad or cry, these classmates tell me I'm making a big deal out of nothing.

Appendix B.

Statistical Plots

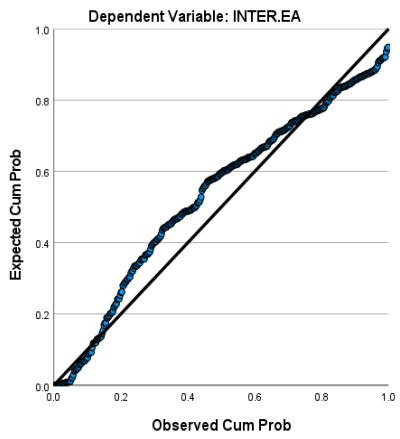
Linearity

Intrapersonal Emotion Awareness

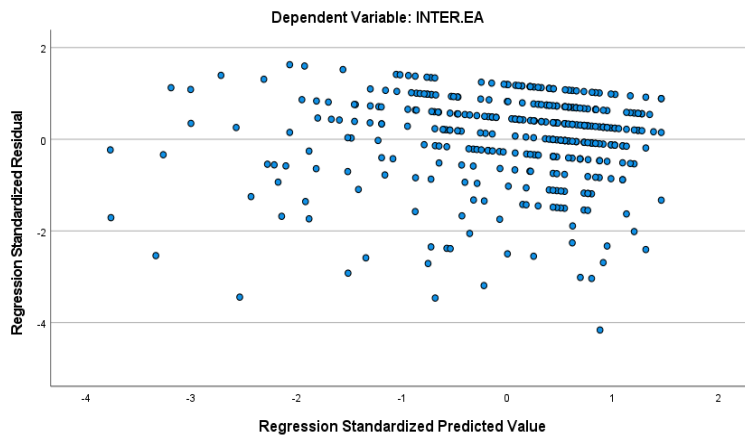


Interpersonal Emotion Awareness

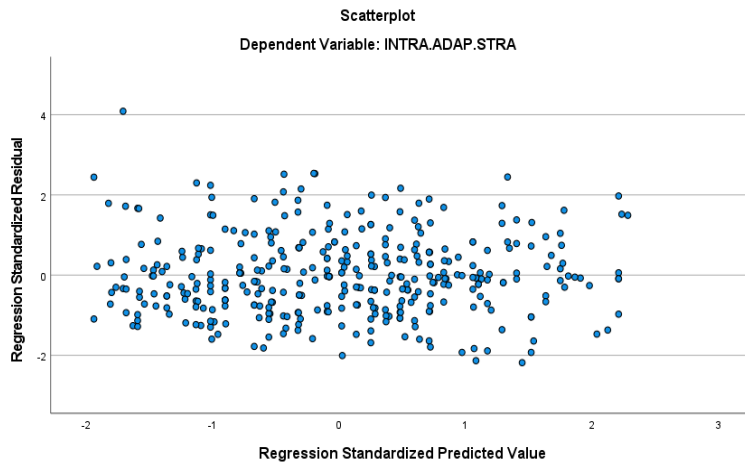
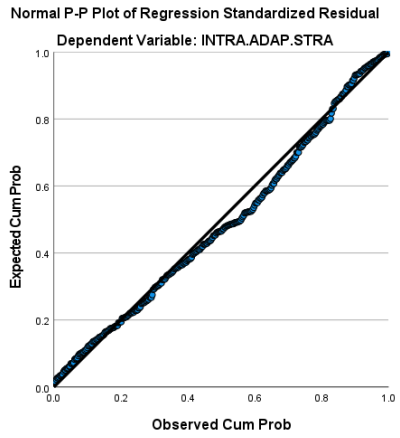
Normal P-P Plot of Regression Standardized Residual



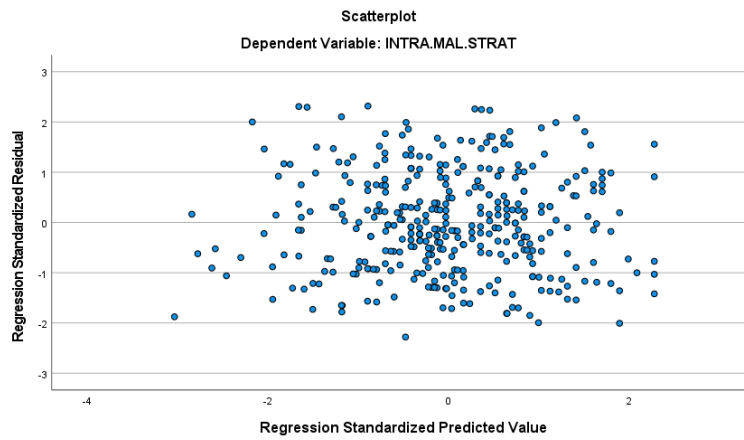
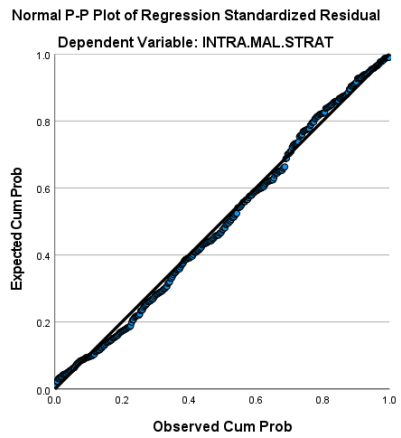
Scatterplot



Intrapersonal Adaptive Emotion Regulation Strategy Use

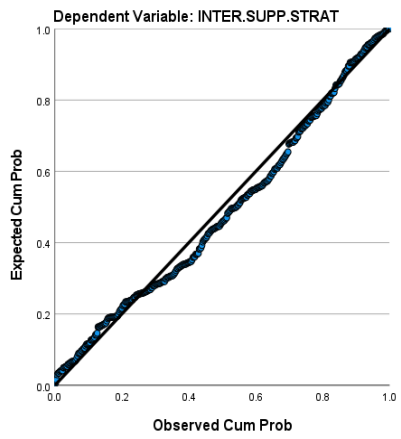


Intrapersonal Maladaptive Emotion Regulation Strategy Use

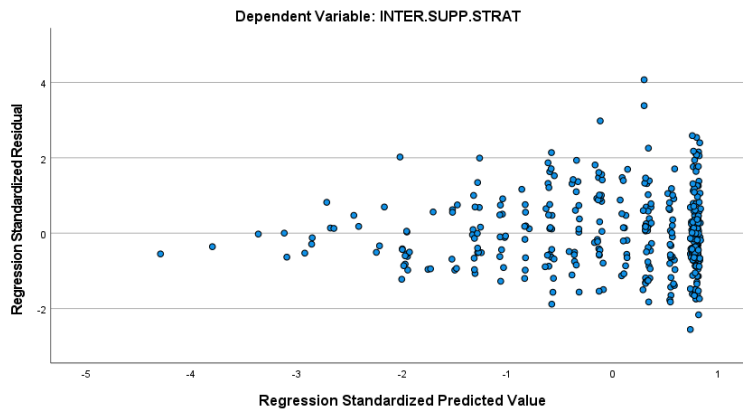


Interpersonal Supportive Emotion Regulation Strategy Use

Normal P-P Plot of Regression Standardized Residual

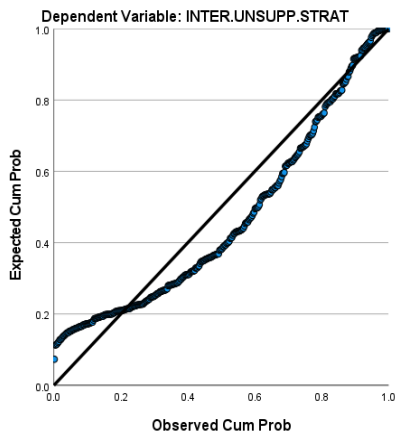


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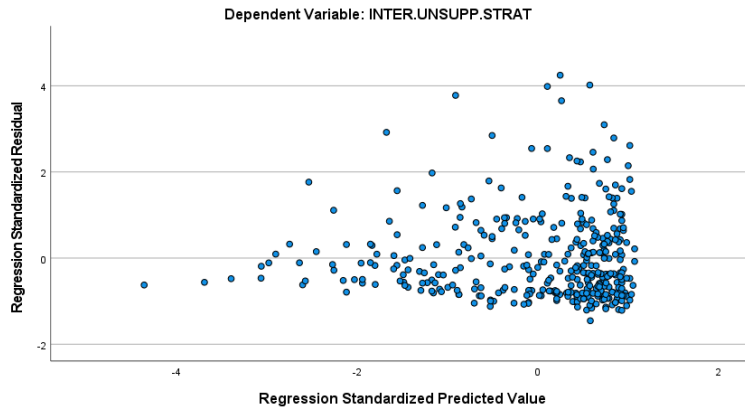


Interpersonal Unsupportive Emotion Regulation Strategy Use

Normal P-P Plot of Regression Standardized Residual

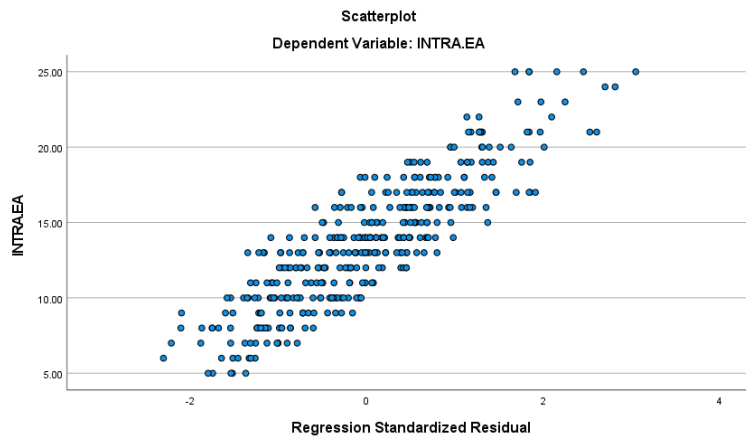


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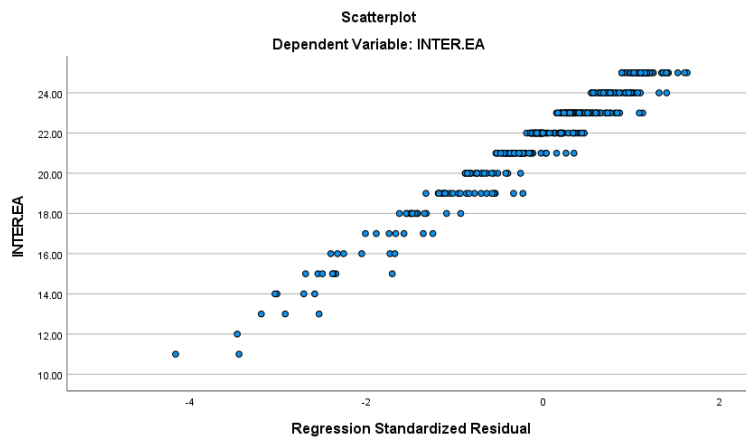


Homoscedasticity

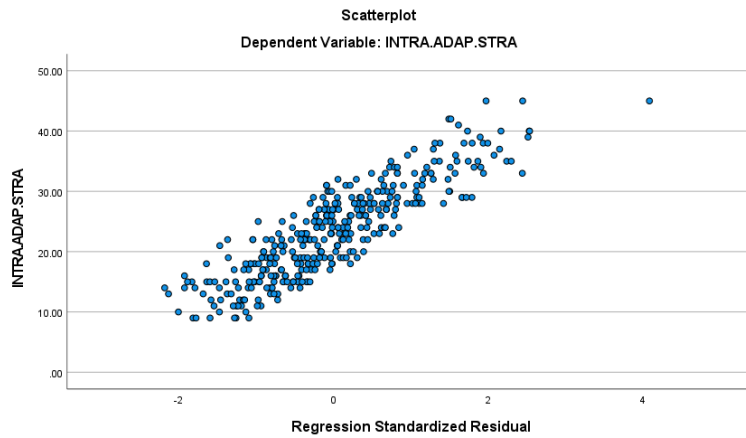
Intrapersonal Emotion Awareness



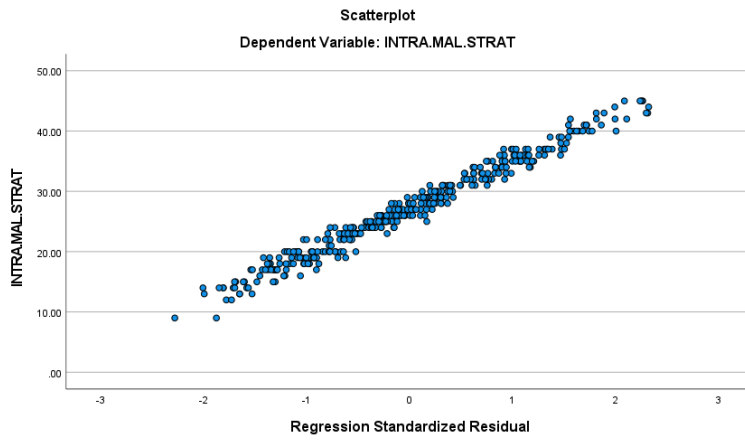
Interpersonal Emotion Awareness



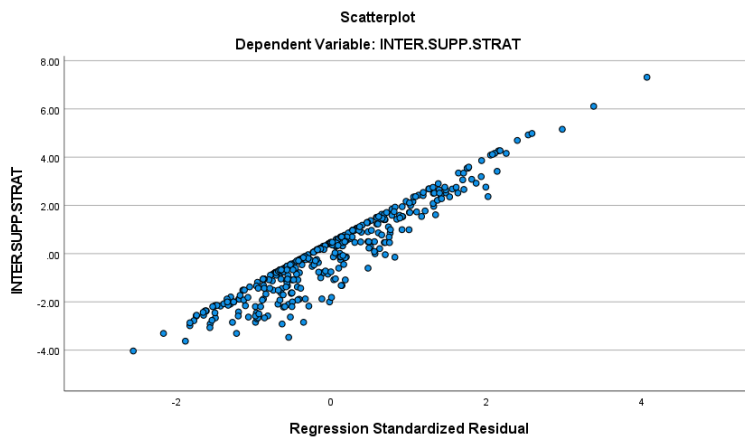
Intrapersonal Adaptive Emotion Regulation Strategy Use



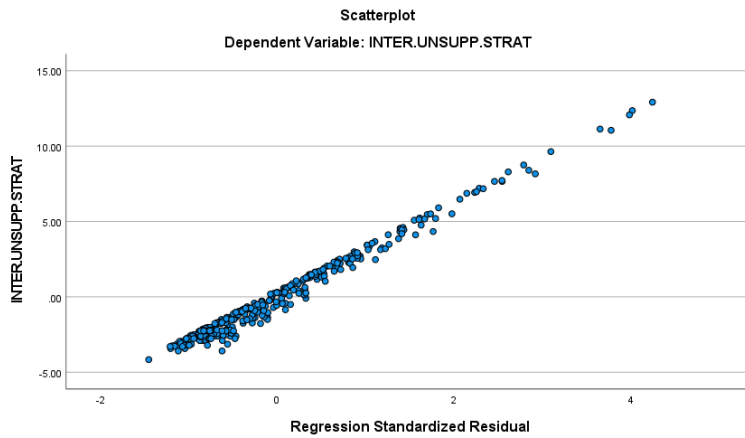
Intrapersonal Maladaptive Emotion Regulation Strategy Use



Interpersonal Supportive Emotion Regulation Strategy Use



Interpersonal Unsupportive Emotion Regulation Strategy Use



Curriculum Vitae

JaNae E. Teer

EDUCATION:

Doctor of Philosophy degree in Educational Psychology, Emphasis in School Psychology
University of Wisconsin-Milwaukee, Milwaukee, WI, September 2016 - present
Advisor: Dr. Kyongboon Kwon, Ph.D.

Educational Specialist degree in School Psychology
Northern Arizona University, Phoenix, AZ, January 2011 - May 2014
Advisor: Dr. Lisa Persinger, Ph.D.

Master of Science degree in Administration of Justice and Security
University of Phoenix, Phoenix, AZ, August 2006 - February 2008

Bachelor of Arts degree in History
College of Saint Benedict, Saint Joseph, MN, September 2002 - December 2005

Study Abroad - Intensive Intermediate Spanish
University of Valladolid, Valladolid, Spain, June 2003 - July 2003

CERTIFICATIONS:

Nationally Certified School Psychologist
National Association of School Psychologists, August 2014 - August 2020

Licensed School Psychologist
Wisconsin Department of Public Instruction, July 2014 - June 2019

Certified Non-Violent Crisis Interventionist
Columbus School District, February 2016 - February 2018

Pediatric Traumatic Brain Injury Evaluator
North Carolina Department of Public Instruction, June 2014

HONORS:

Member of Beta Epsilon Chapter of Pi Lambda Theta, April 2018 - present

RESEARCH EXPERIENCES:

Publication

Kwon, K., Teer, J., Maurice, S. A., & Matejka, C. (2019). Self-report of emotional experience and Peer nominations of expressivity: Predictability of change in teacher-rated social behavior. *Social Development, 29*(3), 837-853.

Professional Presentations

Kwon, K., Hanrahan, A. Benton, A., Teer, J. (2018, February). Long-term stability and predictability of peer nominations of emotionality. Poster presented at the National Association of School Psychologists, Chicago, IL.

Other

Teer, J. (2018, October). Examining Problematic Smartphone Use and its Correlation to Depression and Anxiety in Adolescents. Master's Paper.

Dissertation Research (2019, May)

Project Title: *Children's interpersonal emotion regulation in the classroom*

Responsibilities: Collaborated with team members to create student and teacher questionnaires, visited schools' classrooms to administer questionnaires; collected, coded, and entered data into secure system; aggregated data.

CLINICAL TRAINING EXPERIENCES:

Pre-doctoral Neuropsychology Intern

Fraser, Bloomington, MN, August 2020 - Present

- Provide diagnostic assessments for neuropsychology, Autism Center of Excellence, and mental health clientele
- Administer, analyze, interpret, and report results of neuropsychological, psychological, academic, and cognitive assessment tools
- Maintain client medical records in a timely manner
- Provide individual therapy and/or skills training to children and adolescents
- Provide family therapy, family skills training, and parent guidance for families and/or parents
- Actively participate in weekly didactic trainings, multidisciplinary case reviews, and individual and group supervision

Doctoral School Psychology Practicum Student

Madison Neuropsychological Services, Madison, WI, August 2019 - March 2020

- Prepared client charts and test materials
- Attended client and family intake sessions
- Administered and scored a wide breadth of assessments to children and adolescents
- Obtained and recorded detailed patient history and background information
- Performed client observations; documented, compiled, and reported findings to neuropsychologist

Doctoral Neuropsychology Practicum Student

Medical College of Wisconsin, Milwaukee, WI, July 2018 - January 2019

- Attended client and family intake sessions

- Prepared client charts and test materials
- Administered a wide breadth of assessments to children and adolescents
- Conducted client observations and provided written documentation of findings to neuropsychologists
- Utilized computerized software and test manuals to score assessments
- Attended client and family feedback sessions

Doctoral School Psychology Practicum Student

Glassman Neuropsychology Associates, West Allis, WI, June 2017 - December 2017

- Conducted client and family intake sessions and integrated information into written reports
- Prepared client charts and test materials
- Administered and scored a variety of assessments to children, adolescents, and adults
- Performed client observations
- Integrated historical, observational, and assessment data into written reports; identified and included appropriate evidence-based intervention and strategy recommendations
- Provided feedback to patients and families

Doctoral School Psychology Practicum Student

Crossroads Counseling, Sun Prairie, WI, October 2016 - June 2017

- Attended client and family intake sessions
- Assisted in providing individual and group therapy to adolescent patients with mental health and/or chemical dependency challenges
- Co-taught daily life skills and problem solving strategies
- Completed written progress notes for client records

Educational Specialist School Psychology Intern

Onslow County Schools, Jacksonville, NC, August 2013 - June 2014

- Conducted comprehensive evaluations and assisted in educational planning for students using multiple assessment and intervention methods
- Conducted functional behavior assessments and created corresponding behavior plans
- Provided consultation services to parents, teachers, and other school personnel
- Participated as a member of the Instructional Intervention Team

Educational Specialist School Psychology Practicum Student

Peoria Unified School District, Peoria, AZ, August 2012 - June 2013

- Administered cognitive, achievement, and social/emotional/behavioral assessments
- Participated as a member of the school problem-solving team
- Conducted functional behavior assessments and created corresponding behavior plans
- Attended initial and eligibility IEP meetings
- Contributed to Individualized Education Plan (IEP) development for children with disabilities

PROFESSIONAL EXPERIENCES:

School Psychologist (grades prekindergarten – 12th)

Hustisford School District, Hustisford, WI, August 2016 - June 2017

- Conducted comprehensive evaluations and assisted in educational planning for students using multiple assessments and interventions
- Initiated, developed, and led Response to Intervention (RtI) and student intervention teams
- Collaborated with teachers to identify and implement academic, behavioral, and mental health interventions to support the teaching process, maximize learning, and enhance the RtI program
- Mastered the progress monitoring program and assisted teachers in its use
- Counseled students using various theoretical approaches

School Psychologist (grades 4th -12th)

Columbus School District, Columbus, WI, August 2014 - June 2016

- Conducted comprehensive evaluations and assisted in educational planning for students using multiple assessments and interventions
- Initiated and developed Response to Intervention (RtI) and student intervention teams
- Created and implemented academic, behavioral, and mental health interventions to support the teaching process, maximize learning, and enhance the RtI program
- Mastered the progress monitoring program and assisted teachers in its use
- Counseled students using various theoretical approaches

District 21st Century Community Learning Center (CCLC) Grant Director

Osborn School District, Phoenix, AZ, July 2008 - June 2011, August 2012 - June 2013

- Planned and collaborated with the assistant superintendent, principals, and site coordinators to create and implement the 21st CCLC grant objectives, projects, and activities
- Researched, initiated, and obtained partnerships to sustain the 21st CCLC programs with various organizations (e.g., Arizona State University and the Phoenix Police Department)
- Hired, trained, supervised, and evaluated school Site Coordinators
- Facilitated the collection and maintenance of program data for reporting and evaluation; led annual federal and state monitoring visits
- Administered the grant budget (\$720,000 annually) and recommended adjustments as needed
- Implemented and evaluated adult education classes (e.g., GED, English as a Second Language)

Academic Program Manager/McKinney-Vento Homeless Assistance Act Coordinator

Dysart Unified School District, Surprise, AZ, September 2011 - August 2012

- Oversaw the identification of homeless families and worked collaboratively with staff to effectively meet the families' needs
- Coordinated support with counselors and psychologists from 24 schools to ensure students and families of special populations received adequate support
- Provided staff trainings on the McKinney-Vento Homeless Assistance Act and 21st CCLC grant program requirements

- Monitored the 21st CCLC grant budgets (\$300,000 annually) and recommended adjustments as needed
- Collected and compiled statistical and financial data for annual reports
- Researched and initiated partnerships with various organizations throughout the community
- Collaborated with staff and community partners to facilitate parent and student education programs

Program Coordinator

Chrysalis Shelter for Victims of Domestic Violence, Phoenix, AZ, August 2007 - July 2008

- Recruited, interviewed, and trained volunteers to acclimate individuals to shelter setting
- Conducted recruiting efforts throughout the community
- Organized 100+ shelter events annually
- Engaged and retained volunteers (Fully-staffed program for the first time in 7+ years)
- Coordinated large, off-site events including the 2007 Wonderland Workshop which provided Christmas presents for 300 women and children affected by domestic abuse
- Conducted community outreach through regular, large-group presentations in an effort to educate citizens about domestic abuse

Alternative Education Teacher (grades kindergarten – 8th)

Country Place Elementary School, Tolleson, AZ, February 2006 - May 2007

- Productively instructed, counseled, and managed students in a self-contained classroom while forming positive and trusting relationships with students and staff
- Assisted in the development and implementation of behavioral intervention plans
- Collaborated with staff in determining appropriate educational goals (e.g., academic, behavioral, etc.) for each child
- Monitored and reported student behavior and performance

Summer School Teacher (2nd grade)

Country Place Elementary School, Tolleson, AZ, June 2006

- Planned and implemented the provided curriculum to underperforming students
- Assessed and reported student performance in accordance with policies developed for the summer school program

VOLUNTEER EXPERIENCES:

American Red Cross

Swansboro, NC & Madison, WI, August 2013 – present

Salvation Army of Dane County

Madison, WI, November 2018 – March 2020

United Blood Services

Phoenix, AZ December 2005 – June 2013

St. Vincent de Paul Food Shelf

Lake Mills, WI, March 2015 – December 2017

Phoenix Rescue Mission

Phoenix, AZ, December 2012 - June 2013

YWCA Shelter

Fargo, ND, May 2005 - August 2005

Anne Marie's Shelter

Saint Cloud, MN, February 2004 - June 2004