Authoritarian Parenting, Religiosity, Interpretive Theory of Mind, and Shame in Middle Childhood

by

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ABSTRACT

How individual differences in shame are influenced by children's developing social-cognitive skills is poorly understood in the psychological literature. Furthermore, developmental theories propose that social cognition and parental socialization jointly influence children's emotional development. Despite the theoretical discussion about this developmental interplay, there is a paucity of empirical evidence about the relations between social cognition, socialization, and shame in childhood. The current study examined the relations among children's interpretive theory of mind (IToM), authoritarian parenting style, parent religiosity, and children's shame. Proneness to shame is problematic for some children, thus understanding why children vary in shame proneness could help us treat it. **Method:** Children completed tasks measuring IToM performance and self-reported shame. Mothers self-reported authoritarian parenting style, maternal religiosity, and reported on all relevant demographic variables. **Analyses:** Regression analyses tested the hypothesis that advanced IToM skills attenuate the positive association between authoritarian parenting and child shame. This study also predicted that maternal religiosity, child age, child gender, and social class, explain the variability in child shame. **Discussion:** Unexpectedly, the only significant outcome was a positive association between maternal religiosity and child shame. Results are discussed in the context of previous research on religiosity, socialization, social cognition, and child shame. In the literature, parental religiosity has been a largely overlooked influence on children's self-conscious emotional development. Previous studies mostly examined religious affiliation, making this study's finding an important contribution to the literature on children's self-conscious emotional development.

Keywords: Authoritarian parenting style, interpretive theory of mind, maternal religiosity, middle childhood, and shame

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DEDICATION

For the new people in the world:

My beloved nieces: **K. Ranique Lall** and **A. Anuradha Lall.**
I miss you!

The inspirational siblings!
I will forever be smitten with the three of you.

So happy to have met you, sweet **David Sodomsky**!
I enjoy David stories.

Addison Morgan Lucky!
I can't wait to kiss you silly!

Finally, I dedicate this thesis to **the children** who generously participated in this study.

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CHAPTER 1 – GENERAL INTRODUCTION

Authoritarian Parenting, Religiosity, Interpretive Theory of Mind, and Shame in Middle Childhood

Overview

Moisi (2009) argues that "… men and women can change history for the best when moved by emotions—the right emotions" (p. *ix)*. Furthermore, emotional well-being at any age is highlighted as an important determinant of overall health (Stewart-Brown, 1998; WHO). When it comes to emotional development, social, cognitive, and emotional processes are integrated in important ways (Calkins & Bell, 2010; Hughes, White, & Ensor, 2014; Lagattuta & Thompson, 2010; Posner, 2010; Thompson, 2010). This latter theoretical emphasis on cognitive processes implies that children's emotions are not only "shaped" by social processes external to the child, but that children are also "shapers" of their own emotional development (Olsen, 2015). Therefore, a better understanding of emotional development in various social contexts and developmental time points is warranted.

Despite the theoretical consensus about the interaction of social, cognitive and emotional processes outlined above, empirical evidence on how developmental achievements in social cognition influence individual differences in child shame is lacking in the psychological literature. Thus, this doctoral project examined the interactive influence of a middle childhood social-cognitive skill and parental socialization on the development of child shame. There is a call for developmental research on the interaction between cognition and emotion (Blair & Dennis, 2010; Calkin & Marcovitch, 2010; Zelazo, Qu, & Kesek, 2010). Others, emphasized increasing our understanding about the role of social processes in emotional development, by highlighting the critical role of parents and important others within the child's developmental

context (Lemerise & Harper, 2015; Saarni, 2008; Thompson, 2010; Young, Brown, Beardsall, 1991). Consequently, the present study examined the interactive influence of a middle childhood social-cognitive ability, specifically, children's interpretive theory of mind (IToM), with authoritarian parenting style, on the development of shame in middle childhood. In addition, this study predicted that maternal religiosity, child age, child gender, and social class, explain the variability in middle childhood shame.

One aspect of social cognition, social understanding, refers to the ability to understand self and others' mental states (Carpendale & Chandler, 1996; Carpendale & Lewis, 2010; Wimmer & Perner, 1983). The understanding of mental states, such as beliefs, intentions, emotions, and desires, facilitates interpersonal interactions (Carpendale & Lewis, 2010; Carpendale and Lewis, 2006). In the developmental literature, the study of social understanding in childhood is often referred to as the study of children's theory of mind (ToM) (Premack & Woodruff, 1978; Wimmer & Perner, 1983). Carpendale and Lewis (2006) argue that research on the development of children's ToM has chiefly focused on advances in false belief understanding during the preschool years. Thus, researchers have relatively ignored the study of advances in social understanding that occur after the preschool period.

One advancement in social understanding is the development of IToM abilities during the middle childhood period (Carpendale & Chandler, 1996; Carpendale & Lewis, 2010; Lalonde & Chandler, 2002). While advances in social cognition during childhood are observed, it is important to note that aspects of social understanding may decline in later adulthood (Happe´, Winner & Brownell, 1998; Sullivan & Ruffman, 2004). If social-cognitive abilities, for example, social understanding, fluctuate throughout the life span, it is likely that these changes would have implications for emotional experience in childhood, as well as in adulthood. In the present study,

I examined a developmentally sophisticated aspect of children's social understanding, children's IToM ability, which emerges in middle childhood, as a moderator of middle childhood shame.

Evidence of the development of an IToM in middle childhood is children's emerging understanding of the interpretive nature of the human mind (Carpendale & Chandler, 1996). For children, the development of IToM abilities brings about the understanding that an individual's knowledge of reality has much to do with the unique beliefs that the individual already holds (Carpendale & Chandler, 1996; Carpendale & Lewis, 2006; Lalonde & Chandler, 2002). With IToM, children have developed the understanding that based on individual beliefs, people will reach distinct interpretations or conclusions about identical events (Carpendale & Chandler, 1996; Carpendale & Lewis, 2006; Lalonde & Chandler, 2002). Therefore, as demonstrated by the above cited researchers, with IToM abilities coming online in middle-childhood, children are capable of more adult-like perspectives on others' mental states. Children now expect and predict uniqueness in others' thoughts, beliefs, desires, and emotions. This new social-cognitive ability may have unique implications for children's own socialization, children's interpersonal interactions and children's emotional development. I will now define socialization, and briefly highlight evidence of the role of children in their own socialization process. Then, I will define shame, before discussing the development of shame in childhood.

Socialization refers to "a succession of processes occurring at successive stages of development, with the child's family of origin being the first, and in many cases the most enduring, socializing institution, joined by peer groups, schools, religious institutions..." (Maccoby, 2007, p. 14). Maccoby (2007) highlights that socialization processes can be "optimal", fostering functional developmental pathways, or "dysfunctional," promoting pathological developmental pathways. Parents especially play a key role in children's

socialization process (Grusec and Davidov, 2007). In line with the perspective that unique socialization experiences influence particular pathways of development, the present study included a measure of authoritarian parenting style as a predictor of middle childhood shame.

Authoritarian parenting is a parental socialization style characterized by high parental demandingness for child conformity, and consequently, low parental responsiveness to the child's needs or perspective (Baumrind, 1966; 1968). This definition indicates that an authoritarian parenting style may have specific implications for a child's emotional development. However, studies have also demonstrated that children actively influence many aspects of their socialization (Bugental, Corporeal, & Shennum, 1980; Grusec & Kuczynski, 1980). Using the example discussed in Maccoby (2007), one could consider the principles of social-cognitive learning proposed by Bandura (1992, 2001). According to social-cognitive theory, children possess the cognitive resources to support their ability to selectively control aspects of their socialization process (see this example in Maccoby, 2007). Furthermore, as stated earlier, specific studies found that children do exert their own influence on their socialization process (Bugental, Corporeal, & Shennum, 1980; Grusec & Kuczynski, 1980 Maccoby, 2007). Thus, in considering the implications and outcomes of socialization on children's emotional development, the present study also accounted for the role of a child cognitive factor. The interactive influence of IToM abilities with parental socialization in predicting individual differences in middle childhood shame was examined. The specific studies that examined the relationship between authoritarian parenting and shame will be reviewed in chapter 2.

Shame, guilt and pride are categorized as the cognitively complex self-conscious emotions (Lewis, 1992; 2007; Tangney & Fisher, 1995). According to theories of self-conscious emotions, experiences of shame result from negative, global self-evaluations (Lewis, 1992; 2007;

Tangney & Fisher, 1995). The negative self-focus of shame attributions is also theorized to promote adaptive self-regulation (Lewis, 1992; 2007; Tangney & Fisher, 1995). Furthermore, according to theories of shame, feelings of shame motivate self-correction, in order to preserve social acceptance (Dickerson, Gruenwald, & Kemeny, 2004; Dickerson & Kemeny, 2004; Lewis, 1992; Tangney & Fisher, 1995). The cognitive prerequisites for the development of shame emerge by age three (Lagattuta & Thompson, 2007; Lewis, 1992; 2007; Tangney & Fischer, 1995). Compared to the basic emotions (happy, sad, anger, fear, surprise, disgust, surprise, and interest), which emerge within the first year of life, and independent of these cognitive prerequisites, the self-conscious emotions emerge much later (Tangney & Fischer, 1995). Self-conscious emotions emerge by age three because the cognitive prerequisites for self-conscious emotional experiences have also developed by this time (Lagattuta & Thompson, 2007; Lewis, 1992; 2007).

The cognitive prerequisites for the development of shame include the development of self-awareness, the ability to understand self and others' mental states (theory of mind), the acquisition of standards, rules and goals, and finally, the ability to evaluate the global self, relative to internalized standards, rules and goals (Lagattuta & Thompson, 2007; Lewis, 1992; 2007; Tangney & Dearing, 2002; Tangney & Fischer, 1995). Individual differences in the acquisition of shame prerequisites, such as individual differences in how children self-evaluate, and individual differences in children's acceptance of responsibility for wrong-doing, are likely predictors of individual differences in shame experiences (Lagattuta & Thompson, 2007). For example, children will learn to prioritize certain standards, rules, and goals, because of their unique socialization experiences. Also, based on their unique socialization experiences, children may develop a tendency to self-evaluate with a negative, global self-focus, thus increasing the

likelihood of experiencing shame (Mills, Arbeau, Lall, & De Jaeger, 2010). To summarize, individual differences in shame are also observed as early as the third year of life, the age at which the cognitive prerequisites for shame have also developed (Barrett, Zahn-Waxler, & Cole, 1993; Kelley, Brownell, & Campbell, 2000; Lewis, Alessandri, & Sullivan, 1992). Using examples from the later adulthood literature, the next section broadly illustrates the interaction among cognitive, social, and emotional processes.

Shifts in emotional experiences in later adulthood

Researchers have long argued that cognitive (Clore, 1994; Frijda, 1988; Lewis, 2000; Robinson, Watkins, & Harmon-Jones, 2013; Weiner, 1985) and social processes (Alessandri & Lewis, 1993; 1996; Mills, et al., 2010; Saarni, 2008), independently, as well as interactively, influence emotional reactivity throughout the lifespan (Barrett & Russell, 2015; Carstensen, Fung & Charles, 2003; Frijda, 1986; Lewis, 2014; Lagattuta & Thompson, 2007; Malatesta & Wilson, 1988; Mills, 2005; Mills, Hastings, Serbin, Stack, Abela, Arbeau, & Lall, 2015). Furthermore, others have specifically demonstrated that the valence of emotional experiences shift substantially in later adulthood because of age-related cognitive and social modifications (Charles & Carstensen, 2010; Carstensen, Pasupathi, Mayr, Nesselroade, 2000). Thus, in both childhood and adulthood, modifications to emotional experiences should be expected if modifications to cognitive and social processes occur.

One theory explaining modifications to emotional experiences in later adulthood is socioemotional selectivity theory (SST). According to SST, older adults tend to report higher frequencies of positive emotional experiences compared to younger adults (Charles & Carstensen, 2010; Carstensen, Pasupathi, Mayr, Nesselroade, 2000). SST states that shifts in older adults' emotional experiences towards the positive end of the emotional spectrum result

from age-related developmental modifications to cognitive and social processes that are particular to later adulthood (Charles & Carstensen, 2010; Carstensen, Pasupathi, Mayr, Nesselroade, 2000). For example, compared to younger adults, older adults are expected to possess advanced self-regulation skills because older adults have accumulated more life experience. SST also argues for the tendency for older adults to actively seek out interpersonal interactions that they predict will be positive (Carstensen, Fung & Charles, 2003). In a similar manner, shifts in emotional responding may also occur in middle childhood because of middle childhood cognitive achievements, and because of socialization processes and experiences that are unique to the middle-childhood period (Davidson & Ekman, 1994; Lagattuta & Thompson, 2007; Thompson, 2010; Thompson & Winer, 2013; von Hippel & Henry, 2011).

SST proposed that the decline in negative emotions and increase in positive emotions older adults experience could result from gains in effective self-regulation skills, which in turn, may lead to the selection of positive social situations (Carstensen, Fung & Charles, 2003). In addition to experiential gains in wisdom, age-related biological changes (von Hippel & Henry, 2011) may underlie older adults advanced self-regulation strategies, as well as older adults increased selectivity of positive social interactions. In both adulthood and childhood, age-related biological changes are expected to influence a number of cognitive processes associated with emotional experiences, for example, theory of mind (ToM) (Robinson, Watson & Harmon-Jones, 2013). In addition to successfully perceiving others' mental states (ToM), executive functioning processes, such as working memory and inhibitory functioning are important for successful emotional recognition and emotional regulation (Sokul, Muller, Carpendale, Young & Iarocci, 2010; Zelazo & Cunningham, 2007). The above review of changes to older adults' emotional experiences compared to younger adults supports an investigation of the interactive influence of

social and cognitive processes on emotional experiences in middle childhood, the focus of the present study.

Underlying biological gains and losses influencing ToM and executive functioning abilities may modify older adults' appraisal of others (von Hippel & Henry, 2011), as well as modify how children's appraise others. As noted earlier, even older adult's selection of positive social situations and increased positive emotions may result from underlying biological changes (Charles & Carstensen, 2010; Carstensen, Pasupathi, Mayr, Nesselroade, 2000). These biological gains and losses may influence self-regulation processes, for which, self-conscious emotions are key (von Hippel & Henry, 2011). This perspective highlights the need to explore the influence of lifespan developmental changes in cognition on self-conscious emotional development.

In both childhood and adulthood, cognitive appraisal processes are important for evaluating both the basic and self-conscious emotions observed during interpersonal interactions. It should be noted, however, that von Hippel and Henry (2011) makes the argument that changes in cognitive appraisal processes over the lifespan may be especially relevant for changes in older adults' ability to appraise the more cognitively complex self-conscious emotions. During social interactions, the self-conscious emotions as reviewed earlier are especially important for regulating the self relative to normative societal standards, rules and goals, and for maintaining social relationships (Tracey, Robins & Tangney, 2007; Tracy & Robins, 2004). Furthermore, it is also possible that age-related changes in biological, cognitive and social processes may be more relevant for how one experiences the negative self-conscious emotions, which are key to self-regulation processes compared to the positive self-conscious emotions (von Hippel & Henry, 2011).

With age-related cognitive changes, older adults may be selectively paying more attention to positive emotions and less attention to negative emotions during social interactions (von Hippel & Henry, 2011). Consistent with this perspective, one study found that older adults reported lower frequencies of the negative self-conscious emotions compared to younger and middle-aged participants (Henry, Waters, von Hippel, & Ruffman, 2009). The above discussion on changes in older adults' cognitions and their selectivity of positive social interactions, illustrates how cognitive and social processes influence emotional experiences. Undoubtedly, in childhood, influences of cognitive and social processes on emotional development should also be expected. Furthermore, knowing more about self-conscious emotional development in childhood may inform our understanding of adult emotional experiences.

Social, cognitive and emotional processes in middle childhood

Based on the above review, the theoretical consensus in the literature is that variation in cognitive and social processes should predict individual differences in emotional responding, regardless of developmental age. Therefore, similar to older adults, as children develop, we can expect that advances in children's cognitive abilities and changes to children's social contexts will interactively predict individual differences in emotional development. The various social processes occurring within the parental socialization context and within the many other social contexts children encounter, could operate as direct and indirect mechanisms to further predict variation in children's emotional appraisal, and children's emotional responding (Barrett, 2000; Camras, Shuster, & Fraumeni, 2014; Lemerise & Harper, 2014; Rutter, 1972). Referring to the older adult example reviewed above, based on SSL, reports of increased frequencies in positive emotional experiences may result from increased opportunities to observe positive emotions within social settings, which likely result from increased opportunities to engage in positive

social situations. The new social contexts that are particular to the middle childhood period may also provide similar opportunities for positive social interactions.

In middle childhood, children are exposed to diverse social contexts because they are spending more time at school, and less time at home (Collins, Madsen, & Stillman, 2001). Thus, children's social networks are expected to expand because of increasing opportunities to interact with teachers and peers. However, it should be noted that the expansion of social networks in middle childhood also means that children are interacting less frequently with their parents (Collins, Madsen, & Stillman, 2001). Therefore, in middle childhood, children need to accommodate for the social influence and perspectives of the new, yet significant others, they are now encountering. These new interactions have implications for children's cognitive and emotional development. The developmental literature acknowledges that along with parents, many other social partners are mechanisms for emotional socialization (Cole & Tan, 2007). Cole and Tan (2007) argued that although parents are mostly considered the direct mechanism of emotional socialization, the parental mechanism is only a "partial" explanation for children's development.

Olsen (2015) argued that the historical context of development also exerts influence on children's emotional development and self-regulation. Similarly, Cole and Tan (2007) as noted earlier emphasized the importance of indirect mechanisms of emotional socialization, such as cultural influences on emotional regulation. In addition, children also internalize how emotions are portrayed by the media (Cole & Tan, 2007). Furthermore, Scheff (2007) emphasized the role of religion as a social system within which "beliefs, rituals, ideas and actions" intersect (p. 427), to influence the emotions of the collective. Finally, McCullough and Carter (2011) discussed religion as a source of behavioural, emotional, cognitive and motivational self-regulation, and as

to be expected, many children attend church with their parents. The broader processes discussed above, are examples of the various levels of influence on children's emotional development (Bronfenbrenner, 1979)

To summarize, along with parents, broader social systems, such as the influence of the particular historical context, culture, and religion, as well as interactions with extended family members, teachers, and peers (Parke & O'Neil, 2000; Saarni, 1999), influence children's emotional development. Parental influence is an important mechanism for emotional socialization, but there are other socialization mechanisms at play, influencing and predicting children's emotional responding.

Despite the theoretical consensus and examples outlined above, there needs to be more empirical evidence on how cognitive and social processes individually, and interactively, impact emotional development (Calkins & Bell, 2010; Lagattuta & Thompson, 2007; Thompson, 2010). In fact, many more empirical studies are needed to clarify the relationship between cognition and emotion in the moment, and the relationship between cognitive, social and emotional processes from a developmental perspective (Lagattuta & Thompson, 2007; Thompson & Winer, 2013). Thompson and Winer (2013) argued that:

> … another characteristic of the longstanding debate about the interaction between cognition and emotion is that it tends to lack a developmental orientation. Research and theory typically focus on how affective and mental processes function in maturity…Fresh attention to the contributions of a developmental analysis may be warranted, however. (p. 293)

Understanding cognitive, social, and emotional processes from a developmental orientation could potentially highlight typical patterns of emotional development across the lifespan.

Increasing our knowledge of normal emotional development may potentially highlight any opportunities for emotion-based psychopathologies to develop. Although emotion-based

pathologies may result from problems occurring at the biological level, emotion-based pathologies may also result from deficits in cognitive ability, and from sub-optimal interpersonal relationships (Monks & Smith, 2000; Nigg, Martel, Nikolas, & Casey, 2010; Rutter, 1972; Werner & Gross, 2010). Therefore, an understanding of cognitive and social processes on emotional responding from a developmental perspective has the potential of informing our knowledge base about both typical and atypical developmental trajectories. Furthermore, understanding the interaction of cognitive and social processes at different time points in emotional development creates new opportunities for intervention.

Interventions at both the cognitive and social levels may help bypass maladaptive developmental trajectories in favour of adaptive trajectories. Earlier intervention may be especially potent in preventing atypical developmental trajectories. Many cognitive and social processes are implicated in the development of emotions and emotional regulation (Thompson & Goodman, 2010), and the present study examined some of these processes. In the present study, IToM, a crucial social-cognitive ability emerging in middle childhood, authoritarian parenting style, and shame in middle childhood, were emphasized. This particular emphasis adds unique empirical information about the development of a cognitively complex self-conscious emotion, shame, from a developmental systems perspective (Thompson & Goodman, 2010; Thelen & Smith, 1998).

A developmental systems perspective argues that emotional development is the result of multiple interactive influences. A developmental systems framework recognizes the interrelations among children's social-cognitive abilities, socialization experiences, and emotional development (Emde, 1998). In summary, a developmental systems perspective is a framework for understanding how an intrinsic child-cognitive factor (IToM) and socialization

(authoritarian parenting) processes interactively influence individual differences in child shame (Campos, Campos, & Barrett, 1989).

The next section discusses the importance of the stated variables of interest: (1) IToM, (2) child shame, and (3) authoritarian parenting. Then, drawing on this conceptual background, the predicted relationships among IToM, authoritarian parenting, and shame will be outlined.

Why study the relationship between IToM and shame?

The influence of a key child-cognitive factor, IToM ability on the development of shame was examined by the present study. The literature argues that the capacity for social understanding, or ToM, is a key determinant in the development of the self-conscious emotions (Cutting & Dunn, 2002; Dunn, 1995; Heerey, Keltner & Capps, 2003; Lagattuta & Thompson, 2007; Thompson & Winer, 2013). Despite this theoretical argument, only three studies considered the relationship between individual differences in ToM capacities and the development of the self-conscious emotions (Cutting & Dunn, 2002; Dunn, 1995; Heerey et al., 2003). Furthermore, researchers have argued for additional empirical evidence on the impact of individual differences in ToM. For example, Olson and Dweck (2008) argued:

> … although there is much good empirical research and theorizing—for example, asking at what age children begin to demonstrate a theory of mind (a controversy still brewing,) see Leslie 2005; Onishi & Baillargeon, 2005; Ruffman & Perner, 2005; Wellman, Cross, & Watson, 2001), or what mechanism might underlie theory of mind (Gallese & Goldman, 1998; Gopnik & Wellman, 1992; Saxe, 2005)—less research has been done on the input or experiences that foster theory of mind or on the impact of individual difference (Olson & Dweck, 2008; p. 199), *in ToM* (emphasis added).

Consistent with the above argument, the present cross-sectional study examined the developmental ramifications of individual differences in children's later developing IToM skills on individual differences in middle childhood shame.

Theory of mind (ToM), or social understanding, refers to the ability to mentally reflect on self and other's beliefs, desires, feelings, intentions, and emotions. As a cognitive ability, ToM is particularly important to the self-conscious emotions. ToM is important to the self-conscious emotions because ToM facilitates our understanding of how others appraise us within interpersonal interactions (Carpendale & Lewis, 2010; Lagattuta & Thompson, 2007). Hence, Lagattuta and Thompson (2007) argued:

> because self-conscious emotions arise from how we evaluate our skills and behaviours in relation to normative standards or to how we imagine other people will appraise us, self-conscious emotions are fundamentally about relationships—about connections between self and other. (p. 91)

Thus, ToM is expected to play a key role in the development of the social and psychological selves.

Developmentally, as mentioned earlier, the emergence of a self-concept is a key determinant for the emergence of shame, guilt and pride (Lewis, 1992, 2014). Unlike the basic emotions that only require the mental representation of the objective self, self-conscious emotions require the development of self-awareness and self-evaluation, before shame, guilt, or pride experiences could emerge (Lewis, 2003). ToM plays a key role in the development of self-conscious emotions, such as shame, through the role it plays in the construction and organization of the psychological self (Lagattuta & Thompson, 2007). To clarify, the mechanism between ToM abilities and the developing self-system, I will now borrow from attachment theorists and discuss Bowlby's idea of the internal working model. The internal working model as described by Bowlby is central to attachment theory (Bretherton, 1992; Bretherton & Munholland, 1999).

According to Bowlby, the internal working model is the child's mental representation of their ongoing relationship with their caregiver (see Bretherton, 1992). The internal working model as a cognitive-affective mental representation develops over time, becoming more

complex as it incorporates and carries children's expectations of their caregiver's responsiveness (Bretherton & Munholland, 1999). Overtime, what starts out as a simple internal working model becomes an "interactive group of mental representations" (Bretherton & Munholland, 1999). This interactive mental representation acts as a filter, playing a key role in the organization of children's expectations of interpersonal interactions and children's self-perceptions (Bretherton & Munholland, 1999). Most importantly, in middle childhood, because of advances in children's cognitive development, in which IToM may play a key role, mental representations are expected to develop into flexible representations of self and other in relationship (Bretherton & Munholland, 1999; Kerns. 2008). These flexible self-other representations may facilitate more accurate self-evaluations and self-perceptions (Harter, 1999), which in turn, may have implications for school age children's emotional development.

Bowlby's internal working model may be a representational structure identical to or related to the mental representation of the self-system required for self-conscious emotional experiences. Whereas, the child's internal working model initially contains internalizations of interactions with a primary caregiver, interactions with teachers and peers are later incorporated. Internal working models are theorized to predict later experiences and behaviours, for example, adult patterns of attachment (George, Kaplan, & Main, 1984, as cited in Bretherton, 1992). To summarize, according to Bowlby, internal working models develop because children develop affective mental representations of their early interactions with their caregiver. In particular, the responsiveness of the caregiver to the child's bids develops into a mental representational structure or the internal working model, informing later self-awareness, attachment patterns, interpersonal interactions in (Bretherton, 1992).

In a similar manner, as proposed (Harter, 1999), the development of the cognitive-affective self-structures required for the experience of self-conscious emotions are influenced by socialization experiences. Standards, rules and goals are internalized within these representational self-structures. In turn, cognitive-affective self-structures generate later patterns of emotional responsiveness, emotional experiences, emotional understanding, and emotional self-regulation. Within the socialization context, the child's ToM, as well as precursors to ToM, such as earlier developing joint attention abilities, for example, social referencing, are mechanisms for updating the internalized content of the self-representational system (Lagattuta & Thompson, 2007).

In this regard, Susan Harter (1999) states the following:

> For Cooley, significant others constituted a social mirror into which the individual gazes in order to detect their opinions toward the self. These opinions, in turn, are incorporated into one's sense of self. Cooley contended therefore, that what becomes the self is what we imagine that others think of us, including our appearance, motives, deeds, character, and so on. (p. 17)

Because ToM abilities are an important mechanism for internalizing into one's sense of self others' perspectives and evaluations about the self, parental socialization processes predicting individual differences in ToM, may in turn, predict individual differences in the quality of the above described cognitive-affective self-structures. As a result, self-conscious emotional experiences, which are dependent on these self-structures are impacted should ToM abilities be enhanced or compromised.

Disturbances in the capacity to mentally represent self and others' cognitions and emotions may create the vulnerabilities required for developing various psychopathologies (Fonagy, Leigh, Kennedy, Mattoon, Steele, Target, et al., 1995). For example, persons with borderline personality disorder demonstrate evidence of an unstable self-system, excessive

shame, and difficulties with emotional self-regulation (Rusch, Lieb, Gottler, Hermann, Schramm, Richter, et al., 2007). Sharp, Pane, Ha, Venta, Patel, Sturek, et al., (2011) argue that a compromised ToM may be implicated in the development of borderline personality disorder. Sharp et al., (2011) examined ToM abilities in a group of adolescents diagnosed with borderline personality disorder (BPD). They found that the BPD group utilized their ToM abilities in a compromised manner. Specifically, BPD adolescents engaged in hyper-ToM strategies when asked to attribute mental states to movie characters, whereas normal participants did not engage in hyper-ToM strategies. Hypermentalizing was characterized as the over-thinking of another's perspectives, and in this study, the over-use of ToM skills was associated with BPD symptoms, for example, emotional dysregulation (Sharp et al., 2011). The Sharp et al., (2011) study illustrates the interconnectivity between cognitive and emotional domains, and psychopathological outcomes. The above research findings linked compromised ToM abilities with emotional dysregulation in BPD adolescents, a disorder, in which, excessive shame is central.

Heerey et al., (2003) examined the relationship between ToM abilities and the ability to recognize facial expressions depicting shame and embarrassment. They compared the performance of 8-to 15-year-old typically developing children to 8-to 15-years-old children diagnosed with autism. Bear in mind that compromised ToM abilities are also implicated in the broad social and emotional difficulties children with autism experience (Baron-Cohen, 1985). Heerey et al., (2003) found that children with autism performed less well on shame and embarrassment recognition tasks compared to the typical group of children. However, when ToM abilities were controlled for, group differences in the ability to correctly identify shame and embarrassment disappeared. Thus, ToM deficits explained the difficulty that children with

autism encountered when they were asked to identifying expressions of shame and embarrassment. On the other hand, typically developing children, demonstrating normal ToM abilities were much better at the shame and embarrassment recognition task.

To summarize, so far, the existing empirical evidence has established links between ToM skills and the self-conscious emotions in a variety of populations. I will now review the development of ToM and IToM in childhood.

The development of ToM/IToM in childhood

Most 4–5-year-old typically developing children have achieved an important social-cognitive milestone by this age. As reviewed earlier, the development of ToM capacities in early childhood facilitates children's understanding of self-other psychological perspectives, such as correctly predicting others' desires, beliefs, thoughts, emotions, and behaviours (Carpendale & Lewis, 2006; Flavell, 1999). In addition, ToM also facilitates children's understanding of how others are evaluating them (Lagattuta & Thompson, 2007). Furthermore, theoretical perspectives on the development of self-conscious emotions argue that ToM is a cognitive prerequisite for the experience of self-conscious emotions (Lagattuta & Thompson, 2007). Unfortunately, research to date, has not sufficiently probed the specific role that ToM plays in the development of shame, guilt, and pride (Lagattuta & Thompson, 2007). Only three studies (Cutting & Dunn, 2002; Dunn 1995; Heerey et al., 2003), examined the relationship between ToM and the self-conscious emotions in childhood. I will now differentiate between IToM and ToM, however, the specific studies linking ToM to child shame mentioned above, will be reviewed in chapter 2.

With the development of ToM abilities, children have demonstrably shifted from a Piagetian, egocentric point-of-view of others' minds (Carpendale & Lewis, 2006). Children now understand that others may hold different and incorrect perspectives, and that these different and

incorrect beliefs will predict how others act (Wimmer & Perner, 1983). The litmus test to demonstrate the development of ToM in early childhood is the ability to pass the false belief test (Wimmer & Perner, 1983). Passing the false belief test requires children to correctly predict that a puppet protagonist will search for an object based on the puppet's current, but false beliefs about an object's location, as opposed to searching where the object is actually located in the world (Wimmer & Perner, 1983). To summarize, with an understanding of false beliefs, children now correctly represent others' unique mental states about the world and utilize this knowledge to predict others' behaviours.

The social-cognitive developmental story, however, does not conclude with the development of false belief understanding in early childhood. Around 6 to 7 years of age, children develop an understanding of the interpretive nature of the mind (IToM) (Chandler & Lalonde, 1996; Lalonde & Chandler, 2002). As reviewed earlier, with this new social-cognitive acquisition, children are described as having acquired a more adult-like understanding of others' mental states (Chandler & Lalonde, 1996; Lalonde & Chandler, 2002). Children now understand that people's points of view after viewing an identical object or event could actually be unique, because of each individual's unique interpretation of the object or event. Children also understand that these different interpretations or constructions of the world, in turn, will influence how people will act (Chandler & Lalonde, 1996; Lalonde & Chandler, 2002). To summarize, with IToM, children understand that no two people will think about the world in the same manner or act the same in the world, because people possess unique interpretations of reality.

The approach to assessing the development of IToM abilities was first outlined by Chandler and Lalonde (1996). Children were asked to describe how two individuals would

interpret each of a set of ambiguous drawings. Children with an understanding of interpretation attribute unique interpretations of each ambiguous drawing to two dolls. Children with false belief understanding (ToM), but without an understanding of interpretation, tend to believe in a one-to-one relationship between the world and others' mental states. Consequently, Chandler and Lalonde found that younger children would consistently attribute an identical interpretation of an ambiguous drawing to both doll characters. Younger children have no problem coming up with an interpretation for the first doll but find it difficult to provide a second and unique interpretation for the second doll (Lalonde & Chandler, 2002). In other words, by ages 6-7 years, with their new insight about the constructed nature of the mind, children understand that knowledge or mental states are "person-relative" (Lalonde & Chandler, 2002).

To summarize, earlier developing ToM abilities allow for the awareness of others' beliefs, desires and emotions, and children's awareness of how others evaluate them. However, children with only a developed ToM believe in a one-to-one relationship between the world and others mental states. On the other hand, by middle childhood, with newly acquired IToM skills, children understand that points-of-views are constructed, which means that children now expect diversity in other's mental perspectives about an identical event.

I will discuss other cognitive abilities that are thought to be related to, and which are thought to be supportive of IToM skills. Then, I argue that a shift to an IToM in middle childhood has implications for shame experiences.

IToM and executive function

Cognitively, IToM involves the capacity to mentally represent, yet inhibit, various perspectives, while simulating additional perspectives about an event (Lagattuta, Sayfan & Blattman, 2010; Lagattuta, Sayfan, & Harvey, 2013). Thus, this research evidence supports the

position that by middle childhood, children are now able to hold online one or more perspectives, while considering real or imagined social evaluations about the self. Therefore, the possibility exists that advanced IToM skills may inhibit a dominant shame response when children encounter negative, global evaluations about themselves within social interactions. IToM skills have been known to correlate with measures of executive functioning, such as inhibitory control and verbal working memory (Lagattuta, et al., 2010; Lagattuta, et al., 2013). Executive function abilities may interact with IToM skills to facilitate information manipulation, selective attention, and the ability to inhibition certain social messages. The findings by Lagattuta and colleagues indicate that a relationship between executive function and IToM skills is likely. Thus, IToM skills may be reflective of underlying executive abilities or IToM abilities may work together with executive functioning skills to facilitate social understanding.

Executive functioning skills are generally defined as a set of *"higher order cognitive functions,"* which include inhibition, working memory, interference control, and cognitive flexibility (Diamond, 2013). Executive functioning is "essential for mental and physical health; success in school and in life; and cognitive, social, and psychological development" (Diamond, 2013, p. 136). However, optimal executive functioning can be compromised in certain situations. For example, stress is known to impair executive functioning skills, and impairment in executive functioning skills, in turn, are related to emotional regulation difficulties (Diamond, 2013; Zelazo & Cunningham, 2007). There is a growing body of developmental evidence linking IToM to executive functioning skills (Carlson, Moses, & Breton, 2002; Lagattuta et al., 2010; Lagattuta et al., 2013; Sabbagh, Xu, Carlson, Moses, & Lee, 2006). According to these researchers, IToM success and optimal executive functioning skills are more or less intrinsically associated. The particulars of the social understanding and executive functioning association are currently being

debated. The debate circles around three issues: social understanding is a precursor to the development of executive functions; executive functions are a prerequisite for social understanding; and the third perspective proposes an intrinsic relationship between social understanding and executive functioning (reviewed in Carpendale & Lewis, 2006; Schneider, Schumann-Hengsteler, & Sodian, 2005; Sokul et al., 2010). The above cited authors argue that the ability to hold information online in working memory in order to consider others' perspectives indicates that executive capacities are inherently intertwined with IToM skills. For the purposes of this study, based on the above literature review, IToM skills support children's ability to consider the multiple interpretations others' construct. It is possible that the ability to consider multiple perspectives may weaken children's tendency to automatically internalize negative, social evaluations about the self. A reduction in the tendency to automatically internalize negative, social evaluations about the self may reduce the vulnerability to develop shame proneness. It is possible that IToM skills may be a protective factor against the development of dispositional shame.

To summarize, IToM may be protective against shame because IToM supports children's ability to consider multiple perspectives, for example, both positive and negative perspectives about the self as opposed to only negative, shaming perspectives. For the remainder of chapter 1, I will briefly review the literature on shame.

Self-conscious emotions

Emotions are ubiquitous, observed at birth, but continue to develop and elaborate throughout the lifespan. Emotion researchers make the distinction between the basic and self-conscious emotions. Research on the development of emotions has focused predominantly on the basic emotions (disgust, fear, joy, anger, etc.), which are observed shortly after birth (Tracey,

Robins & Tangney, 2007; Tangney & Fischer, 1995). Recently however, researchers are recognizing the importance of understanding the development of the more cognitively complex self-conscious emotions (e.g. shame, guilt, pride), which emerge by the third year of life (Heerey, et al., 2003; Tangney & Fischer, 1995; Tracey et al., 2007). In the present study, using a social-cognitive perspective, I investigated the development of individual differences in middle childhood shame.

Shame

Shame experiences are elicited by a negative, global, and stable self-attribution of responsibility, that is, a self-attribution to the effect of *"I am no good"* (Lewis, 1992; Tangney & Fischer, 1995; p. 210; Tangney & Dearing, 2002). The self-focus of shame attributions results when one experiences painful states of unworthiness (Lewis, 1992). Thus, shame is characterized by intensely painful feelings of defeat and negativity towards the self (Lewis, 1992; Tangney & Fischer, 1995; Tangney & Dearing, 2002). Theories of shame (Barrett, 1995; Campos, Frankel & Camras, 2004; Dickerson, Gruenewald, & Kemeny, 2004; Schore, 1996) argue that shame serves an adaptive purpose in development because feelings of shame signal the presence of a social threat. Feelings of shame are thereby expected to motivate self-corrective action. For example, in social self-preservation theory (Dickerson et al., 2004; Gruenwald, Dickerson, & Kemeny, 2007)), shame is thought to signal the presence of a threat to social acceptance. Thus, feelings of shame may motivate self-regulation and self-correction to maintain social acceptance.

While shame serves an important adaptive function, it can become maladaptive if it becomes the dominant response to negative events. That is, when the individual becomes prone to shame. Shame proneness is linked to psychological symptoms, such as depression, hostility, impaired recovery from abuse, and physical and mental health problems in childhood and

adulthood (Feiring, Taska, & Lewis, 2002; Feiring Taska, & Chen, 2002; Orth, Berking, & Burkhardt, 2006; Ferguson, Stegge, Miller, & Olsen, 1999; Stuewig & McCloskey; 2005; Tangney, Burggraf, & Wagner, 1995). For example, links were found among shame, increased anger, and later behavioural problems in maltreated children (Bennett, Sullivan, & Lewis, 2005).

Research also suggests a link between shame and physical health. Shame is associated with increased cortisol levels, suggesting that shame is a psychological stressor (Dickerson, Gruenewald et al., 2004; Lewis & Ramsay, 2002; Mills, Imm, Walling, & Weiler, 2008). Patients with HIV had poorer overall prognosis if they were ashamed of their HIV positive diagnosis (Gruenewald, et al., 2007). Finally, higher levels of proinflammatory cytokines, reflecting immune system activity were present in those experiencing higher levels of shame (Dickerson et al., 2004). In light of this body of research suggesting that proneness to shame may be a health risk, a better understanding of factors contributing to the development of individual differences in shame was warranted.

As described earlier in the general introduction, this study adopted a social-cognitive and a developmental approach to understanding individual differences in shame in middle childhood. Incorporating these two approaches has the potential to expand our knowledge about the early development of shame, as well as inform our knowledge base about the impact of individual differences in IToM. More importantly, a social-cognitive approach to understanding the development of shame specifically addresses the interactive influence of the child's social world with a child-cognitive factor. IToM was the child-specific cognitive factor examined by this study, and the variable gauging the influence of socialization on individual differences in shame was authoritarian parenting style.

To summarize, this study had two main goals. Firstly, to provide insight into how differences in children's capacity to represent and interpret others' points-of-views (IToM), predict individual differences in children's shame. Currently, research has not delved into the role of IToM on the development of the self-conscious emotions (Lagattuta & Thompson, 2007). As mentioned, only three studies (Cutting & Dunn, 2002; Dunn, 1995; Heerey et al., 2003) examined the relationship between earlier developing ToM and shame. I investigated the development of shame, because compared to guilt and pride, maladaptive shame is associated with a greater number of negative health consequences. A deeper understanding of the role of IToM in the development of shame in childhood may promote the development of adaptive levels of shame.

The second contribution of the present study involved examining the combined influence of authoritarian parenting and IToM on individual differences in shame. From a social-cognitive perspective, authoritarian parenting represents a particular quality of socialization processes (Olson & Dweck, 2008), which are predictive of shame in middle childhood (Mills et al., 2010). As a reminder, socialization is the process through which children accept the "values, standards, and customs of society as well as the ability to function in an adaptive way in the larger social context" (Grusec & Davidov, 2007, p. 284). Furthermore, as reviewed earlier, socialization of values, standards, rules and goals is an ongoing process throughout life involving many players, with parents playing an important role especially during the formative years (Grusec & Davidov, 2007). Other important socializers of children include the extended family, teachers, and peers (Cole & Tan, 2007). Teachers and peers are expected to play an important role within the new contexts of development that are associated with the middle childhood period.

Links between authoritarian parenting style and middle-childhood shame were established by previous research (Mills, 2003; Mills et al., 2010). Mills et al., (2010) also reported that preschool age shame predicted shame in middle childhood, but this association was dependent on child gender and parenting style. However, to date, no studies have examined the moderating influence of the child's IToM skills on the established positive relationship between authoritarian parenting and shame. Child-specific cognitive skills should be examined because children's cognitions may indeed moderate the positive relationship between an authoritarian style of parental socialization and shame. Finally, other explanatory variables of child shame, such as maternal religiosity, child age, child gender, and social class were examined. Details pertaining to all variables will be outlined in the upcoming literature review and methodology chapters.

CHAPTER 2 – LITERATURE REVIEW

Factors Contributing to Shame in Childhood

ToM and shame

Theories of emotional development distinguish between the basic and the self-conscious emotions. Basic emotions appear shortly after birth and are observed to have universal, facial expressions cross-culturally (Ekman, 1994; Izard, 1991; Lewis, 1992; 2014). On the other hand, self-conscious emotions develop later in life and their expressions are determined by the socio-cultural significance of the specific emotion (Edelstein & Shaver, 2007; Furukawa, Tangney, & Higashibara, 2012; Kitayama, Markus & Matsumoto, 1995). The intensity and frequency of self-conscious emotional expressions are both culturally and linguistically dependent (Edelstein & Shaver, 2007; Furukawa et al., 2012; Kitayama, et al., 1995; Matsumoto, 1995). For example, Kitayama et al., (1995) and Wallbott and Scherer, (1995) reported that self-conscious emotional experiences were dependent on whether the self was constructed as interdependent, for example, as in the Japanese culture, or independent, for example, as in the American culture. Kitayama et al., (1995) further argues that shame elicitation is associated with differences in cultural goals. Furukawa, et al., (2012) measured and compared Japanese, Korean, and American children's mean scores on shame, guilt and pride, and found unique cross-cultural differences. Thus, based on the extant literature, it appears that self-conscious emotional expression more so than basic emotional expression depend on the specific sociocultural context. To summarize, while self-conscious emotions depend on both biological and cognitive antecedents, there is an inherent plasticity to the self-conscious emotions, whereby situational factors are able to exert an influence on how self-conscious emotions are expressed (Lewis, 2014).

Furthermore, in addition to external influences, such as socio-cultural processes on how self-conscious emotional experiences unfold in development, emotional theorists suggest that individual differences in the experience of self-conscious emotions derive from factors internal to the child (Lagattuta & Thompson, 2007; Lewis, 2014). While self-conscious emotional experiences are based on social relationships, such as how others view the child, self-conscious emotions are also elicited by the evaluation and judgment of the child, by the child, (Lewis, 1992; 2014). Given the nature of the cognitive appraisal in shame, *"I am no good,"* (a global, stable self-attribution), children's understanding of how others view them (ToM), is likely to be an important internal cognitive factor contributing to individual differences in children's shame. Such understanding is an important aspect of the study of children's "theory of mind," or children's emerging awareness of their own mental states and other people's psychological points of views, which typically emerges between ages 3 and 5 years (Lagattuta & Thompson, 2007; Lewis, 2014).

As discussed earlier, the prerequisites for shame include a ToM, and the presence of a ToM makes shame possible. Optimal ToM skills facilitates children's ability to infer others mental states and other's subjective emotional experiences, and to accurately predict how others are judging them (Lagattuta & Thompson, 2007, Lewis, 2014). Therefore, precocious development or skilled use of this cognitive capacity may lead to a greater sensitivity to shame. On the other hand, as proposed in the present study, the development of IToM skills in middle childhood could lead to some level of resilience against the development of excessive shame. With IToM, not only does one have a greater capacity to infer various perspectives about the self in others, but one can be selective about which perspective about the self as portrayed by others,' one would like to adopt. Thus, IToM may profoundly transform how the self is constructed and

represented, social interactions, self-evaluations, and self-conscious emotional experiences (Lewis, 2014).

Three studies have examined the implications of children's understanding of other's minds, or social understanding (ToM) on their emotional development. However, these studies only indirectly hint at the relationship between ToM and shame, and provide no direct empirical evidence of the relationship between shame and IToM. The first study, conducted by Dunn (1995), examined the relationship between children's ability to pass false belief tasks, which measured ToM skills, and children's sensitivity to criticism. Findings revealed that children with higher ToM scores demonstrated more sensitivity towards a teacher puppet's criticisms of their drawings. That is, after receiving criticism from the teacher puppet about their drawings, children adjusted their own judgments of their drawings by subsequently criticizing their drawings more harshly. Those children passing fewer false belief tests continued to judge their drawings favourably despite receiving harsh criticisms from the teacher puppet. Thus, children with better performance on false belief tests and demonstrating greater ability to take others' perspectives, were more likely to incorporate the teacher puppet's evaluations into their own judgments of their drawings. Thus, in Dunn's study, ToM abilities predicted children's ability to detect others' opinions about themselves, as well as children's ability to incorporate others' opinions into their own self-judgments.

Another finding in this study (Dunn, 1995) was that children's success on false belief tasks also predicted children's ability to recognize that opposite-valence emotions, such as happy and sad could be simultaneously experienced. It should first be noted that Dunn (1995) did not measure each child's emotional response to the teacher puppet's criticisms. Secondly, as Dunn

pointed out, overall, these results should be interpreted carefully because they are based on a small sample of children ($N = 46$), and should be replicated.

In a follow-up, large sample ($N = 141$) longitudinal study, Cutting and Dunn, (2002) examined whether individual differences in ToM ability and emotional-perspective taking skill in preschool were predictive of sensitivity to a teacher puppet's criticism one year later. They found that children with an advanced understanding of others' minds and an advanced understanding of others' emotions were more sensitive to the puppet teacher's criticism compared to children scoring lower on the perspective-taking tasks. These replicated findings indicate an indirect link between ToM ability and shame. However, it is important to note that it was children's preschool ToM ability that predicted children's later sensitivity to criticism, as opposed to concurrent ToM ability. This finding led the authors to conclude that the development of ToM may follow unique developmental trajectories as opposed to a single trajectory. This is an indication that at different points on the developmental timeline, ToM abilities may have unique predictive relationships to the self-conscious emotions. With the findings from Cutting and Dunn's study in mind, in the current study, I examined how individual differences in IToM skills influence individual differences in middle childhood shame.

The third, and final study was conducted by Heerey et al., (2003), and it examined whether ToM ability predicted self-conscious emotion recognition. Heerey and colleagues compared the performance of a group of high-functioning children with autism on a self-conscious emotion recognition task to a group of typically developing children's performance. Deficiencies in ToM skills are implicated in the social difficulties demonstrated by persons with autism (Baron-Cohen, 1995); whereas, intact ToM capacities are implicated in the ability to recognize, experience, and understand self-conscious emotions (Lagattuta & Thompson, 2007;

Lewis, 2014). The authors predicted that because of an impaired ToM, children with autism would perform poorly on the self-conscious emotion recognition task. As predicted, compared to typically developing children, children with autism scored lower. It should be noted that this study examined children's ability to "recognize" the emotional expressive features of shame and embarrassment. While I acknowledge that Heerey and colleagues study certainly implicated ToM skills in the recognition of the self-conscious emotions, they did not examine the implications of children's IToM ability on the development of children's "shame proneness," the focus of the present project. The present study examined the role of children's IToM on individual differences in children's shame.

To summarize, my first objective in this study was to directly examine the relationship between children's IToM skills and their tendency to express shame in a cross-sectional study. My second objective is to examine how parenting style, reflecting parents' attitudes and practices with regards to child rearing interact with IToM skills to predict child shame. I will now turn to a discussion about the role of parents in the development of shame.

Parental socialization and shame

The quality of the parent-child relationship, reflective of socialization processes has implications for the child's emotional development. Parents not only provide the context for children's development, they influence children's emotional and behavioural development, and children's outcomes in a variety of areas (Collins, Maccoby, Steinberg, Hetherington & Bornstein, 2000). For example, attachment security between a parent and child compared to other categories of attachment was associated with more positive psychological, social and problem-solving skills (Thompson, 2008; 2010). Parents are also in an important position of power to provide rewards, incentives and punishment to achieve their socialization goals (Laible

& Thompson, 2008). Therefore, the parent-child relational quality may be more or less motivational for children's understanding of values, and their conscience development (Thompson & Meyer, 2006).

Parenting style, parenting practices, and parental appraisal of the child may promote experiences influencing children's emotional development. Crossfield, Alloy, Gibb, and Abramson (2002) found that negative parental feedback about negative events in the child's life predicted later risk for childhood depression. From a social-cognitive perspective, the authors argued that parents could either communicate to their children using positive feedback described by the authors as "unstable, specific attributions and positive consequence feedback" (p. 490) or by using negative feedback. Crossfield et al., (2002) characterized parental negative feedback as "stable, global attributions and negative consequences for their child," when negative events occur (p. 490). Children's internalization of negative feedback about the self was predictive of children's mental health (Crossfield et al., 2002). Mills et al., (2015) also linked negative self-beliefs and shame to anxious and depressive symptoms. Together, these studies imply that the ongoing presence of negative parental feedback to the child when negative life events occur, result in increased opportunities for children to internalize negative cognitions and experience negative emotions. Ongoing negative parental feedback, negative evaluations, and negative experiences become mental representations that children "carry forward" (Dweck & London, 2004; p. 428), which increase their risk for anxiety and depression (Crossfield et al., 2002; Lewis, 1992).

Parents are in the position to influence their child's personality development. Logically, if children encounter more shaming experiences within the parent-child interaction, these experiences may foster the development of a shame prone cognitive-affective style of

responding. Thus, shame becomes the primary emotional experience for the child as opposed to the child being able to respond with a broad range of affect. There are individual differences in children's socialization experiences based on parents' personalities and parents' beliefs about child rearing. Thus, the development of individual differences in shame proneness may itself originate from individual differences in children's socialization experiences.

Theories of self-conscious emotions suggest that shame experiences are activated by a global, stable, and negative attribution about the self in its entirety (Lewis, 1992; Tangney, 1995; Weiner, 1986). Global, stable, and negative attributions highlighting the self as falling short or as flawed may be activated in children's everyday interactions with their parent (Crossfield et al., 2002). Individual differences in child shame may originate from individual differences in parental socialization of standards, rules and goals, individual differences in parental response to children's failure to meet standards, and individual differences in global, stable, negative attributions, which become internalized within the child's developing self-concept (Lewis, 1992). In addition, harsh and negative parenting, involving punishment, blaming, expressions of disgust, contempt, humiliation, and love withdrawal may activate negative attributions about the child's global self (Lewis, 1992). Based on theories, and studies reviewed earlier (Dunn, 1995; Cutting & Dunn, 2002; Heerey et al., 2013; Lagattuta & Thompson, 2007; Lewis, 2014), individual differences in children's ToM abilities may make children sensitive to others' criticisms and evaluations in early childhood. An important outcome of parental socialization is emotional regulation, however, less than optimal parenting strategies predict sub-optimal emotional regulation (Grusec, 2002). However, as proposed by the present study, the development of IToM skills in middle childhood may be one cognitive process that prevents children from automatically internalizing negative self-attributions. Thus, advanced IToM skills

may restrict the development of a potent, shame-prone cognitive-affective style over time. I will now discuss a portion of the literature on parenting style to further clarify the parent-shame mechanism.

Baumrind (1967, 1978 & 1980) and Maccoby and Martin (1983) identified four parenting styles based on their observations of parental discipline style, parental emotional warmth, parental communication style, and parental expectations of their children. They distinguished among the authoritarian, authoritative, permissive and uninvolved styles of parenting. The above parenting styles were determined by combining two parent qualities: (1) parental demandingness, which refers to the rules parents expect their children to follow, and the level of control parents exerted over the child; and (2) parental responsiveness, which refers to the amount of emotional warmth parents expressed towards their child, and the level of consideration parents gave to the child's emotional state and perspective (Baumrind, 1967, 1978; 1980; Maccoby & Martin, 1983).

Later researchers (Barber, 1996; Steinberg, 1990) separated the control aspect of parenting into two categories of control: behavioural control and psychological control. Behavioural control refers to the behavioural rules that parents outline for their children, how parents go about enforcing behavioural rules, and how closely parents supervise their children (Barber & Harmon, 2002). Barber and Harmon (2002) also defined behavioural control as a continuum ranging from reasonable behavioural control to behavioural over-control on the part of the parent. Psychological control at the high end refers to parental strategies used to emotionally manipulate the child, with an overall disregard for the child's current emotional state, the resulting consequences on the child's overall emotional wellbeing, and the child's global self-perceptions (Barber & Harmon, 2002). Parental over-control of the child's psychological self "aligns itself with the conceptual descriptions and measurement" of

authoritarian parenting style, in the work done by Baumrind (p. 17, Barber & Harmon, 2002). Thus, the psychological control component of an authoritarian parenting style may be one mechanism causing children sufficient distress, to the point, whereby children may develop an enduring, negative self-focus, and a tendency to generate negative, global, and stable self-attributions (*I am no good*). Thus, children may experience heightened shame if the parent attempts to emotionally manipulate and control the child, if parents are hostile in nature, if parents reject the child, and if control is not expressed out of genuine concern for the child's wellbeing (Mills, 2003; Mills, et al., 2010; Grusec & Davidov, 2008).

Thus, specific parenting patterns and cognitions consistent with an authoritarian parenting style may facilitate mechanisms predisposing children to shame proneness. Because parenting patterns are generally considered stable, at least until the adolescent years (Kaplan, 2004), middle childhood is an appropriate time to understand the parenting-shame mechanism. Bornstein's (2006) review concluded that as much as "20 to 50%" of the variance in child outcomes were accounted for by parenting (p. 911). Thus, parent-child socialization experiences may result in enduring shame based emotional schemas, which over time, predispose the child to shame proneness (Izard, 2009).

At this point, it is important to recall that "even when parenting effects are apparent, it is not reasonable to expect that a given style or quality of parenting would have the same effect on every child" (p. 221, Collins, Maccoby, Steinberg, Hetherington, Bornstein, 2000). Child factors also influence parent's beliefs and thinking about childrearing (Rubin, Hemphill, Chen, Hastings, Sanson, Lococo, et al., 2006). Furthermore, as reviewed above, cultures and different contexts of development also interact with the diversity of child and parent factors, resulting in diverse developmental trajectories (Cicchetti, 2006). While there are a range of socialization processes at

work, nevertheless, a better understanding of the range of developmental pathways leading to typical and atypical development is required.

In the light of the above discussion on potential parent-child mechanisms influencing the development of child shame, I will now review studies linking harsh parenting patterns reminiscent of an authoritarian parenting style and shame in young children (Alessandri & Lewis, 1993; 1996; Belsky, Domitrovich, Crnic, 1997; Ferguson & Stegge, 1995; Kelley, Brownell & Campbell, 2000; Mills, 2003; Mills et al., 2010). Other studies have examined the development of shame in older children and adolescents (Bennett, Sullivan & Lewis, 2005; Stuewig & McCloskey, 2005). However, only two studies linked explicit measurements of authoritarian parenting style to shame in childhood (Mills, 2003; Mills et al., 2010). Mills (2003) found that *both* mother and father authoritarian parenting predicted higher levels of shame in girls. Authoritarian parents, as reviewed earlier, are defined as parents who are demanding, harsh, critical, punitive, unsupportive, and directive (Baumrind (1967; 1978; 1980). Authoritarian parenting style is therefore characterized by the expectation of unquestioned obedience and conformity, and as defined above, are unresponsive and rejecting towards their children (Mills, 2003). Mills (2003) argued that harsh, punitive parenting may elicit global, negative self-attribution from children, leading to children experiencing feelings of shame. Mills (2003) findings are consistent with studies cited earlier, linking harsher approaches to parenting in general, to child shame.

In a follow-up longitudinal study, Mills et al., (2010), found that the interaction between child temperamental inhibition, child shame, and mother and father authoritarian parenting style at preschool age, predicted child shame in middle childhood. This study also found that overall, girls showed more shame than boys. The Mills et al., (2010) study also provides evidence that

parental socialization factors interacted with child gender to predict differential shame outcomes for boys and girls. Dweck (2008) argued that a person's beliefs about him or herself may play a central role in their personality development. From the above studies (Mills, 2003; Mills et al., 2010), we see evidence of parental attributes, such as verbal hostility, physical punishment and punitive style, together reflective of parental shaming, predicting child shame. Negative parenting attitudes may lead to certain negative self-beliefs (Dweck, 2008), or negative self-attributions, which once internalized by the child, develops into enduring shame-based self-schemas (Izard, 2009).

Heyman, Dweck, & Cain's (1992) study provides additional evidence of mechanisms through which negative parental attitudes may influence shame. Heyman and colleagues found that after kindergartners were criticized, they were more likely to subscribe to negative, stable, and global beliefs about themselves. These negative self-beliefs did not reflect children's general tendency towards negative self-attributions. Instead, children subsequently incorporated others' negative judgments into their later self-judgments and self-beliefs. "Beliefs matter, beliefs can be changed, and when they are, so too is personality" (p. 394, Dweck, 2008).

As mentioned above, studies conducted prior to the Mills (2003) and the Mills et al., (2010) study, linked harsher parenting in general to shame. These earlier studies did not specifically measure authoritarian parenting style. For example, Ferguson and Stegge (1995) found that parental attitudes reliably predicted individual differences in whether children aged 5 to 12 years responded with shame versus guilt. In this study, parents were asked to imagine their child had failed in performance situations or failed in moral situations. Then, parents were asked to rate a series of attributions about their child's failure. Child shame was predicted by parents' negative disciplinary attitudes as measured by the authors, and included absence of induction,

love withdrawal, power assertion, anger towards the child, and absence of rewards in imaginary situations of child failure (Ferguson & Stegge, 1995). Even though they did not measure authoritarian parenting per se, Ferguson and Stegge (1995) found that an overall negative style of parenting consistent with the attributes of an authoritarian parenting style predicted shame.

Alessandri and Lewis (1993) examined the role of different parental evaluations of their children and child shame. For example, researchers assessed global evaluations about the child, (*You* are smart) versus specific evaluations about their child's specific actions (You did *it* right), as predictors of child shame. Findings revealed that less shame was expressed when parents frequently evaluated their child positively. On the other hand, more negative parental evaluations were significantly and positively correlated with child shame. However, this study did not find a significant association between parents' use of "global" negative evaluations about their child and shame.

In a follow-up study, Alessandri and Lewis (1996) found additional evidence of the relationship between parental socialization practices and shame. They examined the relationship between 4- to 5-year-old maltreated and non-maltreated children's expressions of pride versus shame during task failure. This study had several interesting findings. Firstly, maltreating mothers offered more negative feedback than non-maltreating mothers. Secondly, maltreated children showed more instances of shame when they failed, and fewer instances of expressed pride in success situations. Finally, this study provided evidence of children's own evaluation of themselves as a function of task difficulty. Alessandri and Lewis (1996) found that children expressed shame more often when they failed an easy task compared to when they failed a difficult task. According to the authors, this meant that "children of this age evaluate task difficulty, and this evaluation involved both the nature of the task itself, and one's success or

failure at it" (p. 866). Finally, sex differences were also evident in the expression of shame as a function of task difficulty. Girls showed more shame than boys, especially when they failed an easy task. Overall, Alessandri and Lewis (1996) linked child shame to harsh parental behaviours, child perceptions of task difficulty, and child gender.

In a longitudinal study, however, Belsky, Domitrovich, and Crnic (1997) found results contradicting the positive relationship between harsh parenting and child shame just reviewed. They examined relations between parents' general attitudes (sensitivity, engagement, affective tone), as opposed to measuring authoritarian parenting specifically, when children were between 1 and 2 years old. These measures of earlier parental attitudes were correlated with children's expression of pride and shame, 24 months later. The unusual findings of this study are that less positive parenting predicted greater expressions of pride. The more surprising finding was that more positive parenting predicted greater shame. Belsky et al., (1977) suggested that they did not assess parenting attributes in the same manner as other studies, thus they may have missed tapping into negative parental attitudes. Furthermore, the young age of the sample may be a possible explanation for these unusual findings.

Finally, Kelley, Brownell, and Campbell (2000) examined mothers' behaviours towards their 24-month-old children during a challenging teaching situation. Consistent with most studies linking negative parenting practices to shame, maternal negative evaluative feedback predicted child shame one year later, when children were 36 months old. Furthermore, negative parental feedback was related to children's task avoidance, whereas positive parental feedback was related to task persistence and mastery. Finally, and somewhat surprising, maternal controlling behaviours in itself, which were defined as intrusive attempts (grabbing, pushing) to structure children's task behaviours did not predict shame. Altogether, studies reviewed above have

primarily linked shame to general, negative parental attitudes, and specifically to authoritarian parenting, with mixed findings in a few studies.

To recap, the present study examined the relationship between IToM, authoritarian parenting and shame. According to theory (Bennett & Matthews, 2000; Lagattuta & Thompson, 2007; Lewis, 2014; Tangney & Fisher, 1995), ToM skills are a prerequisite for shame. Furthermore, consistent with a social-cognitive perspective, shame is predicted from children's socialization experiences, particularly, a relatively authoritarian parenting style (Mills 2003; Mills et al., 2010). However, parenting style is also predictive of children's ToM development. I will now review the empirical evidence linking parenting style to children's ToM development. Then, I will review the literature on parental religiosity and child shame. Finally, I will review the goals of the present study, before outlining the specific hypotheses that were tested in the present study.

Parental socialization and ToM

Researchers have linked aspects of mother's parenting, including mother's talk about emotions, maternal sensitivity, and mother's mental state talk to children's later social understanding (ToM abilities), (Dunn, Brown, Slomkowski, Tesla, & Youngblade 1991; Hughes, Deater-Deckard, & Cutting, 1999; Meins, Fernyhough, Wainwright, Das Gupta, Fradley, & Tuckey, 2002; Meins, Fernyhough, Wainwright, Clark-Carter, Das Gupta, Fradley, & Tuckey, 2003; Pear & Moses, 2003; Racine, Carpendale, & Turnbull, 2006; Ruffman, Perner & Parkin, 1999; Ruffman, Slade, Devitt, & Crowe, 2006; Vinden, 1997 (as cited in Ruffman, Perner, & Parkin, 1999)). However, these studies have reported mixed findings about the relationship between parental attributes and ToM development. I will now briefly review the studies that specifically assessed the relationship between style of parenting and ToM development.

Ruffman et al., (1999) asked parents to describe their approach to dealing with their child in five unique disciplinary situations. They found that parents who asked their child to empathize with or to think about the wronged person's feelings had children who were more advanced in false belief understanding. They also found that parenting strategies that are similar to authoritarian parenting strategies, such as reprimanding the child without asking the child to adopt the other person's mental states were negatively related to false belief understanding. However, the latter findings described above, did not hold up once Ruffman and colleagues controlled for children's age and children's verbal ability.

Later, Hughes, Deater-Deckard, and Cutting (1999) found a parent by gender interaction that was predictive of ToM abilities in their study. They examined the role of warm parenting, and an overall positive or negative parenting style on false belief understanding. Parental warmth predicted false belief understanding for girls. On the other hand, for boys, a harsher parenting style, inclusive of physical punishment was positively correlated with false belief understanding. These were surprising, and contradictory findings compared to the Ruffman et al. (1999) study reviewed above. At this point, researchers were in a position whereby they still needed to tease out the relationship between parenting and ToM. And, future studies did attempt to examine this relationship by using alternative measures of parenting style.

Pear and Moses (2003) examined the predictive influence of specific parental discipline strategies such as parental power assertiveness, how parents gave general instructions to their child, parent's tendency to explain other's feelings to their child, and parent's tendency to explain consequences to their child (e.g. time-out), on ToM abilities. They found that power assertion and ToM abilities were negatively correlated. Children whose parents used techniques such as yelling, and spanking, had children with far less advanced false belief understanding.

However, this type of harsh parenting style was positively associated with children's emotion understanding abilities. Pears and Moses further tested whether parents' tendency to use more positive parenting strategies with older children predicted advanced false-belief understanding; however, this relationship was not significant. Power assertion was negatively associated with false belief understanding even after controlling for children's age. They concluded that parenting strategies may indeed facilitate social understanding and are not necessarily dependent on the child's level of maturity. Despite the controversial findings so far, these studies together indicate that parents do play a key role in the development of ToM abilities.

Ruffman, Slade, Devitt, and Crowe (2006) extended this approach by attempting to link mother's mental state talk and parenting style to children's ToM. Surprisingly, they found that mental state talk was predictive of unique variance in the child's ToM ability, whereas only one aspect of parenting, a warm parenting style, predicted later ToM development, as well as predicted advanced ToM skills. These findings are inconsistent with the studies reviewed above and have implications for present models of social-cognitive development. One explanation for this study's inconsistent findings may be the restricted sample size recruited by Ruffman et al., (2006), which consisted of only middle and upper-class families. Socioeconomic status was previously associated with ToM, accounting for about 12% of the ToM variance (Cutting & Dunn, 1999). Furthermore, Ruffman et al., (2006) measured parenting style with a single indicator, as opposed to including multiple measures of parenting.

It was my intention in this current study to recruit a more representative sample, and to use an appropriate measure for authoritarian parenting style to investigate the relationship between authoritarian parenting and IToM understanding. This investigation was complementary to the main interaction hypotheses of interest in this study. Investigating and modeling the

relationship between parenting and IToM will inform the degree to which parent-child interactions based on specific parental attitudes predicts IToM development. Twin studies conducted by Hughes, Jaff, Happe, and Taylor (2005) and Ronald, Viding, Happe, and Plomin (2006), demonstrated that variation in ToM ability was mostly explained by environmental effects. Furthermore, Vinden (2001) examined cross-cultural differences between parenting style and ToM by comparing Korean American and Anglo-American families. Vinden (2001) found that authoritarian parenting was negatively associated with ToM understanding for the Anglo-American group. An opposite, positive effect was found for the relatively more authoritarian Korean-American mothers, whose children scored higher on ToM. Cultural differences in parent-child interactions may have differentially predicted social-cognitive development. Finally, a better understanding of the influence of the social context on IToM development has implications for our understanding of the relationship between IToM, parenting style, and shame.

The relationship between parenting style and IToM needs to be better understood. I successfully proposed this current study as my dissertation project in September 2015. At that time, a search of the literature revealed that no studies had examined the relationship between parenting style and IToM. Furthermore, there is currently no theoretical framework to bring an understanding to the current, but controversial relationship between parenting style and ToM (Carpendale & Lewis, 2006). The nature of this dissertation project gave me an opportunity to conduct a complementary investigation between parenting and IToM development in middle childhood. Providing additional empirical evidence about the relationship between a later developing social-cognitive skill, IToM, and authoritarian parenting style, makes an additional contributes to the literature.

Parental religiosity and child shame

According to Statistics Canada's 2002 Ethnic Diversity Survey, when asked about the personal importance of religion, 40% of Canadian-born, 55% of immigrants to Canada before 1982, and 57% of immigrants to Canada between 1982 to 2001, selected "very important" on a 5-point Likert scale. Murphy and Moriarty (1976) examined the role of religion in families. Murphy and Moriarty (1976) reported that for some families, God could be perceived as actively providing support to families. For other families, "God was a vivid present reality" (p. 27). Religion also strongly influenced family values, standards, rules, and goals (Murphy & Moriarty, 1976). Given the high importance of religion to a portion of the Canadian population (40% to 57%) reviewed above, and given that religion may influence the values, standards, rules, and goals against which children self-evaluate, a measure of parental religiosity was included in the present study. Parental religiosity, reflecting parent-to-parent individual difference in religious commitment may predict individual differences in children's self-conscious emotional development.

As reviewed in the general introduction, there are direct and indirect mechanisms of influence on children's emotional development (Cole & Tan, 2007). Religion and religious institutions may have an indirect influence on children's emotional development, as explained by ecological systems theory (Bronfenbrenner, 1975). According to ecological systems theory, the influence of religion on children's development originates within the exosystem, with religion exerting its direct influence on parents (Bronfenbrenner, 1975). Religion may indirectly influence children's emotional development via levels of parental religious commitment at the mesosystem level of influence. Parental religious commitment may predict not only the frequency of children's church attendance and children's involvement in family prayers, but also

predict how children think about themselves in relation to God (Murphy & Moriarty, 1976), the divine, or the supernatural.

Granqvist and Kirkpatrick (2008) argue that one's relationship with God may even fulfill the attachment criteria of the internal working model described in Bowlby's attachment theory. Therefore, individuals, including children, may construct an internal working model of the child/person-God relationship. Furthermore, Granqvist and Kirkpatrick (2008) argue that the child-God/person-God attachment relationship may follow a developmental sequence in childhood. For example, as reviewed earlier, middle-childhood is associated with a decrease in the frequency of parent-child interactions. As a result, in middle childhood, God may become the secure base to whom children cognitively and emotionally increase proximity to, in order to feel safe (Granqvist & Kirkpatrick, 2008; see the review of studies investigating this question in Granqvist & Kirkpatrick, 2008). Finally, studies reviewed by Granqvist and Kirkpatrick reported that in middle childhood, children report feeling much closer to God compared to early childhood. Granqvist and Kirkpatrick also reported that the children in the studies they reviewed had parents who were more religious. Religiosity may have developmental implications for children, and although some studies have examined the influence of religiosity in childhood, no studies have specifically examined the relationship between religiosity and the development of shame in childhood.

The importance of psychological research on the influence of religiosity was further highlighted by Evans (2002). Evans (2002) argued that despite scientific, evolutionary evidence, creationist beliefs are strongly embedded in contemporary society. Thus, although evolutionary theories are accepted in many realms, others still believe in, and defend Biblical teachings about human origin (Evans, 2002). The Evans (2002) chapter was particularly focused on the

embeddedness of religious teachings within the Western context. However, it would be reasonable to expect that strong religious beliefs exist in many other contexts, despite widespread knowledge about the existence of scientific, evolutionary fossil evidence. Using evolutionary theory, theorists have even attempted to explain the prevalence and maintenance of religious thinking in contemporary society from a variety of perspectives.

Evolutionary perspectives on the purpose of religion propose that religion is an evolutionary adaption, built into the brain or that religion is just an evolutionary by-product of the brain (see Bering, 2005; Thagard, 2005, for critiques on these perspectives). From the evolutionary by-product perspective on religion, McCullough & Carter (2011) proposed that the shift from a nomadic hunter-gatherer lifestyle to a more agrarian lifestyle led to the selection of religious cognitions. Religious cognitions were selected out for the sole purpose of promoting self-control, and for maintaining the social relationships required for agrarian societies to be successful (McCullough & Carter, 2011). Others, considered the evolution of broad human emotional and cognitive abilities (Thagard, 2005), and the evolution of the human information processing system (Bering 2005), for example, the ability to represent mental states, to be important causal factors supporting the eventual development of religious thinking in the human species.

In realms of psychological research, religion is considered an important influence on psychological regulation, for example, in emotion regulation (Watts, 2007), and in self-regulation (McCullough & Carter; 2011). Watts (2007) argues that aspects of religion, such as religious beliefs and practice may play an important role in controlling negative emotions. Religious participation, for example, may foster social support, which in turn, may help to moderate negative emotions, such as anger. Religion may also control other-directed anger,

through internalized representations of a loving God (McCullough & Carter, 2011). Finally, religious beliefs, and explanations of situations that are difficult to causally explain, or difficult to accept, may foster self-regulation and acceptance (McCullough & Carter, 2011).

Rosengren, Johnson, and Harris (2000) highlighted the importance of understanding religious thinking from a developmental perspective. Studies reviewed by McCullough and Carter (2011) found that parental religiosity predicted both parents' reports and teachers' reports of children's self-control, with more religious children displaying more self-control. Litchfield, Thomas, and Li (1997) examined the relationship between patterns of parent-adolescent relationship (connectivity, parental behavioural control, parental psychological control), and adolescents' future religious development and future engagement in deviant acts. Connection and behavioural regulation were positively related to later adolescent religiosity (public, private and future religious plans), with some links to reduction in deviant behaviours. Litchfield et al., (1997) reported that psychological control was unrelated to parental religiosity. The authors did caution that their 3-item measure of psychological control may have been insufficient to capture sufficient variance to investigate the parental religiosity and parental psychological control association.

Psychological evidence about the importance of religiosity to human psychological development is accumulating. Taylor and Clarkson's (2000) reviewed existing studies on the role of religion in development as well as presented their own ethnological study. Taylor and Clarkson's (2000) review presented evidence that particular religious beliefs influenced unique parental attitudes about children's pretense play with an imaginary character. For example, Hindu mothers, fundamentalist Christian mothers, and Mennonite teachers demonstrated unique beliefs about children's imaginary companion. For Hindu mothers, children were not engaging

with an imaginary companion, but instead, children were encountering memories of their past lives. As reported, Hindu mothers were likely to encourage children's engagement with their imaginary friend. The authors explained that Hindu mothers' belief about children's memories of past lives was in alignment with the teachings of Hinduism, including the philosophy of Karma, and beliefs in reincarnation (Taylor & Clarkson, 2000).

Taylor and Clarkson (2000) reported that mainstream fundamentalist Christian mothers on the other hand, based on their particular religious beliefs did not encourage imaginary companions. Fundamentalist Christian mothers attributed this developmental milestone to childhood deceitfulness (Taylor & Clarkson, 2000). Fundamentalist Christian mothers even curbed children's beliefs about Santa Claus, because eventually learning that Santa Claus is nothing but a myth may lead children to question the existence of God. Furthermore, these mothers reported that they discouraged imaginary play because Satan may appear, interact with, and spiritually harm their children. Fundamentalist Christian teachers also viewed imaginary companions and pretense play as suspicious. However, despite Fundamentalist mothers and Fundamentalist teachers' attempts to curb children's imagination, children from this religious denomination still reported to the researchers that they engaged in pretense play.

Mennonite parents were inaccessible to the researchers. Thus, researchers had to settle for interviewing children's teachers or observing children at play. Taylor and Carlson (2000) reported that some Mennonite children had not developed the language required to be able to talk about pretense, and that children's pretend-play modeled the realistic roles that children were expected to fill in adulthood. Taylor and Clarkson (2000) reported that despite being discouraged from engaging in fantastical and pretend play, those Mennonite children engaging in pretend play reported to the researchers that they hid this activity from their parents. Clearly,

developmental interest on the influence of religiosity on children's development exists in the literature. However, growth in developmental research has been especially slow with regards to the religiosity-self-conscious emotional link in childhood.

In many religions, feelings of shame and guilt are emphasized, in order to encourage socially and morally appropriate behaviours (Watts, 2001). Furthermore, studies have reported that self-conscious emotions can be relatively important for positive mental health and well-being, as well as important for the development of psychopathology (DeZutter, Soenens, & Hutsebaut, 2006; Gramzow & Tangney, 1992; Luyten, Corveleyn, & Fontayne, 1998; Mills, 2003; Stuewig & McCloskey, 2005; Tangney & Dearing, 2002). If religiosity influences adult shame and guilt experiences, then parental religiosity may have implications for shame and guilt in childhood. Because, there are no studies with children examining the relationship among parental religiosity, guilt, and shame, I will review two studies conducted with adults.

Luyten, Corveleyn, and Fontaine (1998) found that religiosity and its relationship to shame and guilt may have implications for interpersonal functioning. Religious participants reported more guilt compared to non-religious participants. On the other hand, religious participants did not report more shame compared to non-religious participants. Religious subjects also reported more empathy compared to non-religious participants, which the authors interpreted to be related to religious participants' reports of higher levels of guilt. This latter interpretation of their finding is consistent with the literature indicating that guilt is positively associated with empathy (Tangney & Dearing, 2002). Luyten et al. (1998) interpreted the non-significant relationship between religiosity and shame to be an indication that religiosity may attenuate maladaptive shame. Perhaps, religiosity may promote interpersonal functioning by promoting adaptive guilt, and by attenuating maladaptive shame experiences. Finally, Luyten et

al. (1998) also examined the relationship between religiosity and mental health. However, they did not find a negative association between religiosity and mental health.

Interrelationships among religiosity, shame, guilt, and mental health were also investigated by DeZutter, Soenens, and Hutsebaut (2006). Shame was significantly associated with literal religious beliefs (r = .10), and use of religion for non-religious purposes, such as praying for personal protection (r = .16). Guilt was also significantly related to literal religious beliefs (r = .22), and the use of religion for non-religious purposes (r = .19). In addition, guilt was significantly related to symbolic affirmation (r = .21), intrinsic religious motivation (r = .19), extrinsic religious motivation (r = .19), church attendance (r = .20), and to the personal importance of religion (r = .20). Literal religious beliefs and the use of religion for non-religious purposes were negatively related to psychological well-being. Religiosity in both studies, reviewed above, was measured in a manner that goes beyond studies using a single measure of religiosity. For example, some studies simply measured a participant's association with a particular religious denomination or church affiliation, whereas other studies simply asked participants to report on the personal importance of religion to them (see this criticism in Zarzycka & Rydz, 2014). The two studies reviewed above conceptualized religiosity as a multi-dimensional construct. Each study, in turn, found that the various dimensions of the multi-dimensional religiosity construct were differentially associated with shame, or guilt.

Based on findings reported by the Luyten et al.'s (1998) study, religiosity may protect against shame by promoting the development of more adaptive guilt and interpersonal empathy. Furthermore, Dezutter, Soenenes, and Hutsebaut (2006) study found that the religiosity dimensions associated with guilt were more likely to predict psychological well-being. These findings raised the possibility that parental religiosity may be associated with differential child

outcomes. For example, parental religiosity may be associated with decreased parental shaming. Perhaps, parents higher on religiosity are more likely to discipline their children in a manner that fosters the development of adaptive guilt as opposed to maladaptive shame. These predictions are speculative because of the existing gap in the childhood research literature pertaining to religiosity, shame, and guilt. Because of this gap in the literature, I refrained from explicitly stating any hypotheses, and simply included parental religiosity as a covariate in the final analyses.

To summarize, based on the studies reviewed above, I developed some expectations about a negative association between parental religiosity and child shame. I also speculated that a negative relationship between authoritarian parenting and parental religiosity may be likely. Finally, I further speculated that the above relationships would likely be explained by the following mechanism. Perhaps, parental religiosity fosters increased parental use of empathetic disciplinary strategies, which in turn would lead to lower levels of shame. Similar to the literature reviewed earlier, any relationships among parental religiosity, shame, and guilt would have implications for children's physical and psychological health. Thus, the current study's investigation of the relationship between parental religiosity and the self-conscious emotions was an important investigation. Finally, I explored these relationships in the present study using a multi-dimensional measure of religiosity as opposed to a single-item measure of religiosity.

To summarize, a multi-dimensional measure of religiosity provided deeper insight into shame and guilt's differential association with the sub-components of the religiosity construct. The associations among parental religiosity, guilt, and shame in middle childhood were investigated in the present study, however, because of gaps in the literature, explicit, a priori hypotheses about the relationship among shame, guilt, and parental religiosity were not stated.

The present study

IToM, parental socialization, and shame

As reviewed above, theories of self-conscious emotions (Bennett & Matthews, 2000; Lagattuta & Thompson, 2007; Tangney & Fischer, 1995) suggest that ToM abilities are necessary for the development of shame. A functional ToM facilitates the understanding of others' mental perspectives. With regards to the development of shame, ToM is the mechanism that facilitates children's understanding of other-originating evaluations of the child, relative to norms, standards, goals, and values. Furthermore, the literature reviewed above suggests that the quality of the parent-child interaction predicts individual differences in the development of ToM, as well as the development of child shame. However, a huge gap exists in the literature with regards to the association between later developing IToM and parenting style, and the association between IToM and shame. To address these limitations in the literature, the present study attempted to obtain empirical evidence of these processes. The main empirical question was: do IToM and authoritarian parenting style interact to predict individual differences in middle childhood shame?

In addition, this dissertation was an opportunity to investigate the relationship between authoritarian parenting style and IToM ability. So far, researchers have only reached tentative conclusions about the role of parenting and individual differences in ToM ability. Findings on the relationship between parenting style and ToM abilities, as reviewed above, are still mixed. The relationship between parenting style and IToM skills had not yet been examined. Therefore, the relationship between parenting and IToM development required empirical attention and became an additional focus of the present study.

Theory as reviewed (Bennett & Matthews, 2000; Lagattuta & Thompson, 2007; Tangney & Fischer, 1995), predicts that children with a more advanced understanding of others' mental states (ToM) may be more sensitive to shame-inducing experiences, and more prone to respond to negative events with shame. However, Mills et al., (2010) linked a relatively harsh parenting style to shame (Mills, 2003; Mills et al., 2010), and others have linked a warmer and positive parenting style to advanced levels of ToM ability in childhood (Hughes et al., 1999; Pear & Moses, 2003; Ruffman, et al., 1999; Ruffman et al., 2006). Based on this literature, I proposed that advanced IToM skills will moderate the relationship between authoritarian parenting style and child shame. The notion of a moderating role of IToM skills on emotional development follows from an information processing model of emotional experience, which was proposed by Frijda (1988).

According to Frijda (1988), cognitive variables fulfill three roles in emotional experience: "1) as constituents of emotional experience, 2) as antecedents of emotional experience and response, and 3) as elaborations of experience and response" (p. 325). According to Frijda, these three cognitive functions do not need to simultaneously occur in order to influence an emotional experience. Therefore, according to Frijda, in any emotional experience, it is possible for a cognitive variable to function in only one of the three ways outlined above.

Consistent with the theory proposed by Frijda (1988), I proposed that IToM may play a significant role in whether shameful attributions directed towards a child are elaborated by the child, or not. For example, when negative, global self-attributions are directed at children, children with well-developed IToM skills may be less likely to focus on negative attributions and less likely to elaborate on negative attributions. Being able to inhibit negative attributions about the self, decreases the likelihood that a negative attribution becomes internalized into the child's

developing self-system. Thus, in the long-term, the child's shame experiences may be a less aversive emotional experience, because IToM skills have circumvented the likelihood of developing an overly active, shame-based, cognitive-affective representational system (Malatesta & Wilson, 1988). Furthermore, it is possible that the child with advanced IToM skills may to a greater extent, be able to selectively elaborate on more adaptive self-attributions. Thus, IToM may play an important role of protecting children from developing shame prone cognitive-affective representational structures, and long-term maladaptive shame proneness.

In addition to IToM protecting against the development of an enduring shame-prone, cognitive-affective self-representational structure, IToM may also facilitate adaptive emotional regulation in the moment. As a cognitive ability, IToM may inhibit an initial shame response in a negative situation for a more adaptive emotional response. Thus, when cognitive-affective schemas (e.g., the shame schema) are activated, IToM skills may cognitively facilitate (Frijda, 1988) of how a child engages with negative events or shaming attributions.

Shame is associated with an action pattern of hiding, which serves to limit social interaction (Tracey et al., 2007). Children's advanced IToM skills may potentially weaken, or modify attributions triggering the shame experience. Thus, the eventual intensity in experienced shame in the moment may be reduced, resulting in emotional self-regulation, a more adaptive emotional response and experience, and a more adaptive action pattern. Too much shaming disrupts adaptive self-development over time, the result of which, is the development of a shame prone cognitive-affective style. A shame prone cognitive-affective style underlies any future tendency to interpret the majority of events via this enduring shame schema (Malatesta & Wilson, 1988). To summarize, as proposed, IToM skills may be protective against the

development of a shame prone affective style in childhood by facilitating more adaptive emotional responces and action patterns.

Studies examining the development of shame have focused on the interactive influence of socialization and temperament on the development of shame (Mills, et al., 2010). Studies have not examined the moderating influence of children's IToM skills on the intensity of shameful messages originating within children's socialization context and the development of shame. Children's social, cognitive, and emotional experiences are interconnected, therefore a range of developmental outcomes involves an interaction of these three domains. In light of the preceding analysis, and limitations in the research literature, I made the following predictions:

Hypotheses

I hypothesized: 1) a positive association between authoritarian parenting and shame; 2) a negative association between authoritarian parenting and IToM; 3) a negative association between IToM and shame; and 4) the positive association between authoritarian parenting and shame will attenuate for children with advanced IToM skills.

Overall, the present study's main goal was to provide insights into the cognitive and social processes predicting shame in middle childhood.

Summary of the present study

The main goal of this study was to investigate the hypothesis that children's IToM will moderate the contributions of authoritarian parenting style to the development of child shame. In the reviewed literature, it was empirically established that a predictive relationship exists between parenting and individual differences in ToM development. It has also been empirically established that a positive relationship exists between authoritarian parenting and child shame. This study attempted to clarify the interactive relationship between authoritarian parenting and

IToM relative to child shame. If this study finds that IToM moderates the positive relationship between authoritarian parenting and shame, then IToM skills could be fostered as a protective factor, in order to control the development of shame proneness.

This study also investigated the hypothesis that IToM skills contribute directly to the development of the self-conscious emotions. While theory strongly suggests this relationship, only a few studies examined the influence of earlier developing ToM. Therefore, a second goal of this study was to investigate the influence of individual differences in IToM skills on individual differences in middle childhood shame. I could not find any studies in the literature that investigated the IToM and shame relationship.

Aside from the above stated hypotheses, the influence of authoritarian parenting and IToM on the development of shame was examined, above and beyond the contributions of child age, gender, social class, and parental religiosity. Based on the literature reviewed above, and further reviewed in the methodology section, both IToM and shame follow age-related developmental trajectories. In addition, and to be reviewed in the methodology section, empirical evidence supports gender-specific developmental patterns in the development of shame, making it important to include gender in the main analyses. Another pertinent demographic variable, social class, to be described in the methods section below, was also included in final analyses. Finally, because studies are yet to explore the relationships among parental religiosity, shame, and guilt, I included a measure of parental religiosity in the current study.

I will now proceed to describe the recruitment process, the parent and child participants, the testing materials, and the testing and scoring procedures, before outlining the analyses that were conducted to test the proposed hypotheses of the present study.

CHAPTER 3 - METHOD

Participant recruitment and compensation

A total of $N = 60$ children and their parents were recruited for this study. Participating children's ages typically ranged from seven to under 10 years. There was, however, one child included in the final sample who was 10 years 3 months old. This child celebrated a birthday sometime between the time the family was recruitment for the study and the date of the child's interview. All data pertaining to this child were still included in the final model tested. Both mothers and children were fluent in English, although English may not have always been their first language.

The seven to less than 10 age range was targeted for recruitment because previous research indicated that IToM skills have achieved stabilization around age 7 years and beyond (Lagattuta et al., 2010). At younger ages, particularly between 6 to 7 years, although children demonstrate IToM skills, they have a tendency to over interpret others' minds. When children are between 6 to 7 years, empirical evidence indicates that children experience some difficulty in differentiating situations in which both characters should have the same thoughts because of a shared and identical history (Lagattuta et al., 2010). Thus, they incorrectly attribute different points-of-views to two characters that had had an identical past experience. It is as though, children at this age understand that a one-to-one correspondence between every person's mental states and the world does not exist. However, they still encounter problems selecting the appropriate situations in which to apply their new understanding about the interpretative nature of the mind (Lagattuta et al., 2010). However, children's IToM skills demonstrate stability a bit later in middle childhood. Beyond 7 years, children are better at correctly attributing "situation-appropriate" interpretive thoughts to different dolls, while demonstrating individual differences

in their IToM skills (Lagattuta et al., 2010). For the present study, I wanted to capture individual differences in the more stable IToM skills as opposed to IToM skills that are somewhat unstable and overly-interpretive.

Once ethics approval was received from the Psychology/Sociology Research Ethics Board at the University of Manitoba, an application was submitted to the appropriate school division for school division ethics review, and for subsequent permission to conduct this study in elementary schools within a school division. Shortly after receiving written ethics approval and permission from the school division, each elementary school principal was approached to discuss the study requirements, and to secure their buy-in to the present study. Once principal-permission was acquired to commence testing, and once the particular logistics for the testing process as it pertained to each school was understood by both the school principal and the principal investigator, participant recruitment began.

Initially, participant recruitment and testing for the present study commenced with mothers and children from elementary schools in Winnipeg. Subsequently, I recruited additional University of Manitoba students with children through the Department of Psychology's undergraduate psychology subject pool. Notices were also posted across the University of Manitoba campus and in an office serving families and children in Winnipeg. Additionally, participants were also recruited through parent referral. Children recruited from elementary schools were tested at their respective schools by a hired female research assistant blind to the study's hypotheses. This same female research assistant also tested all other child participants at the Social Cognition and Emotional Development Laboratory, University of Manitoba.

Each participating family was compensated for their time and commitment to this study as follows: elementary school-recruited families each received a $20 thank-you gift card; notice

board-recruited participants each received a $40 thank-you gift card; and each undergraduate psychology-recruited parent with a child in the desired age range received two research credits for one hour of research participation, which went towards their course grade, and a $30 thank-you gift card. The location of the child's interview determined the level of monetary compensation given to each family. Thus, parents who had to bring their child to the university for the child interview received thank-you gift cards of higher values. Parents whose child was being tested at their respective schools during school hours received thank-you gift cards of a lower value (Table 1).

Table 1.

Number of participants by recruitment source, testing location, and level of compensation.

Recruitment source	Location of Child Interview	Compensation to family
Elementary schools (n = 29)	School	$20
Undergraduate subject-pool (n = 14)	Lab	$30 + 2 research credits
Notice Board and parent referrals (n = 17)	Lab	$40

Note: The above table is based on the total number (N = 60) of participants recruited for the present study.

Elementary school recruited families did not need to bring their child to the university for testing, nor did these parents need to meet with me prior to their child's interview. School-recruited parents received the invitation letter to participate in the study, the informed consent form, and the parent questionnaire via their child's teacher. After, meeting with principals to obtain permission to conduct the study in the school, an initial planning meeting occurred with each school principal. Subsequent to this planning meeting, all documents were then delivered to the respective principal/principal's assistant. Completed informed consent forms and completed parent questionnaires were returned to me via the child's teacher, the principal, or the principal's

assistant. Dates and times for at-school testing were negotiated and scheduled with either the school principal or the principal's assistant.

Each subject pool or notice board recruited parent visited the university lab twice. Firstly, these parents visited the lab to learn more about the study, to complete the informed consent process, and to collect the parent questionnaire. Parents had the option of completing the parent questionnaire during this initial visit or to complete it at home and return it on the day of their child's interview. During this initial visit with parents, a date and time for the child interview at the lab was also scheduled..

Refusals

Of the $N = 60$ mothers and children recruited, one mother subsequently refused to complete the parent questionnaire. This parent reported that she was uncomfortable with some of the questions in the parenting questionnaire. Thus, her child's interview data, which had already been collected at this point in time, was removed from all analyses. A second child refused to attend a previously scheduled interview session, and a third child was distracted and preferred to play with the research assistant. After consultation with the research assistant about the latter, the decision was made to end this interview early. Finally, a parent returned a completed consent form, but unfortunately the child's name and the parent's signature were illegible, thus the principal's assistant was unable to deliver the parent questionnaires to this parent, and we lost the opportunity to interview this child. Taking the above into consideration, $n = 56$ child participants successfully completed the child interview with usable data. Unfortunately, this sample was further reduced, and the final sample entering into main analyses was $n = 48$, because eight mothers did not return their questionnaires to the principal investigator.

Description of child interview

Children were interviewed privately by the same female research assistant in a single testing session. Interview sessions lasted between 45 to 90 minutes, although the average length of the majority of child interviews was less than 60 minutes. In parent and child informed consent letters, participants were advised that each child interview could last up to an hour-and-a-half or more, which was a best estimate of the uppermost limit for the length of a child interview. Parents were advised of an upper limit to ensure that sufficient time was allocated so that children had the opportunity to warm up to the research assistant at his or her pace, to accommodate for the informed consent process, so that children could take a break and enjoy a healthy snack, and to accommodate for individual differences in children's response time to the interview questions/IToM task. Furthermore, it was very important that children not think that they were being evaluated on how long it took them to complete the interview. Therefore, parents and children were advised this upper time limit of an hour-and-a-half or more.

School interviews

Each interview was video-taped in a private room with only the child and the research assistant present. The research assistant and the child sat at a small table with the child always seated to the left of the research assistant; the camera was placed to the front of the room facing the small table. For those interviews conducted with school-recruited children, each principal provided a private room for conducting interviews. Prior to the interview days, the principal or the principal's assistant was contacted to schedule dates for the research assistant to visit the school. The number of children interviewed during each scheduled school visit depended on whether schools could accommodate the research assistant for a full day, or half-a-day. The researcher provided the principal/principal's assistant with the names of the children to be

interviewed during each visit. This way, the principal/principal's assistant was able to communicate to teachers the days when the research assistant would be stopping by the classroom and the names of the students scheduled for testing.

When the research assistant arrived at a school, she first checked-in at the principal's office before proceeding to the private interview room with the research equipment. The research equipment and materials included the camera and tripod, testing materials, such as the child consent form, the IToM task, the child questionnaire, and gifts and snacks for the children. The research assistant was trained on the interview room set-up to ensure the highest level of standardization across testing situations. Once the room was set-up, the research assistant met with the teacher. Then, the child and the researcher headed to the interview room. Interviews were always scheduled to avoid children's lunch, and break times. School principals assured me that class teachers would re-teach any curriculum-related material children missed while they were being interviewed.

The research assistant was trained to greet each child in a friendly manner using the child's name ("Hi _____"), before introducing herself as the research assistant and telling the child her name. The research assistant then asked children how they were, and whether they were ready to start the interview. The child was allowed time to feel comfortable with the researcher in the interview room. Then, the child was encouraged to sit at the small table to the left of the researcher. The researcher always let the child know that there was a camera in the room, and that they would both need to speak loudly so that the camera could record their conversation clearly. Finally, the research assistant asked the child if he or she was ready to begin the interview, and if the child consented, the research assistant would turn the camera on.

The consent procedure for children came next, followed by the child questionnaire, the break and the snack, and finally, the IToM task. Children were given the opportunity to assent to participate in this study. In addition to obtaining informed consent from parents for them and their children to participate in this study, each child was also given the opportunity to agree to participation.

Prior to the interview days, principals provided information about each child's allergies and approved all snack options. Children were offered a healthy snack consisting of a juice box and fresh fruit (an apple, an orange, a banana, cherries, a bunch of grapes, or a mandarin). When interviews were completed, children were thanked for participating in the study, and the research assistant always asked the child whether they had any questions about the interview. Then, each child's attention was directed towards an attractive box, from which, they could choose two gifts. The attractive box contained a wide selection of sticker sheets and attractive pencils. Finally, the research assistant thanked the child for participating in the study and accompanied the child to his/her classroom. A copy of the consent form for children that each child completed was sent home to the respective parent.

After testing was completed at a particular school, thank-you/debriefing letters addressed to each participating family were delivered. A $20 thank-you gift card was enclosed with each family thank-you/debriefing letter. School principals signed to acknowledge receipt of the family thank-you/debriefing letters and gift cards. Teacher thank-you letters contained a $30 dollar thank-you gift card, which was addressed to each class teacher with a student participating in this study. Principals also signed to acknowledge receipt of teacher thank-you letters and gift cards. Each principal received a personalized thank-you letter from the principal investigator and her

PhD advisor for supporting the present study. However, principals did not receive thank-you gift cards from the principal investigator and her PhD advisor.

Laboratory interviews

Notice-board-recruited parents and parents recruited through word-of-mouth expressed their interest in the study by either telephoning or emailing the principal investigator. Parents then visited the lab, where they completed the informed consent procedure. Notice-board-recruited parents either completed the parent questionnaire during this visit or took the parent questionnaire away to complete at a more convenient time. This visit was also the opportunity to schedule the child's interview. Parents provided information about their child's existing food allergies and were advised of the snack options available to their children Emails/texts or phone calls served as reminders to each parent prior to the scheduled child interview. Interviews were scheduled at times convenient to the parent and child, and included weekday business hours, weekday-evenings, and weekends.

Undergraduate psychology students selected to participate in this study by choosing a 1-hour appointment time slot advertised on the Department of Psychology's online research participation sign-up system. Student parents then visited the lab where they received additional study details. These parents were required to complete the informed consent process and the parent questionnaire during this time. All activities completed during this appointment earned student-parents two research credits, and constituted parents' completion of the first part of the study. Then, if student-parents were willing to grant permission for their child to participate in the child interview, parents were given a part-2 consent form to complete and return to the researcher. Appointments for the child-interview session were also scheduled during this initial meeting. Parents provided information about their child's allergies and were advised of possible

snack options. Parents were always sent a reminder email/text or received a reminder phone call prior to their child's interview. Research sessions were again held at times convenient to the parent and child, and included regular business hours, weekday-evenings and weekends.

Child interview procedures at the lab for both the notice-board-recruited families and the undergraduate psychology subject-pool-recruited families were identical. Parent and child were greeted by the research assistant at the main entrance of the building. The research assistant always greeted the child by name, introduced herself to the child, and thanked the child and parent for helping with the research project. The research assistant escorted families to the lab, where parents were given the opportunity to return any completed parent questionnaires to the research assistant. In the case of the student-parents, the part-2 informed consent forms were also returned to the research assistant at this time.

Parents and children were then shown to the child interview area, and when children indicated that they were comfortable with their parent leaving the interview room, the research assistant showed the parent to a parent-waiting area. The research assistant also showed children the parent-waiting area and told each child that we can get mom or dad whenever you want. The child and the research assistant then headed to the lab where the researcher offered the child a seat at a child-friendly desk and drew the child's attention to the camera. The research assistant said to the child that "we will need to speak loudly for the camera." Then, the researcher asked the child whether he or she was ready to start the interview before turning the camera on. Next, the informed consent procedure for children was completed, followed by the completion of the child questionnaire, and the completion of the IToM task. Following completion of the child questionnaire, the child enjoyed a break and a healthy snack, before completing the IToM task.

Children were always offered a healthy snack, which consisted of a juice box and fresh fruit (an apple, an orange, a banana, cherries, a bunch of grapes, or a mandarin).

After completing the interview, children were thanked for participating in the study, and the researcher asked children whether they had any questions about the research project they had just completed. Children's were then shown the attractive box containing a wide selection of stickers and attractive pencils, from which the child could choose two gifts. Then, the research assistant and the child walked to the parent waiting room, and the parent was invited into the lab. In the lab, the parent received a thank-you/debriefing letter and the thank-you gift card. Parents were always asked whether they had questions about the research project before the parent and child were thanked for helping with the research project.

All parents had the opportunity to learn more about the study's findings by checking a box on the consent form. Parents will be sent a copy of the study's results after the final dissertation defense. Parents also indicated on their consent form whether the video recording of their child should be destroyed or if it could be kept for training purposes. Child videos were downloaded and saved onto an external hard-drive, and further backed-up onto a second external hard-drive. Both hard-drives were encrypted to ensure that child-interview sessions could only be read by the password-protected computers located in the lab. Encrypted hard drives were kept in secure locations, accessible to the principal investigator, the PhD advisor, and the research assistants. All research-related materials containing identifying information, including consent forms and completed questionnaires were kept in a combination-protected locked cabinet located in the locked lab.

Measures

In this study, the following assessments were made for each family: (a) child shame and guilt; (b) child interpretive theory of mind (IToM); (c) mother authoritarian parenting; (d) mother religiosity; and (e) a demographic section, which included questions pertaining to family composition, child's birth order, child gender, family subjective socioeconomic status (SSES), child age, and length of time living in Canada. The main dependent measure of interest for the first, third, and fourth hypotheses outlined in chapter 2 was child shame. Some variables from the above list entered the statistical model as predictor variables or as covariates to the predictor variables of interest. The dependent variable for the second hypothesis outlined in chapter 2 was IToM.

Testing materials

Children's shame and guilt – The Test of Self-Conscious Affect

Children's shame and guilt were assessed using the Test of Self-Conscious Affect for Children (TOSCA-C; Tangney, Wagner, Burggraaf, Gramzow, & Fletcher, 1990). The TOSCA-C was constructed to measure maladaptive shame, but adaptive guilt (Tangney & Dearing, 2002). The TOSCA-C consists of hypothetical situations children are likely to encounter. Each situation is designed to motivate childhood feelings of guilt, shame, and pride. Examples of TOSCA-C shame and guilt inducing scenarios included making a mistake, destroying someone else's property, or failing a task. Each hypothetical scenario was first read to the child, followed by a series of "situation-specific phenomenological descriptions of affective, cognitive, or behavioural responses capturing shame (negative self-feeling or self-judgment, desire to hide), guilt (negative evaluation about one's behaviour towards another), detachment (unconcern), pride in one's self, and pride in one's behaviour" (Mills et al., 2010; p. 511). The research

assistant read each scenario to the child, before asking the child to rate the likelihood of responding on a 5-point scale: 1 = *not likely* to 5 = *very likely*. An example of a TOSCA-C item is, "Your aunt is giving a big party. You are carrying drinks to people, and you spill one all over the floor: (a) you would think 'I should have been more careful' (guilt action-tendency); (b) you would think 'my aunt wouldn't mind that much' (detachment); (c) 'I would run upstairs to be away from everybody' (shame action-tendency); (d) you would think the 'tray was too heavy' (externalization)." The TOSCA-C consists of 15 scenarios measuring guilt, shame, pride, externalization, and detachment. Because variables of interest in this study were shame and guilt, children's responses to items related to shame and guilt were averaged across the 15 scenarios, which yielded continuous measurements of maladaptive shame and adaptive guilt.

The TOSCA-C is a theory-derived measure, based on the premise that there are specific cognitive appraisals underlying shame and guilt. Because feelings of shame *(I am bad)* and guilt *(I did a bad thing)* are driven by unique cognitive appraisals, then each emotion is distinct, and each emotion should result in an action tendency specific to either shame or guilt (see Tangney & Dearing, 2002). For each scenario, each TOSCA-C response category is meant to capture the action tendency associated with a specific self-conscious emotion (Tangney & Dearing, 2002). The TOSCA-C has stronger psychometric properties compared to many measures of self-conscious emotions. For example, some measures of shame and guilt tend to confound definitions of shame and guilt (Tangney & Dearing, 2002). Some measures also rely on the participant's ability to distinguish between the definitions of shame and guilt, the moral standards, the situations, and the dispositions associated with the shame-versus-guilt constructs (Tangney & Dearing, 2002). On the other hand, a situation-specific measure of the self-conscious emotions, such as the TOSCA-C, simply asks respondents to rate the likelihood of

them experiencing the various phenomenological descriptions associated with each self-conscious emotion (Tangney & Dearing, 2002). Tangney et al., (1990) and Tangney and Dearing's (2002) approach to measuring shame and guilt, circumvents the likelihood of confounding measurements of shame and guilt.

I noted earlier in the hypotheses section that the main dependent variable of interest in this study is child shame. However, I have now indicated that both TOSCA-C shame and guilt responding scales were of interest in the present study. Although shame and guilt are operationalized as unique constructs, when measured, they are positively correlated with each other. Despite the positive correlation between shame and guilt, however, they are associated with other psychological constructs in very different ways (Tangney & Dearing, 2002). For example, shame is mostly unrelated to empathy, whereas guilt and empathy are strongly and positively correlated. Shame residuals correlate negatively with self-esteem, while guilt residuals are positively correlated with self-esteem (Tangney & Dearing, 2002). Furthermore, if raw shame and guilt scores should simultaneously enter into statistical analyses, they suppress each other's effects. This suppression occurs because shame and guilt associate with other psychological variables in opposing ways (Mills, et al., 2010; Tangney, 1995; Tangney & Dearing, 2002). Furthermore, in the raw shame score, there is a guilt component that influences the statistical model, and vice-versa, there is a shame component in raw guilt scores. To circumvent the likelihood of a suppressor effect, before conducting final analyses, I computed a residual shame score from which guilt had been removed. Pure, residual shame scores were expected to improve the predictive power of this study's statistical model (Mills et al., 2010; Tangney, 1995; Tangney & Dearing, 2002).

The TOSCA-C has overall fair-to-good internal consistency, with reported alphas of .78 and .83 for shame and guilt respectively (Tangney & Dearing, 2002; Tangney et al., 1990). Good internal consistency means that the TOSCA-C is a reliable measure of children's shame and guilt responding. However, compared to the alphas reported above, Mills et al., (2010), reported a similar alpha for shame (.78) and a slightly lower alpha for guilt (.74) for the TOSCA-C. According to the test authors, these fair-to-good coefficient alphas may reflect an underestimation of the reliability of the TOSCA-C. Tangney & Dearing (2002) explain that because scenario-based measures utilize a variety of situations, each situation could introduce additional variance into the shame, guilt or pride measure. Items of a given scale (shame, guilt or pride), may share more with its own particular situation, while other scale items may share less variance (Tangney & Dearing, 2002). However, the scenarios and responses used to construct the TOSCA-C were the ones mostly cited by respondents, and were not generated by Tangney and Dearing themselves, making this measure ecologically valid (Tangney & Dearing, 2002). Together, the internal consistencies cited above, indicate that the TOSCA-C is a reliable measure of childhood shame and guilt responding.

Interpretive Theory of Mind Ability (IToM)

Children's IToM skills were measured using a version of the IToM task proposed by Carpendale and Chandler (1996) and Chandler and Carpendale (1998) (see Lalonde & Chandler, 2002, for a review of earlier tasks), which was modified by, and outlined in Lagattuta et al. (2010). As reviewed earlier, around age 6, children increasingly demonstrate a more adult-like interpretation of others' minds. By an adult-like understanding of others' mind, the developmental literature refers to children's understanding that individual minds construct unique viewpoints of other people's mental life (Carpendale & Chandler, 1996; Chandler &

Carpendale, 1998; Lagattuta et al., 2010; Lalonde & Chandler, 2002). Therefore, cognitive development is such, that children understand that two people would not construct the same interpretation of a third person's mental states, for example, thoughts.

In the classic IToM task, children were asked to describe how two people would interpret each of a series of ambiguous drawings (see Lalonde & Chandler, 2002 for a review). Children with an interpretive or constructive theory of mind were expected to attribute distinct points-of-views about the ambiguous drawings to two dolls. On the other hand, children, who were *yet to* develop an interpretive theory of mind expect a one-to-one relationship between the world and others' minds. This latter group of children was expected to consistently attribute similar interpretations of each ambiguous drawing to different individuals, who in this case are two dolls, Sam and Alex. Children, yet to develop an IToM have no problem coming up with an interpretation of the first doll's perspective on the ambiguous drawing, that is, a first order false-belief. However, these children find it difficult to provide a second, distinct interpretation of the ambiguous drawing to the second doll (Carpendale & Lewis, 2006). The IToM task used in the current study was obtained from Dr. Kristin Lagattuta, University of California, Davis (K.H. Lagattuta, personal communication, April 1, 2014).

In the Lagattuta et al., (2010) measure of IToM skills, each child first met two doll-characters, Sam and Alex. Lagattuta et al., (2010) advised that the Sam and Alex dolls presented to each child should be consistent with the child's gender. The names Sam and Alex were selected because these names could represent both males and females (Lagattuta et al., 2010). Children saw Alex or Sam leave their houses and view a black-and-white drawing. Then, the research assistant covered up the picture with an opaque card with a 2-in square cut out, which exposed a small section of the picture. The research assistant then took Alex and Sam out of their

house to view this mostly concealed picture. Consistent with the protocol outlined by Lagattuta et al., (2010) and received from Dr. Lagattuta, children were presented with 3 trial conditions: *the irrelevant-past trial*, *the relevant-past trial*, and *the distinct-past trial*. The *irrelevant-past* trial was designed so that the portion of the picture visible through the window was easily identifiable. Therefore, past experience with the full pictures in this trial was not required to identify them. In the *relevant-past* trial, again, one doll first viewed a full picture, and the second doll had no past experience with the picture. The partial picture that was subsequently revealed through the 2-in window was ambiguous. Thus, past experience with the full pictures was necessary in order to be able to identify the small portion exposed. In the *distinct-past* trial, each character viewed a different and full picture. The part of each picture viewed in this condition looked identical through the 2-in window when these pictures were covered, and thus was ambiguous to Alex and Sam. Therefore, only if the character had a past with a picture in this trial, could Alex or Sam correctly identify it.

Following Lagattuta et al. (2010) protocol, for each of the 3 conditions described above, children were required to answer 4 questions about Sam and Alex's thoughts After children had responded to the four questions, a third character, approached. This third character's (Joe/Jo) gender was also matched to the child's gender. For each trial in the IToM task, children made predictions about the thoughts of three characters: Sam or Alex, a Sam or Alex, Joe/Jo, consistent with the test protocol outlined in Lagattuta et al. (2010). Children were also asked to explain why it was that Sam and Alex thought the same or different things. The order of these three conditions in this task was counterbalanced to prevent the possibility of an order effect. Within each condition, the order of the two trials were also counterbalanced, again, to prevent an order effect. Children were assigned a trial combination so that a comparable number of boys

and girls completed all possible trials from one to 12. Because the child interview session was video recorded, the IToM task was not coded in vivo. The coding for the IToM task was completed at a later time by two independent research assistants blind to the study hypotheses, and uninvolved with the IToM testing.

IToM scoring

For the IToM task, each child was required to complete a total of six trials (giraffe and flower; elephant and ship; snail/snake and pig/boot) across the three conditions *(irrelevant-past, relevant-past, and distinct-pasts trials)*. For each trial, a score of one was awarded to children who accurately predicted the thoughts of all three characters, Alex, Sam, and Joe/Jo. Therefore, each child could potentially earn a maximum of six points in total across the six trials. The scoring criteria as described in Lagattuta et al., (2010) are summarized in Table 2, below.

Table 2.

IToM scoring criteria by trial type

	Content and premises		Scoring Criteria: Presumed correct responses		
Trial Type	Past experience	Picture revealed through occlude	Knowledgeable character	First naive or biased character	Second naive character
Irrelevant-past	~ One character views a full picture ~ Other character has no past experience	~ Distinctive ~ Past experience not needed to identify	~ True belief	~ True belief that shares similarity with the knowledgeable character	~ True belief that shares similarity with the other two characters
Relevant-past	~ One character views a full picture ~ Other character has no past experience	~ Ambiguous ~ Past experience necessary to identify	~ True belief ~ State you cannot identify even with past experience	~ False belief, unrelated to reality or to the thought of the knowledgeable character	~ Unique false belief unrelated to reality or to the thoughts of the other two characters
Distinct-pasts	~ Each character views a different full picture ~ The pictures share a common nondescript part	~ Ambiguous ~ Past experience necessary to identify	~ True belief ~ State you cannot identify even with past experience	~ Specific false belief, based on personal past experience	~ Unique false belief, unrelated to reality or to thoughts of the other two characters

This table was reproduced with permission from the first author Dr. Kristin Lagattuta (K.H. Lagattuta, August 18, 2017, personal communication) and the APA. (Original published in "Forgetting Common Ground: Six- to Seven-Year-Olds Have an Overinterpretive Theory of Mind." by K.H. Lagattuta, L. Sayfan, and A.J. Blattman, 2010, *Developmental Psychology*, *39,* p. 1420. Copyright 2010 by the American Psychological Association.

Interrater-reliability coding for IToM task

For reliability coding and training, the principal investigator and two research assistants jointly, and independently, coded 10% of the study's data. All coding discrepancies affecting reliability were discussed and resolved among the two research assistants and the principal investigator. These research assistants (coders) were not involved at any time with the data collection process for the present study. After training, for reliability purposes, the first research assistant independently coded the remaining 90% the data, and the second research assistant independently coded 30% of the data. Following Lagattuta and colleagues' suggestion, the 30% of the data coded for reliability calculations sampled participant data from all age groups. Coders were blind to the children's ages; however, coders were not blind to children's gender. Coders were not gender-blind because this task was transcribed directly from the video recordings of the

child-interview. Coders first transcribed children's responses from the videos onto the IToM scoring sheets. Then, coders coded the transcribed responses as correct or incorrect based on the scoring criteria outlined in Table 2, above.

Scores representing IToM skills were obtained by totaling children's score on each of the six trials (giraffe and flower; elephant and ship; snail/snake and pig/boot) presented. This study followed the stringent scoring criteria outlined in Lagattuta et al. (2010), whereby children had to accurately predict the thoughts of all three characters (Alex, Sam and Joe/Jo) in order to receive a score of one for each trial. Reliability calculations for this measure reported by Lagattuta and colleagues (2010) were high. They reported kappa coefficients ranging between .84 and .95, with *M = .90,* for children's predictions, explanations, and errors. Finally, it should be noted that in order to minimize the impact of demand characteristics on this study's validity, a female research assistant blind to the study's hypotheses was hired to conduct all child interviews.

Parental socialization

The Parenting Styles and Dimensions Questionnaire (PSDQ; Robinson, Mandleco, Olsen & Hart, 1995; 2001) was available to mothers in paper and pencil format. Mothers were asked to rate themselves on 62 items using a 5-point Likert scale (1 = *Never*; 2 = *Once in a while*; 3 = *About half of the time*; 4 = *Very often*; 5 = *Always*), to assess how often they exhibited a number of parenting strategies. Each parenting behaviour measured by the PSDQ loads onto one of the three global parenting styles, authoritative (27 items), authoritarian (20 items) or permissive parenting (15 items). These dimensions are consistent with the parenting style dimensions proposed by Diana Baumrind (Baumrind, 1966; 1968). The PSDQ was developed using a large sample of fathers and mothers of preschool-aged and elementary school-aged children with varied levels of education (Robinson et al., (1995; 2001). The authoritarian subscale of the

PSDQ contains questions tapping verbal hostility towards the child (4 items), corporal punishment (6 items), non-reasoning and punitive strategies (6 items), and directiveness (4 items). Scores for the authoritarian dimension were obtained by averaging scores on items within the authoritarian dimension. Some items were reversed-scored prior to averaging (Robinson et al. (1995; 2001). Alphas reported for this scale by the Mills et al., (2010) study was.78 for mothers' self-reports.

Demographics and other predictors

The demographics section of the parent questionnaire asked questions that helped describe the recruited sample of mothers and children. This section included questions pertaining to the participating child: child birth order, child age, child global health, child gender, how long the child had lived in Canada, and child grade in school. Parents were also asked about the number of children living in their household, their marital status, how long the parent had lived in Canada, the parent's relationship to the child (biological mother, step-parent etc.), the number of hours the parent spends at work, family subjective socioeconomic status (SSES), level of education, and family income. I chose several of the above demographic variables as covariates for the final model, based on the justifications described below.

Subjective socioeconomic status (SSES) was included as a covariate in the present study because it was my intention to recruit families from diverse backgrounds. I hoped to include children from diverse family compositions, such as children from single-parent homes, and children growing up in high-risk situations. Demographic characteristics such as SES and the resulting stress on families living in poverty are not only known predictors of individual differences in early ToM development (Cutting & Dunn, 1999; Pears & Moses, 2003), but they predict individual differences in general cognitive development (Petrill, Pike, Price & Plomin,

2004), poorer executive functioning (Hackman & Farah, 2009), and lower academic skills (McLoyd, 1998). SES and the resulting family stress of living in poverty also predicted increased levels of cortisol secretion in children (Lupien, King, Meaney & McEwen, 2001). Studies have reported that cortisol levels increase when children respond with shame during task failure, indicating that shame is a psychological stressor (Dickerson, Gruenewald, & Kemeny, 2004; Mills, Imm, Walling & Weiler, 2008). A measure of SES was included in this study because living in poverty may contribute to a higher frequency of shaming experiences, and I wanted to account for such an influence.

To measure SSES, on the MacArthur Scale of Subjective Social Status (SSES), parents choose a rung on a ladder representative of their perceived status in society ranging from one (low) to 10 (high). The SSES ladder ranking is a measure of the participant's perceived place in their society (Goodman, Adler, Kawachi, Frazier, Huang, & Colditz, 2001). Reported reliabilities for this measure ranged from between .73 to .79 (Goodman, Adler, Kawachi, Frazier, Huang, & Colditz, 2001). This measure was found to be a reliable and valid composite measure of income, education, and health (Goodman, Adler, Kawachi, Frazier, Huang, & Colditz, 2001; Operario, Adler & Williams, 2004). For example, Ostrove, Adler, Kuppermann, and Washington (2000) found that SSES was significantly correlated with objective measures of SES, such as education, household income, and occupation. Although, this relation was mostly true for White, and Chinese American women, but not for African American women or Latina women. For African American women, there was no substantial relationship between the ladder, and objective measures of income, education, and occupation. For Latina women, the relationship among SSES, education, and household income resembled the pattern for White, and Chinese American women. However, the pattern of the relationship between SSES and the education variable was

different. In this study, the variance in self-rated health was primarily accounted for by SSES, with objective measures of SES accounting for no additional variance. Adler, Epel, Castallazzo, and Ickovics (2000) reported that SSES was a better predictor of psychological and physical health indicators compared to objective SES measures. Furthermore, the relations among SSES and the above indicators held, although objective measures were later added to the model for White and Chinese American women. For Latinas and African American women, it was notably that income predicted self-rated health beyond the variance accounted for by the SSES variable.

Gender is a known predictor of ToM performance, with girls outperforming boys on some tasks (Carlson & Moses, 2001). Furthermore, research suggests different developmental trajectories and levels of shame for boys versus girls (Barrett et al., 1993; Lewis et al., 1992; Mills et al., 2010). Differences in socialization experiences of boys versus girls may be one explanation why girls are more prone to shame than boys (Mills, 2005; 2010). In addition, girls are more physically mature, which could have cognitive and emotional consequences for girls (Tanner, 1989). Therefore, it was necessary to account for gender in a study that examined the interactive influence of parenting and IToM on the development of middle childhood shame.

Finally, consistent with the influence of gender outlined above, gender differences in the development of shame may also lie in gender differences associated with personality factors (Dweck & Leggett, 1988; Seligman, Peterson, Kaslow, Tanenbaum, Alloy, & Abramson, 1984). For example, in achievement and depression settings, females to a greater extent than males demonstrated a tendency towards making global self-attributions when faced with failure (Dweck & Leggett, 1988). Because of the earlier reviewed evidence of gender differences in the development of shame, I sought to recruit a comparable number of boys and girls for this study, which I did with reasonable success ($N = 60$; boys: $n = 34$; girls: $n = 26$). In a meta-analysis of

697 studies examining gender differences in self-conscious emotional experience, Else-Quest, Higgins, Allison and Morton (2012) found gender gaps in shame studies using trait versus state scales. The authors noted that trait items tapped into "global, nonspecific" assessments of the self across age. Gender differences in shame were not the same throughout development. Gender differences during childhood were not significant, although, these differences became significant during adolescence and adulthood. Therefore, along with gender, child age was an additional variable included in the final analyses.

There appears to be a pattern in the development of negative affect, such as depression, that follows the development of gender differences in shame (Else-Quest et al., 2012). Gender differences are implicated in the development of internalizing problems, especially for girls during adolescence, but not during childhood (Zahn-Waxler, Klimes-Dougan & Slattery, 2000).). The above findings indicate that both gender and age may have a moderating influence on internalizing problems (Zahn-Waxler et al., 2000). Thus, the development of shame may follow a similar pattern as the development of internalizing problems. Furthermore, shame is predictive of internalizing problems in children (Mills et al., 2015), indicating the need to further examine the development of shame in middle childhood. Children in elementary school will soon begin the transition into early adolescence. In light of the above literature review, gender and age were included as covariates in this study.

A final reason to include age as a covariate in the main analyses is that age-related cognitive changes are also consistent with the development of shame. As noted earlier, shame develops as the child progressively advance in their cognitive development. For example, children's cognitive development enables them to better appraise their behaviours in different situations, and to better internalize standards and values (Lewis, 1992). Children develop self-

awareness before they develop ToM abilities in early-childhood, followed by IToM skills in middle childhood. The age-related development of the above cognitive abilities supports the theory that the progression of age-related cognitive development may be predictive of how shame evolves throughout childhood (Lagattuta & Thompson, 2007).

Finally, parents were asked to complete a measure of their level of religiosity, which was included as a covariate in the final regression model. As reviewed above, the possibility exists that parents scoring higher on religiosity may tend to use discipline strategies promoting the development of adaptive guilt as opposed to maladaptive shame. Therefore, I developed an expectation of a negative relationship between parental religiosity and child shame, and a negative correlation between authoritarian parenting and parental religiosity. If parent religiosity fosters the development of adaptive emotions in childhood, there could be implications for children's mental health.

To explore this possibility, I measured parental religiosity using the 15-item short form of the Centrality of Religiosity Scale (CRS; Huber & Huber, 2012). The CRS captures five dimensions of the religiosity construct: Intellect (religious thoughts), Ideology (religious beliefs), Private Practice (personal devotion), Public Practice (community rituals), and Religious Experience (emotional contact with the divine) (see Huber & Huber, 2012). Thus, religiosity is operationalized as multifaceted construct by the CRS. I selected a multifaceted measure of religiosity because each dimension of the religiosity construct may be uniquely related to the various self-conscious emotions. To conclude, the various dimensions of the CRS together measure all aspects of an individual's religious life (Huber & Huber, 2012).

Had I used a one-item measure of religiosity, it would have been unclear to the participant which dimension of religiosity this single-item was measuring (Zarzycka & Rydz,

2014). For example, these authors found that some single-item measures of religiosity simply ask respondents questions such as, 'How important is religion to your life?', or 'To what extent are you religious?' One-item measures do not capture the complex structure of the religiosity construct (Zarzycka & Rydz, 2014; p.838). The model of religiosity proposed by Huber and Huber (2012) addressed the multidimensionality and complexity of the religiosity construct. Thus, the CRS captured the range of activities and experiences representative of a religious life, as well as the personal importance of religiosity to each participant.

From a psychological perspective, religiosity as measured by the CRS may be considered an inner representation, through which an individual interprets the world (Huber, 2003, as cited in Zarzycka & Rydz, 2014). Therefore, each dimension of the parental religiosity construct may have particular implications for how parents interact with their children. Nine of the CRS items were scored on the following Likert scale: a) *several times a day*; b) *once a day*; c) *more than once a week*; d) *once a week*; e) *one or three times a month*; f) *a few times a year*; g) *less often than a few times a year*; and h) *never*. The remaining 7 items were scored as follows: a) *not at all*; b) *not very much*; c) *moderately*; d) *quite a bit*; and e) *very much so*. The first 9 items were re-coded on a 5-point scale as follows: items a and b = 5; item c = 4; items d and e = 3; item f and g = 2; and item h = 1. The remaining 7 items were rescored as follows: e = 5; d = 4; c = 3; b = 2; and a = 1. Items were then summed and averaged to obtain the total score for each person. Higher scores on the religiosity construct indicated that religion is more central to an individual's personality. Higher scores on a CRS subscale indicated that that dimension was strongly reflected in that person's personality.

The CRS was validated in over 21 countries with over 100,000 participants, and the internal consistency of the CRS was reported at .93 (Huber & Huber 2012). The core dimensions

of religiosity do not measure specific religious affiliations, but instead measure a person's level of religiosity, regardless of their religious affiliation. Parent religiosity was included in this study because it may exert an influence on parents' interpersonal interactions with their child, and subsequently influence the development of shame.

To conclude, as reviewed above, there was an age and gender requirement for the present study grounded in the research literature about the age at which IToM skills had begun to stabilize, and to account for gender differences in the development of shame. Therefore, one of the recruitment strategies for the present study was to target a sample with a comparable number of boys and girls to test the predicted hypotheses. The number of children recruited for this study included $n = 34$ boys and $n = 26$ girls (Total: $N = 60$) between the ages of 7 to under 10 years. However, this sample was reduced considerably because of the reasons to be described below.

Sample size and power

At the dissertation proposal stage, power analyses were conducted to determine the optimal sample size to test the proposed model predicting the development of shame. An optimal sample size ensures adequate statistical power to detect an effect of statistical significance. An optimal sample size thus prevents the possibility of a Type II error or a failure to detect a significant effect. Power analyses for the inclusion of 6 predictor variables into multi-regression analyses were conducted using G-Power (Faul, Erdfelder, Lang & Buchner, 2007; Faul, Erdfelder, Buchner & Lang, 2009). These analyses indicated that a sample size of 128 participants was required for an 80% chance of detecting a non-null effect of moderate size with six predictor variables, and $\alpha = .05$. Power analyses are an important step in the research protocol because there is the risk of including too many participants in the research protocol and incurring

excessive costs. As well, too large a sample size could lead to results that are of statistical significance for some variables, when in fact there is no scientifically meaningful effect among these variables. On the other hand, as mentioned earlier, if a study was underpowered, then the research protocol could fail to detect the expected magnitude of effect in the model, when a scientifically meaningful effect is in fact present (Type II error). Thus, a sample size of $N = 128$ would have provided good statistical power for testing this study's hypotheses and detect any meaningful effects.

Sample characteristics

I sought to recruit a sample of approximately 128 participants. To achieve this goal, participant recruitment commenced immediately after receiving university ethics approval, school division ethics approval, and elementary school principal permission. Participant recruitment for this study first started in elementary schools in April 2016. Approximately, 300 invitation packages were distributed to participating elementary schools. Because of the low response rate from elementary schools ($n = 29$; a response rate of approximately 10%), alternative recruitment strategies as reviewed above, were set in motion.

Subsequent to receiving ethics approval to engage in alternative recruitment strategies, notices about the study were posted on notice boards across the University of Manitoba campus, and the study was advertised on the Department of Psychology's undergraduate psychology subject pool website. The recruitment process for this study began in April 2016 and ended in April 2017. By March 2017, 52 families had been recruited, however, within March and April 2017, an additional 8 families were recruited. Of the $N = 60$ participants recruited, however, only $n = 48$ participants had complete mother and child data. Thus, the hypotheses for the present study were tested using data provided by $n = 48$ participants. Coding of data for all participants

into an Excel spreadsheet began in December 2016. Reliability coding for the IToM task was completed during April and May 2017. The final spreadsheet was triple-check for data entry errors and deemed ready for hypothesis testing in June 2017.

Mother and child demographic characteristics

Mothers in this study were primarily the biological parent in 96% of cases (2% adoptive parent; 2% legal guardian); 88% were married (6% cohabitating; 2% divorced; 4% single); and 94% spent the entire week with their child (4% spent 5/7 days; 2% spent 4/7 days). Approximately 60% of mothers reported that their family income was over $75,000 (8%: $60,001 -- $75,000; 10%: $40,001 -- $60,000; 10%: $30,001 -- $40,000; 4%: $20,001 -- $30,000; and 2%: $10,001 -- $20,001). Many parents had completed university or professional degrees (46%). The remaining mothers reported completing: graduate degrees - 17%; community college certificate/diploma - 15%; trades certificate - 13%; high school -13%; and partial high school - 4%. Approximately 75% of parents had lived in Canada all their life (whereas 2%, lived 1 to 2 years; 2%, lived 3 to 5 years; 4%, lived less than 6 years; and 17%, had lived in Canada for 6 years or more. This sample consisted mainly of 2-children households (44%). The remaining families consisted of 5-children (2%), 4-children (8%), 3-children (25%), and 1-child (21%) households. Finally, the number of hours mothers spent working for pay was: 40 hours (19%), 25 to 39 hours (33%), 15 to 24 hours (10%), 1 to 14 hours (12%), and approximately 25% of mothers were not working for pay.

Children's ages in this sample consisted of primarily 7, (44%), 8 (23%), 9 (31%), and a single 10-year-old (2%) (Table 3). The majority of children had lived in Canada all their lives (85%), and were first (52%), and second-born (40%). Parents rated children's global health as *excellent* (63%), *very good* (35%), *good* (2%) and *fair* (2%). Children were primarily from grade

2 (50%), and the remaining sample was distributed as follows: grade 4 (25%), grade 3 (35%), and grade 1 (8%). The gender split of males to females in the full sample ($N = 60$) recruited for this study was 55% to 45%, while the gender split of males to females with complete mother data, and which were entered into final analyses was 50% to 50%. Table 3, below, presents the demographic information for the children participants.

Table 3.

Child demographic characteristics

Number of Child Participants in Each Demographic Category						
Gender	*n* = 32	*n* = 26				
	Male	Female				
Grade in School	*n* = 12	*n* = 17	*n* = 24	*n* = 4		
	Grade 4	Grade 3	Grade 2	Grade 1		
Child Global Health	*n* = 30	*n* = 17	*n* = 1	*n* = 0	*n* = 0	
	Excellent	Very good	Good	Fair	Poor	
Birth Order	*n* = 25	*n* = 19	*n* = 3	*n* = 1	*n* = 0	
	First-born	Second-born	Third-born	Fourth-born	Other	
Live in Canada	*n* = 41	*n* = 1	*n* = 1	*n* = 1	*n* = 2	*n* = 2
	All his/her life	Less than 1 year	1 to 2 years	3 to 5 years	6 years or less	6 years or more
Child's age	*n* = 21	*n* = 11	*n* = 15	*n* = 1		
	7 years	8 years	9 years	10 years		

Note. The number of participants in each category is based on all the participants with available data for that category.

CHAPTER 4 - RESULTS

Assumptions of multivariate analyses

These data were first examined for accuracy of data entry, missing values, reliability, and for how well each variable's distribution fit with the assumptions of multiple regression analysis. Each major variable was evaluated separately for its distributional properties and reliability using statistical programs available in SAS, Version 9.4, prior to hypotheses testing. The major predictor variables tested in this model included child gender, child age, SSES, mother religiosity, authoritarian parenting, and IToM. As presented earlier, for three of the stated hypotheses, the dependent variable was child shame.

After data were triple-checked for errors, frequencies and ranges were computed, and data were examined for unusual data entries or ranges. Missing data in this study primarily originated from mothers who had not returned a completed parent questionnaire to their child's teacher, despite receiving two reminder letters from the principal investigator. Missing reports comprising approximately 14% of mother reports, which was incredibly disappointing considering the small sample (N = 56) remaining, after accounting for participant refusal. Principals had mentioned that the low parental response rate was likely due to low parental literacy rates. The missing parent reports (n = 8) were from elementary school-recruited mothers, which reduced the sample to n = 48.

Although, a low parent-response was likely, it was still important to attempt to recruit families with broad demographic characteristics for this study. Some schools offered to assist mothers with their questionnaires, but it turned out that this additional task proved to be difficult for the already busy school personnel. Unfortunately, mothers' reports were the basis for key predictor variables, so their missing data had an unavoidable impact on the final sample size, and

reduced it to $n = 48$. Mothers reported on a variety of important variables including: child age, child gender, SSES, parent religiosity, and authoritarian parenting. Because of the number of mother reports missing, and the small data set, missing data procedures, for example, multiple imputation was not a viable option for this study.

Each variable was examined to ascertain that the assumptions of normality, independence, linearity, homoscedasticity, and multicollinearity were not violated. Examination of boxplots and histograms for each variable confirmed that the multiple regression assumption of normality was met. Examination of skewness and kurtosis statistics generated by the *Proc Univariate* program in SAS further confirmed that no variable was in major violation of the normality assumption. The values of the skewness and kurtosis statistics for all variables with the exception of child age were close to zero, indicating that these variables met the assumption of normality. The skewness statistic for age was close to zero, however the kurtosis statistic computed was -1.34, but within the range of -2/+ 2, therefore, still acceptable (Gravetter & Wallnau, 2014). Further evaluation of the above kurtosis statistic using a *z*-test for normality testing indicated that the *z*-score for kurtosis was not significant at $p<.001$. Visual examination of the child age data points revealed that the 10.3-year-old participant was a possible outlier. However, because of the small sample size, this data point remained in the data set until it was possible to examine its influence as a multivariate outlier, post hypotheses testing. Finally, differences between the mean and median for each variable included in this study were minimal, further indicating that the distributions for the study's variables approximated normality. Subsequent to hypotheses testing, examination of the scatterplots of the standardized error terms against the standardized predicted values determined by the model, ensured that the distribution

of error terms were consistent with the assumptions of normality, linearity, independence and homoscedasticity. I will elaborate on these findings in the section below.

Multicollinearity and singularity checks were conducted prior to main hypotheses testing. Examination of the intercorrelations among predictor variables revealed that no two predictors were highly correlated (multicollinearity) or redundant (singularity) with another predictor (Table 6 below). If the need had arisen, steps to address the presence of high covariation amongst the predictor variables, such as deleting one of the two highly correlated or one of the two redundant variables would have been taken. Because multicollinearity and singularity were not concerns, all predictors were entered into the final model. Post analyses, the multicollinearity statistics obtained from the multiple regression analyses were examined to prevent the risk of inflated error terms. Both Howell (2007) and Hayes (2013) suggest that smaller VIFs and larger tolerances are desirable. All predictors in this study had VIFs and tolerances close to 1, which according to Hayes (2013), "must be good" (p. 287).

Measure evaluation

The reliability of each measured variable with the exception of the IToM variable was examined. Cronbach's alpha for each scale was computed (Table 4), and compared to the reliabilities from published studies reported in the 'Testing materials' section, above. Comparisons indicated that overall, each predictor measured had acceptable internal consistency reliability.

IToM

Reliability for the IToM measure was estimated using a Pearson's product moment correlation, to determine the strength of association between the two coders on approximately 30% of the IToM scores. IToM scores were computed by totaling the number of correct

responses each child earned across the six IToM trials. Therefore, IToM scores could potentially range from 0 to 6. Reliability was calculated using 30% of the data sampled equally from both genders, and across the age spectrum. The calculated reliability of the IToM prediction scores for this study was $r = .95$, $p < .0001$, which was comparable to the average reliability of .90 reported by Lagattuta et al., (2010).

Shame

The calculated standardized Cronbach alpha for the 15 TOSCA-C items measuring shame in this study was .76. This alpha approximated those reported by others (.78; Tangney and Dearing, 2002) and (.78; Mills et al., 2010). Consequently, it was decided to utilize the complete set of 15 TOSCA-C scenarios to compute the shame score for each child.

Guilt

The standardized Cronbach alpha for the guilt variable was first computed using the full set (15) of the TOSCA-C guilt-items. However, one item, *"After everything she has done for me, how could I forget her birthday"* was negatively correlated with the total Cronbach alpha score. Including this item considerably lowered the overall standardized alpha for guilt. Therefore, this item was deleted from the guilt variable, and the standardized alpha for guilt was recalculated with the remaining 14 items. Removal of the negatively correlated guilt-item from reliability calculation increased the standardized alpha for the guilt scale from .78 to .80. This final alpha was somewhat higher than the alpha of .74 (based on 10 of the 15 guilt-items) reported by the Mills et al., (2010) study, but lower than the reliability of .83 reported by Tangney and Dearing (2002). The final internal consistency of .80 for the TOSCA-C guilt scale for the present study was judged to be acceptable.

Authoritarian parenting

Standardized Cronbach alpha for the 20 PSDQ items of the authoritarian parenting subscale was .83. This alpha was slightly lower than the alpha of .86 reported by Robinson et al., 1995; 2001). Mills and colleagues reported a lower alpha of .78 for mother reports, but they only utilized 12 of the 20 authoritarian subscale items measuring *verbal hostility*, *physical punishment*, and *punitiveness*. Therefore, they excluded the *parent directiveness* dimension of the authoritarian parenting construct. In contrast, the *parent directiveness* subscale of the authoritarian parenting construct was included in the present study, because the majority of the variance for the authoritarian parenting variable originated from this dimension.

Let us now turn to the other predictors in the model.

Gender

The full, recruited sample of $N = 60$ reported in the methodology section was based on the total number of signed consent forms received by the principal investigator. As noted earlier, one parent could not be located after they had submitted their signed consent form. Therefore, no information was available about this child's gender, and the sample was reduced to $n = 59$. At this point, the number of boys to girls recruited was comparable ($n = 33$) and girls ($n = 26$). However, this sample was subsequently reduced to $n = 56$, because two boys did not wish to participate ($n = 2$) or asked for their data to be removed ($n = 1$) from final analyses. At this point, the ratio of boys to girls became $n = 30$ *and* $n = 26$ respectively. However, only data for equal numbers of boys ($n = 24$) and girls ($n = 24$) were entered into the final regression analyses, after data for the children with missing mother reports were removed from the data set. This final sample ($n = 48$) represented the number of children in the data set with complete data and complete mother reports.

Age

As noted earlier, children were between 7 to 10.3 years, and the average age of child participants was $M = 8.4$ years. Because the goal was to recruit children between ages 7 to 9.5 years, invitation letters were distributed to grades 2, 3 and 4. The child aged 10.3 years was a bit older than anticipated, but as noted above, this child's data was still included in hypotheses testing.

Subjective socioeconomic status (SSES)

Mothers' reports of their SSES using a 10-point scale ranged from 3.0 to 9.0 with $M = 6.90$.

Descriptive statistics

Descriptive statistics including means, standard deviations, and the range of responses for each variable are reported in Table 4. Compared to published means, calculated means for shame, guilt, religiosity and authoritarian parenting were unremarkable. Mean shame ($M = 2.21$) here was slightly lower than published means ($M = 2.60$; Mills et al., 2010), and published, averaged means ($M = 2.80$; Furukawa, et al., 2012). Mean guilt ($M = 3.80$) was comparable to previous research (*M's of* 3.96; 3.94 (Mills et al., 2010; Furukawa, et al., 2012, respectively). For authoritarian parenting, $M = 1.86$ was within reported means: $M = 1.74$ (Mills et al., 2010), and $M = 2.09$ (Robinson et al., (2001), respectively. Finally, religiosity ($M = 2.80$) was comparable to norms published for Great Britain ($M = 2.74$), but lower than the United States ($M = 3.92$), which are reported in Huber and Huber (2012). Mean religiosity for the present study's sample fell within the "religious" category as opposed to the "not-religious" or "highly-religious" categories (see published norms in Huber & Huber, 2012). In summary, the reliabilities and means for the present study's variables reported in Table 4 were comparable to published reliabilities and means.

Table 4.

Measure evaluation and descriptive statistics.

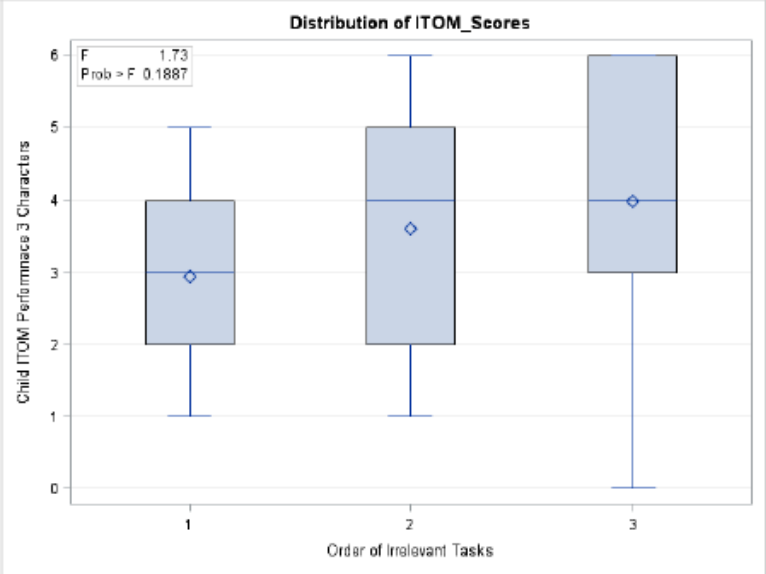
Measure	Standardized Cronbach Alpha	# of Items	n	Mean	Median	SD	Measure Range	Study Range
Shame	0.76	15	57	2.21	2.13	0.61	1 - 5	1.13 - 3.67
Guilt	0.81	14**	57	3.8	3.93	0.69	1 - 5	1.93 - 5.00
Religiosity	0.96	15	48	2.8	2.63	1.1	1 - 5	1.07 - 5.00
IToM	$r = 0.95$*	6	57	3.49	4.00	1.59	0 - 6	0.00 - 6.00
Authoritarian	0.83	20	48	1.86	1.83	0.34	1 - 5	1.10 - 2.60
Age (years)			48	8.37	8.48	0.95	-	7.0 - 10.30
Mother SSES			48	6.9	7.00	1.35	1 - 10	3.00 - 9.00

**Note. Pearson product moment correlation* determined the reliability of the IToM variable. $p < .0001$.
**Guilt reliability was computed using 14/15 TOSCA items. Descriptive statistics are based on the number of participants with data available for that category.

Other statistical checks

Lagattuta et al., (2010) reported an order effect for the irrelevant task, such that if the irrelevant past task was presented first, children were likely to make more errors on this task. Therefore, prior to final analyses, a one-way ANOVA was conducted to determine the presence of an order effect of the irrelevant task. The order effect was not significant (p = .18). However, the pattern of scores replicated those reported by Lagattuta et al. (2010), whereby, IToM scores were lower when the irrelevant task was presented first in the counterbalanced trial order (Figure 1 below).

Figure 1. Order effect of the ITOM irrelevant past task.



In addition, the present study involved two different recruitment strategies, whereby parents either responded to an advertisement or to a letter of invitation. The former had to bring their child to the lab for testing, whereas children whose parents received a letter of invitation were tested at their school. To address this issue, a new recruitment type variable (Advertisement vs. School) was created, and a series of one-way ANOVA analyses were conducted for the

Advertisement vs. School variable by each of the measured variables (authoritarian, permissive, authoritative, shame, guilt, SSES, religiosity, gender, and IToM scores). Differences emerged for the permissive parenting variable ($p<.05$), whereby, mothers who responded to advertisements, and whose children were tested at the lab were higher on permissive parenting. Because, permissive parenting was not central to the main hypotheses of this study, no further steps were taken to address this group difference. The variable Advertisement vs. School variable also entered into final analyses to account for any variance attributable to recruitment type-testing location.

Finally, to determine that each of the PSDQ parenting subscales, permissive, authoritarian and authoritarian were unique measurements, correlations among these three parenting subscales were computed. Calculated correlations revealed that permissive, authoritarian and authoritarian parenting were not significantly correlated with each other, indicating uniqueness among the measured subscales (Table 5).

Table 5.

Parenting subscales correlations.

Parenting Subscale	1.	2.	3.
1. Permissive	--		
2. Authoritarian	.24	--	
3. Authoritative	-.13	-.16	--

Note: The above subscales were not significantly correlated.

Multiple regression data analysis

Table 6.

Intercorrelations among the main study variables

Measures	1.	2.	3.	4.	5.	6.	7.	8.
1. Shame	--							
2. Guilt	**.30***	--						
3. IToM	-.13	.02	--					
4. Authoritarian Parenting	-.06	-.03	.02	--				
5. Religiosity	**.32***	-.15	.03	.12	--			
6. Gender (Girls = 1; Boys = 0)	-.01	.11	.08	-.18	.14	--		
7. SSES	.09	.10	-.07	**.33***	.05	-.03	--	
8. Age	.01	-.10	-.18	.13	-.01	-.03	-.01	--

* $p<05$.

$n = 48$.

Calculation of guilt-free shame residuals

Recall, that a positive correlation was expected for guilt and shame TOSCA-C scores, and this calculated correlation was ($r = .30$; $p<.05$; see Table 6, above). As reviewed in the methodology section, because raw shame and guilt scores act as "cooperative suppressors" (Tabachnick & Fidell, 2013), it was important to analyze guilt-free shame scores as the dependent variable in the final model. Therefore, guilt-free shame residuals were computed prior to hypothesis testing. To compute pure shame residuals, the *Proc Reg* program in SAS was executed to remove the variance in child shame explained by guilt. Shame-free of guilt residuals were saved and entered into the *Proc Glm* SAS program as the dependent variable in the final model. Calculated guilt-free residual scores are referred to as *Shame* scores in the following analysis.

Model testing

The model between *Shame* as the dependent variable, and child gender, child age, SSES, mother religiosity, authoritarian parenting, IToM, the interaction authoritarian parenting x IToM, and Advertisement vs. School as independent variables was tested using *Proc Glm* in SAS. The predicted model was tested with alpha set at a .05 level of significance. Model testing using the *Proc Glm* program in SAS allowed me to test three hypotheses (Hypotheses 1, 3 and 4) simultaneously. The advantage to using *Proc Glm* was that this program accounted for the effects of each predictor, after considering and adjusting for the effects of all other predictors in the model. Particularly, *Proc Glm* provided Type III Sums of Squares, which allowed me to evaluate the unique contribution of each variable in the model after the contribution of all other variables was considered. All predictors and covariates were entered simultaneously into the statistical model tested using *Proc GLM*. As described in the methodology section, the decision to enter each variable into the model was assessed in an a priori fashion after reviewing the literature. Prior to hypotheses testing, all variables were centered to make their interpretation more meaningful (Aikin & West, 1991; Wishman & McCelland, 2005). For example, age at birth (age at birth = 0), would have been difficult to interpret. Therefore, age was centered using the median of the age variable. All other variables were centered also around their respective medians as opposed to their means, because medians are less easily influenced by outliers. Finally, when interaction terms, such as IToM x authoritarian parenting are tested in a model, the recommendation is that the original variables to be included in the interaction be centered, prior to computing the interaction variable (Tabachnick & Fidell, 2013). Failure to center the original IToM and authoritarian parenting variables would have resulted in an interaction term that was

highly correlated with the original IToM and authoritarian variables, leading to statistical multicollinearity (Tabachnick & Fidell, 2013).

Subsequent to hypothesis testing, scatterplots of the standardized residual error terms plotted against the standardized predicted-y values were evaluated to determine the presence of multivariate outliers. Results of the evaluation of the scatterplots with regards to multivariate outliers led to the discovery of two outliers. However, examination of the plot of the observations against the Cook's D statistic indicated that these observations had Cook's D values of less than 1.00. Cook's D values greater than 1 indicate unusually high influence (Tabachnick & Fidell, 2013). But, this was not the case with these two observations, and they remained in the data set.

Plots were also examined to determine whether the assumptions of multiple regression analyses, including linearity, independence of error and homoscedasticity were violated by these data. These scatterplots indicated an even spread of the error terms around the zero line. No trends, curvilinear relationships, heteroscedasticity, and skewness were observed, indicating that the assumptions of normality, linearity, homoscedasticity and independence of error terms were met by the data. A violation of either one of these assumptions would have also lowered the statistical power of the multiple regression techniques used to detect a meaningful effect, and further interfered with any statistical inferences made (Tabachnick & Fidell, 2013). If multiple regression assumptions were not met by the study's data, I would have taken steps to normalize the data. However, these data met the assumptions for conducting multiple regression analyses.

Details of multiple regression analyses for each of the stated hypotheses

I had hypothesized the following: 1) a positive association between authoritarian parenting and child shame; 2) a negative association between authoritarian parenting and IToM;

3) a negative association between IToM and shame; and 4), higher levels of IToM skills attenuate the positive association between authoritarian parenting and shame. If a significant interaction was found, then simple slopes testing for authoritarian parenting against shame using high and low levels of the moderator variable IToM would have been conducted.

The full model as proposed was tested with all predictors entered simultaneously, however the overall model predicting shame did not explain the data, $F_{(8, 47)} = 1.59$, $p = .16$, 95% CI [0.00, 0.33], and the null hypothesis could not be rejected. The outcomes for individual hypotheses will now be discussed, and a summary of the results from the regression analyses conducted is presented below (Table 8).

Hypothesis 1 - authoritarian parenting and child shame

It was predicted that increasing levels of authoritarian parenting would be positively associated with increasing levels of child shame. Model testing revealed that this hypothesis was unsupported by the data, $F_{(8, 47)} = .61$, $p = .44$, 95% CI [00, .13].

Hypothesis 2 - authoritarian parenting and IToM

It was predicted that increasing levels of authoritarian parenting would be negatively associated with decreasing levels of IToM skills. However, Pearson product-moment correlations calculated (Table 6), revealed that this hypothesis was unsupported by the data, $r\ (48) = .02$, $p = .86$.

Hypothesis 3 - IToM and child shame

It was predicted that increasing levels of IToM skills would be negatively associated with child shame. Model testing revealed that this hypothesis was not supported by the data, $F_{(8, 47)} = .18$, $p = .67$, 95% CI [.00, .10].

Hypothesis 4 - interaction of authoritarian parenting x IToM on child shame

The main hypothesis predicted a positive association between authoritarian parenting and shame attenuated for children with higher IToM scores. This interaction hypothesis about child shame was also not significant, $F_{(8, 47)} = 1.99$, $p = .17$, 95% CI [.00, .19].

Parental religiosity and child shame

Of the predictor variables tested in the overall model, only one predictor, mother religiosity was a significant and independent predictor of shame $F_{(8,47)} = 8.88$, $p < .01$, 95% CI [.02, .35] (Table 8, below). I had some beliefs about likely direction, however, the direction of the relationship between mother religiosity and child shame was opposite. Based on the literature reviewed above, I expected mother religiosity and shame to be negatively correlated, however parent religiosity and shame were positively correlated $r = .32$, $p < 0.05$ (Table 6, above). Further exploration of the religiosity and shame relationship were conducted by examining the association between the five religiosity subscales and shame. Table 7, below presents the religiosity subscales and their correlations with shame. Shame was significantly correlated ($p < .05$) with the Intellectual (.31), Public (.34), and Experience (.28) subscales of the CRS.

Table 7.

Intercorrelations among the religiosity (CRS) subscales and shame.

Variable	1.	2.	3.	4.	5.	6.
1. Intellectual	--					
2. Ideology	.61**	--				
3. Public	.79**	.63**	--			
4. Private	.74**	.74**	.80**	--		
5. Experience	.68**	.76**	.70**	.79**	--	
6. **Shame**	**.31***	.25	**.34***	.24	**.28***	--

**p<.0001.
*p<.05.
n = 48.

Table 8, below, displays the details of the full model and its 8 elements. An R^2 = .25 for the regression model was not significantly different from zero, 95% CI [.00, .33]. The adjusted-R^2 value of .10 indicates that only 10% of the variability in children's shame proneness was predicted by child age, child gender, SSES, parent religiosity, authoritarian parenting, IToM, the interaction (authoritarian parenting x IToM), and the Advertisement vs. School variables. However, examination of the squared semi-partial correlations showed that parent religiosity accounted for 19% of the *shame* variance, leaving only 6% of the remaining variance to be shared among the other seven predictors.

The size and direction of the only significant predictor in the model, parent religiosity, suggests that parents scoring higher on the centrality of religiosity construct had children reporting higher levels of shame. Calculating the squared semi-partial correlation of religiosity

($sr^{2\ (religiosity)} = .19$) above, is an indication of how much the R^2 for this model would be reduced if religiosity was removed from the model. For, religiosity, the conservative confidence interval is 95% CI [.03, .37], and does not include zero. Religiosity secured up to 19% of the variance in shame, according to the present study's data.

Table 8.

Regression analysis summary for variables predicting child shame

Predictor variables	Child Shame (residuals)		
	t-value	*β*	*SEB*
Intercept	-0.6	-0.1	0.2
Hypotheses			
ITOM	-0.4	-0.1	0.1
Authoritarian Parenting	-0.8	-0.2	0.3
ITOM x Authoritarian Parenting	1.4	0.2	0.1
Other predictors			
Religiosity	**3.0***	0.2	0.1
Gender	-0.6	-0.1	0.2
Age	0.5	0.1	0.1
SSES	0.3	0.1	0.1
Methodology			
Advertisement vs. School	0.8	0.1	0.2

$R^2 = .25$. Adjusted-$R^2 = .10$.

$F = 1.59$, *ns.*

*$p<.01$.
$n = 48$.

CHAPTER 5 - DISCUSSION

Proneness to shame is problematic for some children and understanding why children vary in shame proneness could help us treat it. Children's ability to understand others' thinking may be an important contributor to the development of shame proneness. The main goal of this study was to examine the combined influence of authoritarian parenting style and interpretative theory of mind (IToM) on individual differences in middle childhood shame. The present study was to provide insight on how individual differences in children's capacity to represent and interpret others' points of view, or IToM, predict individual differences in child shame. Three related, and foundational, hypotheses that undergird the interaction hypothesis were tested in the present study. They were: 1) there is a positive association between authoritarian parenting and child shame; 2) there is a negative association between authoritarian parenting and IToM; and 3) there is a negative association between IToM and child shame.

The primary hypothesis tested by the present study was that advanced IToM skills attenuate the positive authoritarian parenting and child shame relationship. I predicted that the cognitive-interpretive processes associated with advanced IToM skills would facilitate decreased levels of shame. However, neither the foundational nor the main hypotheses were supported. Instead, an unexpected and surprisingly important relationship between maternal religiosity and shame emerged. I will now evaluate the results obtained for each hypothesis tested in the present study before discussing the influence of the included covariates (child age, child gender, and social class). Then, I will discuss the unexpected effect between maternal religiosity and shame to bring clarity to this unexpected effect. Finally, the study limitations, implications, and suggestions for future research will be discussed.

Authoritarian parenting did not predict child shame

Parental socialization practices have been found to predict child shame. More specifically, a positive association between authoritarian parenting and shame in middle childhood has been reported (Barber & Harmon, 2002; Crossfield et al., 2002; Ferguson & Stegge, 1995; Lewis, 1992; 2014; Mills, 2003; Mills et al., 2010), with parenting having an important influence on children's emotional development in general (Grusec & Davidov, 2008). However, in the present study, authoritarian parenting was not only a non-significant predictor of shame, but to the extent that there was a relationship, it was negative (r = -.06).

Why this null result? Perhaps it was due to sample composition. Although, authoritarian parenting and child shame mean scores approximated published means, there may have been too few high authoritarian parents to fairly test this hypothesis.

A related explanation for this outcome is volunteer bias. I suspect that high authoritarian parenting is related to an unwillingness to participate in a parenting study. Volunteer bias is a difficult issue in all kinds of socialization research studies. For example, one parent returned their uncompleted parenting questionnaire and a note. They wrote that they were uncomfortable with the questions in the parent questionnaire, would not complete it, and would like to withdraw their child's data. If authoritarian parents are less likely to volunteer than non-authoritarian parents, the resulting restriction of range would work against a good test of this hypothesis.
A related influence is social desirability, or a tendency towards favourable self-reporting. Parents may have been motivated towards favourable responding on the authoritarian parenting measure. Furthermore, social desirability may have been more likely for mothers responding to the advertisements, because these mothers met with me in the lab. However, as discussed earlier, no significant group differences existed between mothers recruited by advertisements vs. invitation

letters, for any of the important variables. Lastly, mothers in this study mostly reported a high level of SSES, and higher SES mothers are considered more susceptible to social desirability (Graves & Glick 1979; Pine 1992; as cited in Hoff, Larsen & Tardiff, 2002). Volunteer bias and social desirability may have contributed to a shortage of high authoritarian parents in this study.

Authoritarian parenting did not predict IToM

Prompted by gaps in the existing literature, I predicted a negative relationship between authoritarian parenting and IToM skills in middle childhood. Instead, I found a non-significant association between authoritarian parenting and IToM. Frohlick (2015) has also reported similar, non-significant results. Whilst I was proposing this study, Sherri Frohlick was simultaneously defending her dissertation. She examined mother's parenting style, mother's use of mental state words, mother's engagement, mother's responsiveness, and mother's sensitivity of control as predictors of 5-to 8-year-old children's understanding of interpretation. Like the present study, she found no significant relationships between children's understanding of interpretation and a variety of parenting variables. Frohlick (2015) suggested that variables like conversations, family discussions, the influence of other caregivers, and children's experiences across various social settings may play a more important role in promoting interpretive skills (see Susswein, 2007, for a similar perspective).

Frohlick's argument is in line with Sameroff and Haith's (1996) notion that new social partners such as peers become more influential in middle childhood. These new social partners, in turn, may influence children's social understanding (Carpendale & Lewis, 2010). The non-significant relationship between authoritarian parenting and IToM may be explained by changes in children's circumstances that are associated with middle childhood. Middle childhood is associated with a "shift" in children's circumstances, whereby on a given day, children spend

increasing hours with new social partners, such as peers and teachers (see review in Sameroff & Haith, 1996). In middle childhood, parents have a reduced role in their child's life, due to peer and school influence. Given that reduced influence, in middle childhood, parental influence on the development of social understanding may be attenuated.

IToM did not predict child shame

My hypothesis was that there would be a negative relation between IToM and child shame. IToM skills promote children's understanding that others construct unique perspectives about reality. In addition, IToM promotes children's own ability to construct unique perspectives about other people's thoughts. I argued that IToM may protect against, and be related to shame However, this hypothesis was not supported by my data.

I considered the possibility that the stringent approach to measuring IToM skills adopted from Lagattuta et al. (2010) might be hiding an effect that would be apparent with looser measurement criteria. Consequently, I examined this hypothesis again using less stringent criteria. However, even this variation in the stringency in scoring the IToM task did not change the outcome of this hypothesis test. Perhaps, individual differences in middle childhood IToM may be less important for the development of shame, compared to earlier developing ToM. In addition, perhaps future studies need to control for earlier developing ToM, because only then, may the effects of IToM emerge in analyses. Therefore, more studies are required to understand the IToM and shame relationships.

IToM skills do not attenuate the authoritarian parenting-shame relation

My main question was whether IToM skills moderated the relationship between authoritarian parenting and child shame. Like the previous hypotheses, this interaction hypothesis was unsupported by the data. Perhaps the levels of shame sampled were too low to be

revealing in this community sample. For example, clinical samples of inpatient girls revealed higher levels of shame proneness compared to a non-clinical sample (Cesare, Francesco, Valentina, Barbara, Olivia, Gianluca, Patrizia, & Enrico, 2016). In comparison to Cesare et al., my study sample reported more moderate levels of shame. Levels of shame reported by the community sample recruited by Mills et al., 2010 were also moderate. Future studies could better test this hypothesis by targeting samples of children that are likely to report higher levels of shame.

Other predictors: gender, age, SSES and parental religiosity.

In addition to the predictors associated with child shame outlined in the preceding hypotheses, several supplementary predictors of shame were also evaluated in the current study. They included two child characteristics, gender and age, and a family characteristic, SSES. In addition to authoritarian parenting, a second parent variable, parental religiosity was examined. It is to the significance of the additional predictors included in this study, to which I now turn.

Child gender

Child gender was not a significant predictor of shame, which was very surprising. Based on previous reports confirming that girls experience higher levels of shame than boys (Barrett, Zahn-Waxler & Cole, 1993, Lewis, Alessandri & Sullivan, 1992; Mills et al, 2010), I expected a significant relationship between gender and shame. But, this study's data did not support this outcome. A possible explanation could be secular changes in gender socialization in recent decades. Changes in beliefs about gender socialization are reflected by a decline in traditional beliefs in favour of more egalitarian ones (see Dorius & Alwyn, 2010 for a review). Consistent with this possibility, Else-Quest et al. (2012) reported that gender differences in shame during childhood were not significant. However, they also found that gender differences in shame were

significant during adolescence and adulthood. Overall, based on this study, and the extant literature, the findings with regards to gender and shame in childhood are still mixed.

Age

Child age was not significantly associated with child shame or children's IToM skills. As reviewed in the methodology section, age-related trajectories are associated with the development of shame. Age-related trajectories have also been found with regards to children's understanding of the causes of self-conscious emotional experiences (Berti, Garattoni & Venturini, 2000; Ferguson, Stegge & Damhuis, 1991; Griffin, 1995; Vaish, Carpenter & Tomasello, 2011). Why I did not find a relationship between age and shame is unclear. The most likely possibility is that the age range was too narrow in this middle childhood sample to detect an age effect. In addition, an examination of the IToM by age scatterplot indicated that a number of younger children scored considerably higher than older children on the IToM task. This finding likely reflects the effects of environmental influences on IToM development and is one possible explanation of the nonsignificant age by IToM relationship, I found.

SSES

Subjective socioeconomic status (SSES) did not predict shame in middle childhood. However, it was positively, and moderately (Hemphill, 2003) correlated with authoritarian parenting. This positive relationship was, to say the least, surprising because the current consensus in the literature is that traditional SES and authoritarian parenting are *negatively* correlated (see Hoff, Laursen, & Tardif, 2002, for a review). There appears to be a gap in the literature with regards to parenting style and SSES, compared to the availability of literature on traditional SES indicators and parenting style.

In my study, about half the mothers worked less than 24 hours per week, but at the same time, about 70% of mothers characterized their SSES status as high (7-9 on the 10-point scale). This suggests that the SSES levels reported by these mothers may be a characterization of the *family*'s general SSES status. In contrast, their reports related to authoritarian parenting may have been about their personal style of parenting. This interpretation, although speculative, aligns with Lerner's (2003) position that the SES and parenting relationship should be understood from a dynamic systems perspective.

Parent religiosity

For many religions and societies, shame and guilt are considered the moral emotions—signaling the norms, standards, rules, and goals for individuals to aspire to (Tangney & Fischer, 1995). For this reason, the centrality of religion to parents was examined as a possible predictor of parents' socialization practices and children's emotional development.

I measured maternal religiosity with the Centrality of Religiosity Scale (CRS; Huber & Huber, 2012), with the expectation that it would predict adaptive guilt, but not maladaptive shame. Higher scores on the religiosity construct is an indication that religiosity is highly salient to parents (Huber & Huber, 2012), with likely implications for parenting beliefs and practices. As reviewed above, CRS scores reflect important aspects of one's personality with respect to religiosity (Huber & Huber, 2012; Zwingmann, Klein & Bussing, 2011). Similarly, as reviewed above, child shame measured by the TOSCA-C represents children's disposition to respond with shame. A relationship between parental religiosity and child shame, or child guilt, would reflect an association between a dispositional aspect of mothers' religiosity and a dispositional aspect of children's self-conscious emotional responding.

A major strength of this result was the fact that data were collected from different participants using different methods (parent self-report vs. child semi-structured interview). Scores for parental religiosity and child shame were obtained separately from mothers' self-reports and children's self-reports at different time points during the data collection process. This circumstance largely rules out shared method variance as an explanation for the observed relationship. What, then, are the implications of this relationship between religiosity and child shame?

My review of the research on religiosity in adulthood led me to expect that parent religiosity would *positively* predict adaptive guilt, but not maladaptive shame. Consequently, the positive association between religiosity and shame was unexpected, which in turn prompted a more detailed literature search. That search unearthed the fact that child shame and parent religiosity may be very important for the development of self-identity during adolescence (Czub, 2013; Czyżowska & Mikołajewska, 2014).

Erikson (1964, 1965) argued that religion is important to the formation of a coherent identity. Moreover, the absence of religion in one's life may lead to the development of an incoherent identity (see overview of Erikson's developmental theory on the relationship between religiosity and identity in Czyżowska & Mikołajewska, 2014, and Scarlett & Warren, 2010). Czyżowska and Mikołajewska (2014) asked a sample of 300 adolescents to complete the CRS, and a measure of identity processing style. They found that low religiosity was associated with an incoherent identity and that high religiosity was associated with greater identity coherence. Their study revealed that religiosity may play a role in both the transmission, and the reinforcement of values, standards and rules, which are internalized into the self-system, and in turn, influence identity formation.

Furthermore, Czub (2013) has recently argued that the relationship between shame and identity formation is through shame's role in self-regulation. Czub (2013) outlines two perspectives on shame: the evolutionary or adaptive nature of shame (see reviews in Kaufman, 1985; 1989; Mills, 2005), and the cognitive-attributional or maladaptive perspective on shame (in line with the perspectives of Michael Lewis, 1992; Tangney & Fischer, 1995; Tangney & Dearing, 2002). Czub (2013) proposed that adaptive shame plays a role in self-regulation by promoting behaviours that are consistent with values, rules and standards, whereas maladaptive shame is disruptive to self-regulation. However, both types of self-regulation, concluded Czub (2013), have implications for identity development. Adaptive-shame self-regulation is expected to facilitate adaptive identity development, whereas maladaptive-shame self-regulation would be detrimental to identity formation (Czub, 2013).

The TOSCA-C measure of shame, used in the present study, clearly fits within the cognitive-attributional perspective, and, as reviewed above, would be a measure of maladaptive shame (and a measure of adaptive guilt). Although identity development is a developmental task specific to adolescence, middle childhood shame may foreshadow shame in adolescence, which in turn, may influence identity integrity and coherence. As reviewed earlier, adaptive shame is thought to encourage behaviours promoting social acceptance. Adaptive shame is also thought to promote engagement with goals central to identity integrity, whilst maladaptive shame is thought to promote maladaptive withdrawal or negative emotions that distract an individual from goals central to their identity integrity (summarized in Czub, 2013). The implication of the present study's findings is that religiosity may predict adaptive or maladaptive shame in middle childhood, which in turn, may preface later identity cohesion or fragmentation in adolescence.

The extant literature on children's understanding of religiosity also highlights additional mechanisms explaining the present study's finding of a link between maternal religiosity and children's self-conscious emotional development. Bamford and Lagattuta (2010) examined children's understanding of the relationship between prayers and emotions in three groups of children (4-, 6- and 8-year-olds). Four- and 6-year-olds reported that positive emotions would motivate praying. On the other hand, 8-year-olds reported that negative emotions would motivate praying, and that engaging in pray activities, in turn, would lead to fewer negative emotional experiences (Bamford & Lagattuta, 2010). Davoodi, Corriveau and Harris (2016) found that both Iranian and U.S. children recognized that the individuals in historical stories are real. However, both Iranian and U.S children exposed to religious narratives and practices were more likely to report that the characters in fantastical stories were also real, compared to children without religious exposure. These reviewed findings suggest that through religious exposure, children may be exposed to a representation of God as a real entity, which in turn, may generalize to children's representation of fantastical story characters.

Lane, Evans, Brink and Wellman (2016) found that both theory of mind and religious background were predictive of children's understanding of concepts about God. Children's ToM performance differentially predicted God's awareness of one's internal desire in early versus middle childhood. In early childhood, better ToM performers predicted that God would have less awareness of inner desires. However, in middle childhood, only lower ToM performers predicted that God would have less awareness of one's inner desires. Lane et al. (2016) suggested that ToM skills in early versus middle childhood differentially support the psychological capacities required for children's awareness of, communication with, and children's thoughts about what God would know about others' inner desires. Children's engagement in prayer activities also

correlated strongly with children's predictions that God would be more knowledgeable of others' desires (Lane et al., 2016). The extant literature establishes links among religiosity, shame, emotions in general, and social understanding (ToM).

The literature just reviewed on children's understanding of God-related concepts and links to emotions provides some support for the present study's finding of a moderate association between parental religiosity and child shame. This literature also provides some ideas about the mechanisms through which children reflect on God-related concepts, as well as mechanisms through which children could internalize religious messages originating from their parents. Lane and colleagues provide some specific examples of how parents may communicate God's knowledge to their children. Examples of messages parents may communicate to their children include, "God hears your prayers," "God knows what is in your heart" (p. 26; Lane et al., 2016). In a similar fashion, Thagard (2005) proposes that parental religiosity may influence the standards, rules and values that parents transmit to their children, and against which, children evaluate themselves. Thus, according to Thagard's (2005) perspective, children's evaluations against the religiously influenced standards transmitted from their parents to children, predict children's moral emotional experiences.

Most religions have a positive view of God (Thagard, 2005), therefore children's mental representations of aspirational religious beliefs and standards should also be positive. Furthermore, from an early age children believe that God has privileged knowledge of inner desires, compared to humans (Lane, Wellman & Evans, 2010). These are all possible mechanisms explaining the relationship between parental religiosity and shame. The ideals that parents communicate to children, and against which children evaluate themselves, may be embedded within parental-religious messages (Thagard, 2005). Thagard (2005) argues that "the

major predictor of religious faith of children is the religion of their parents," and "children take it for granted that their parents are a reliable source of information, so that children can quickly infer from "Parent says X" to "X is true"." (p. 8). Children will believe testimony about the existence of God if their parents state this to be true (Thagard, 2015). When children compare themselves against parent-communicated religiously influenced ideals, and they fall short, children may likely experience shame.

Religious beliefs are both cognitively and emotionally informed (Thagard, 2005). Therefore, it would be possible for children to evaluate themselves based on their mental representations of religious beliefs, and religious standards, and goals. Religious-related ideals and values communicated to children by parents become internalized into the child's self-concept. This mental representation, according to Thagard (2015), has both cognitions and emotions embedded within it. Thus, these cognitions and emotions inform the child's self-evaluation (Thagard, 2015), and may result in processes influencing children's self-conscious emotional experiences, which may in turn, my influence the development of later self-identity (Czub, 2013; Czyżowska and Mikołajewska, 2014). These ideas just summarized are consistent with my finding of a non-chance relationship between parent religiosity and child shame proneness. Finally, this study's findings are consistent with theories reviewed earlier, on parental influences on the development of self-conscious emotions.

Study limitations

Earlier, study limitations, such as recruitment challenges, sample size, volunteer bias, and social desirability were discussed. Another limitation of this study was that it did not control for differences in religious beliefs and ideology. Instead, the present study utilized a measure of religiosity that was non-specific to certain religious beliefs. It is very likely that religion-specific

beliefs and ideology may differentially predict self-conscious emotions (see review in Fischer & Richards, 1998, for religion-specific teachings and beliefs that parents transmit to their children). Therefore, future studies could utilize both broad and specific measures of religiosity to examine how religious-specific beliefs predict parent-to-parent differences in religiosity and influence the development of shame and guilt.

The maternal religiosity-child shame relationship investigated by the present study was specific to middle childhood. Therefore, generalizations should not be made to preschool-aged children and adolescents. For example, Woolley, Cornelius and Walters (2011) and Legare and Gelman (2007) found age-related developmental differences in how children acquire religious explanations of events. Therefore, future studies could examine the religiosity-self-conscious emotional link found in this present study with preschool-aged children, and with adolescents, to better understand the effects of maternal religiosity on self-conscious emotional development.

Finally, this study did not examine the range of mechanisms operating between maternal religiosity and child shame. Mechanisms, such as age-related cognitive development in childhood may underlie the parental religiosity and child shame relationship, I found. While the effects of IToM were examined by this study, IToM did not reveal anything about the maternal religiosity-child shame mechanism. Future studies could examine other child-cognitive factors, by including measures of children's early ToM ability and children's second-order ToM skills, because age-related differences in social understanding may underlie the maternal religiosity and child shame relationship. Finally, another child-specific factor future studies could examine is individual differences in children's temperament. Temperamental differences were found to predict individual differences in child shame (Mills et al., 2010), thus temperament may be associated with individual differences in the ease with which children accept religious

socialization. Thus, in a number of important ways, future studies could attempt to bring to light the specific mechanisms underlying the maternal religiosity and child shame association, this present study found.

Study implications

Overall, the main finding of this study implies that parents do matter when it comes to the development of shame in middle childhood – just not in the expected fashion. The current study's finding that parental religiosity predicted shame in middle childhood makes a new and important contribution to our understanding of the development of the self-conscious emotions. My findings support existing theories on the importance of parental socialization influences on the development of the self-conscious emotions. This important finding also has implications for clinical practice. Thus, when considering children's emotional development, clinicians should also consider influences beyond parental influences, such as the influence of religiosity on self-conscious emotional development. Finally, the present's study finding of a positive association of maladaptive shame and religiosity is of importance, because of the reviewed literature on the consequences of maladaptive shame across development. There may be specific aspects of mother religiosity predicting maladaptive shame versus adaptive guilt, which could be examined by future studies.

Furthermore, as noted in the results section, religiosity is a complex construct, with certain realms of maternal religiosity correlating with child shame, whereas others did not. The Intellectual, Public, and Experience dimensions were correlated with child shame, whereas the Ideology and Private subscales of maternal religiosity were not significantly correlated with child shame. This fine-grained analysis offered deeper insight into the maternal religiosity-child shame relationship. As reviewed in the methodology section, the Intellectual dimension measured

mother's religious thought processes, the Public dimension measured mother's involvement in social and public religious rituals, and the Experience dimension measured the intensity of mother's religious experiences. However, maternal Private devotional practices, and maternal religious Ideology, involving mother's beliefs about the divine and religious convictions did not predict child shame. These findings highlight that certain aspects of maternal religiosity are selectively relevant for child shame. These dimensions may be a significant signpost for parental practices that predict children's emotional development. This additional distinction among the religiosity subscales is significant for exploring the effects of religiosity on childhood emotional outcomes. The association between religiosity and shame was moderate, with religiosity securing 19% of the 25% of the variance accounted for by the model. This is a substantively important finding that is ripe for further exploration. These results suggest that religiosity is complex in its effects, and different religious dimensions may have specific implications for children's self-conscious emotional development.

Overall, religiosity has been a neglected feature of parental socialization practices as predictive of children's shame proneness. In support of my argument about the general neglect of religiosity in relation to the self-conscious emotions, Fischer and Richards (1998) also argued that the implications of religion have been neglected in childhood, in both the theoretical and empirical realms. Maternal religiosity is a complex construct, and we do not know the underlying mechanisms predicting child outcomes, or how maternal religiosity itself interacts with child factors, such as gender, cognitive development, and temperament. This study did not examine these influences, but future studies should, because there would likely be implications for theoretical models of self-conscious emotional development.

Finally, the unsupported relationship between authoritarian parenting and IToM was consistent with the empirical evidence reviewed above (Frohlick, 2015; Susswein, 2007), which concluded that parenting style may be less predictive of middle childhood understanding of interpretation, and more predictive of earlier false belief understanding. The consistency in the literature, reviewed above, with regards to this issue gives me a high level of confidence about the present study's findings.

Suggestions for future research

Most research about the relationship between religion and the self-conscious emotions have focused on religious background. Tangney and Dearing (2002) reported that religious affiliation was not a significant predictor of guilt, or shame. Instead, Tangney and Dearing suggested that this issue may need a different focus, and they advocated for further research into the relationship between religion, and the "moral emotions" (shame and guilt). My finding supports their suggestion, and parent-to-parent difference in religiosity relative to specific religious background needs to be explored further.

Studies have focused on the influence of religion on parenting style or child rearing (see review in Bridges & Moore, 2002), but fewer studies have examined the relationship between parental religiosity, children's social-cognitive abilities, and children's self-conscious emotional development. I explored these relationships in middle childhood, but this area is ripe for the exploration with younger children and adolescents using appropriate measures. Another question future studies could explore is the extent to which higher versus lower levels of parental religiosity impact the development of adaptive levels versus maladaptive levels of shame. The following research questions could be articulated and explored: 1) Do higher levels of parental religiosity predict higher levels of maladaptive shame in childhood, 2) Do moderate levels of

parental religiosity predict adaptive guilt in childhood, and 3) What is the impact of parental religiosity on children's socioemotional functioning in various contexts, such as within peer interactions and within teacher-child relationships?

In the present study, I used a measure of shame that was based on the cognitive-attributional perspective on shame. However, future research could use multiple measures of shame that are based in the evolutionary-affective theory of shame proposed by Sylvan Tomkins in concert with cognitive-attributional perspectives on shame. Analyses that explore the development of shame from these unique theoretical bases would be relevant for a deeper explanation of the process of shame development. Future studies could also include multiple measures of parenting and parental religiosity. These questionnaires could also be offered to parents using a medium that guarantees parent anonymity, with the hope of lowering the effects of social desirability. Online studies, for example, guarantee parents a greater level of anonymity. Finally, when assessing parenting variables, researchers should not only rely on parental reports, but they should also measure children's perceptions of their parents' parenting style and practices.

Significance of the current study and conclusions

This study was the first to examine the joint influence of a social-cognitive skill and socialization experiences on the development of shame in middle childhood. The main hypothesis was that children's IToM ability would moderate the positive association between authoritarian parenting and shame. However, the study's data supported neither the interaction hypothesis nor its assumptions about parent-child relationships and the development of shame. Another goal of this study was to identify additional parent factors associated with shame and guilt in middle childhood. Among them was a measure of the importance of religion to parents.

A positive and moderate association between parental religiosity and middle childhood shame emerged. Although parental religiosity was predictive of shame, it was not significantly associated with middle childhood guilt. The moderate correlation between parental religiosity and child shame indicates that there are other parental characteristics than parenting style that influence the development of shame versus guilt in childhood. This correlation points to an important and new finding about the development of shame in middle childhood.

Although the study supports an association between parental religiosity and shame in middle childhood, an understanding of the mechanism through which parental religiosity operates to influence shame remains to be determined. Parental religiosity may influence parenting style, which in turn may influence shame in childhood. Alternatively, religiosity may capture other aspects of parenting practices that has been overlooked but should be studied.

To conclude, this was the first study to examine the relationship between a parent religiosity construct and the development of shame in middle childhood. This work provides a foundation for future studies to examine the explanatory mechanisms operating between parent religiosity and shame in middle childhood. We need to look beyond customary measures of parenting style to fully understand children's self-conscious emotional development. The present study's main message for theories of self-conscious emotions is that parents are important, and they influence their children's self-conscious emotional development, though not necessarily only in the ways we have been assuming.

Finally, this study's findings should be considered a serious call to action on the part of developmental researchers. Developmental researchers should continue to study the antecedents of individual differences in shame in childhood. However, instead of focusing on authoritarian parenting as a concept for understanding intervention possibilities, research should instead focus

on more specific parent practices, such as specific parent practices related to maternal religiosity when trying to understand the development of the self-conscious emotions and when designing intervention mechanisms.

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APPENDIX A

Ethics Approval Certificates

UNIVERSITY OF MANITOBA | Research Ethics and Compliance
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APPROVAL CERTIFICATE

January 5, 2016

TO: **Debra Lall** (Supervisor: Warren Eaton)
Principal Investigator [redacted]

FROM: **Kelley Main, Chair**
Psychology/Sociology Research Ethics Board (PSREB)

Re: **Protocol #P2015:154**
"Understanding the Connection Between Children's Early Experiences and Thoughts on Their Emotional Development (School Testing)"

Please be advised that your above-referenced protocol has received human ethics approval by the **Psychology/Sociology Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement (2). It is the researcher's responsibility to comply with any copyright requirements. **This approval is valid for one year only**.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Coordinator in advance of implementation of such changes.

Please note:

- **If you have funds pending human ethics approval, please mail/e-mail/fax (261-0325) a copy of this Approval (identifying the related UM Project Number) to the Research Grants Officer in ORS in order to initiate fund setup. (How to find your UM Project Number: http://umanitoba.ca/research/ors/mrt-faq.html#pr0)**

- **if you have received multi-year funding for this research, responsibility lies with you to apply for and obtain Renewal Approval at the expiry of the initial one-year approval; otherwise the account will be locked.**

The Research Quality Management Office may request to review research documentation from this project to demonstrate compliance with this approved protocol and the University of Manitoba *Ethics of Research Involving Humans*.

The Research Ethics Board requests a final report for your study (available at: http://umanitoba.ca/research/orec/ethics/human_ethics_REB_forms_guidelines.html) **in order to be in compliance with Tri-Council Guidelines.**

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AMENDMENT APPROVAL

April 7, 2016

TO: **Debra Lall** **(Supervisor: Warren Eaton)**
Principal Investigator

FROM: **Kelley Main, Chair**
Psychology/Sociology Research Ethics Board (PSREB)

Re: **Protocol #P2015:154**
"Understanding the Connection Between Children's Early Experiences and Thoughts on Their Emotional Development (School Testing)"

This will acknowledge your Amendment Request dated April 6, 2016 requesting amendment to the above-noted protocol.

Approval is given for this amendment. Any further changes to the protocol must be reported to the Human Ethics Coordinator in advance of implementation.

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AMENDMENT APPROVAL

September 21, 2016

TO: **Debra Lall** **(Advisor: Warren Eaton)**
Principal Investigator

FROM: **Kelley Main, Chair**
Psychology/Sociology Research Ethics Board (PSREB)

Re: **Protocol #P2015:154 (HS19209)**
"Understanding the Connection Between Children's Early Experiences and Thoughts on Their Emotional Development (School Testing)"

This will acknowledge your Amendment Request dated September 19, 2016 requesting amendment to the above-noted protocol.

Approval is given for this amendment. Any further changes to the protocol must be reported to the Human Ethics Coordinator in advance of implementation.

UNIVERSITY OF MANITOBA | Research Ethics and Compliance
Office of the Vice-President (Research and International)

Human Ethics
208-194 Dafoe Road
Winnipeg, MB
Canada R3T 2N2
Phone +204-474-7122
Fax +204-269-7173

AMENDMENT APPROVAL

November 14, 2016

TO: **Debra Lall** (Advisor: Warren Eaton)
Principal Investigator

FROM: **Kelley Main, Chair**
Psychology/Sociology Research Ethics Board (PSREB)

Re: **Protocol #P2015:154 (HS19209)**
"Understanding the Connection Between Children's Early Experiences and Thoughts on Their Emotional Development (School Testing)"

This will acknowledge your Amendment Request dated November 10, 2016 requesting amendment to the above-noted protocol.

Approval is given for this amendment. Any further changes to the protocol must be reported to the Human Ethics Coordinator in advance of implementation.

UNIVERSITY OF MANITOBA | Research Ethics and Compliance

Human Ethics
208-194 Dafoe Road
Winnipeg, MB
Canada R3T 2N2
Phone +204-474-7122
Email: humanethics@umanitoba.ca

RENEWAL APPROVAL

Date: December 9, 2016 **New Expiry:** January 4, 2018

TO: **Debra Lall** **(Advisor: Warren Eaton)**
Principal Investigator

FROM: **Kelley Main, Chair**
Psychology/Sociology Research Ethics Board (PSREB)

Re: **Protocol #P2015:154 (HS19209)**
"Understanding the Connection Between Children's Early Experiences and Thoughts on Their Emotional Development (School Testing)"

Psychology/Sociology Research Ethics Board (PSREB) has reviewed and renewed the above research. PSREB is constituted and operates in accordance with the current *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans.*

This approval is subject to the following conditions:

1. Any modification to the research must be submitted to PSREB for approval before implementation.
2. Any deviations to the research or adverse events must be submitted to PSREB as soon as possible.
3. This renewal is valid for one year only and a Renewal Request must be submitted and approved by the above expiry date.
4. A Study Closure form must be submitted to PSREB when the research is complete or terminated.

Funded Protocols:
- **Please mail/e-mail a copy of this Renewal Approval, identifying the related UM Project Number, to the Research Grants Officer in ORS.**

UNIVERSITY OF MANITOBA | Research Ethics and Compliance

Human Ethics
208-194 Dafoe Road
Winnipeg, MB
Canada R3T 2N2
Phone +204-474-7122
Email: humanethics@umanitoba.ca

AMENDMENT APPROVAL

January 11, 2017

TO: **Debra Lall** **(Advisor: Warren Eaton)**
Principal Investigator

FROM: **Kelley Main, Chair**
Psychology/Sociology Research Ethics Board (PSREB)

Re: **Protocol #P2015:154 (HS19209)**
"Understanding the Connection Between Children's Early Experiences and Thoughts on Their Emotional Development (School Testing)"

Psychology/Sociology Research Ethics Board (PSREB) has reviewed and approved your Amendment Request dated **January 11, 2016** to the above-noted protocol. PSREB is constituted and operates in accordance with the current *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans.*

This approval is subject to the following conditions:

1. Approval is given for this amendment only. Any further changes to the protocol must be reported to the Human Ethics Coordinator in advance of implementation.
2. Any deviations to the research or adverse events must be submitted to PSREB as soon as possible.
3. Amendment Approvals do not change the protocol expiry date. Please refer to the original Protocol Approval or subsequent Renewal Approvals for the protocol expiry date.

APPENDIX B

Letter to School Division/Principal

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

November 15, 2017

Dear Superintendent/Principal,

Re: Invitation to participate in a study on children's emotional development

I am writing to invite approximately 130 students from grades 2, 3 and 4 attending (insert school and division name) and their families to participate in a study entitled *Understanding the Connection Between Children's Early Experiences and Their Emotional Development*. Review of the psychological literature indicates that children's emotional development needs to be better understood. Therefore, child development researchers, teachers and parents would all likely benefit from more information about children's emotional development. A better understanding of children's emotional development is important, because emotions affect long-term psychological, social, cognitive and physical health, which in turn impacts academic achievement over time. I hope that you will assist the students in your division with participating in this study.

My name is Debra Lall, and I am a doctoral student in the Department of Psychology at the University of Manitoba, being supervised by of Dr. Warren Eaton, a Senior Scholar at the Department of Psychology. We hope that you will be able to assist us with this study by first distributing the letters of invitation to participate in this study to parents. These letters contain information about how parents can contact us to participate. To compensate parents for their time, and as an expression of our appreciation for their contributions to the study, each family will receive a $20 thank-you gift card to McNally Robinson. For their assistance in helping us schedule children for testing, at the end of the study, each teacher will receive a $30 thank-you gift card to McNally Robinson.

In this study, children will be involved in one research session with a research assistant, during which they will complete tasks measuring aspects of their social-cognitive abilities. We will also interview children to find out how they think and feel, and how they view themselves. For example, we would describe some hypothetical everyday situations to each child and ask what he or she would think if they occurred, and how he or she would react. This research session will last approximately an hour-and-a half, which includes time for a break and snack. Each research session will be video recorded for later coding.

We will also be asking parents to complete questionnaires. These questionnaires will ask parents about their families, about their parenting, and about their children's behavior and health. All information provided by parents and children, and all video recordings will be securely stored at the university. If possible, all research sessions would ideally be conducted at the school. If you have a room at the school that we can use to conduct the research sessions with the children, please grant us access.

The Psychology/Sociology Research Ethics Board at the University of Manitoba has approved this project. This means the study will be safely and well done. The confidentiality of every family member would be protected, and all information families provide will be kept secure, accessible to Dr. Eaton, two research assistants and me. The names of the school, children and their families would not appear on any materials, and the results would be reported for all the study participants as a group, not for individuals. If at anytime families or the school no longer wish to be in the study, you/they would be free to withdraw without explanation. Children and parents are also free not to answer any questions if they do not wish to, without explanation.

At anytime, if you have concerns about this project you may contact Dr. Eaton, me, [redacted] or the Human Ethics Coordinator at (humanethics@umanitoba.ca, 204-474-7122).

Yours truly,

Debra Lall, Doctoral Candidate
Principal Investigator

UNIVERSITY OF MANITOBA Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

Information for Principal Investigator:

Business Address:

Position Title: Doctoral Candidate
Institution: University of Manitoba
Office: P440, Duff Roblin Building
University of Manitoba
UMlalld@myumanitoba.ca

Information of Doctoral Advisor:

Business Address:

Dr. Warren Eaton
Senior Scholar
Department of Psychology
University of Manitoba
(warren.eaton@umanitoba.ca, Telephone: 204-474-9739)

APPENDIX C

Parent Consent Forms

1) School
2) Undergraduate Subject Pool
3) Notice Board

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

April 11, 2016

Dear Parent,

Re: Invitation to participate in a study on children's emotional development

Do you have a child between 7 and 9 years of age? If so, I invite you and your child to participate in a research study. It's about children's emotional development and their early experiences. A better understanding of children's emotions is important because knowing more will help us to greatly improve the quality of programs and services available to children. If you and your child choose to participate, you will receive a thank-you $20 gift card for McNally Robinson Bookstore.

What would be involved? You would be asked to complete a questionnaire about you and your child. Your child will visit with us once at their school for about an hour-and-a-half. During the visit, we will ask your child how he or she thinks and feels in some hypothetical everyday situations that children may encounter. We will also give your child some brief tests of cognitive abilities. For example, I will show your child some pictures and ask your child to tell us how others could think about these pictures. We would also play some picture games much like the picture games your child would do at school. All the information you share with us will be kept confidential. You and your child would be free to stop your participation at any time for any reason.

Who am I? I am a doctoral student in developmental psychology at the University of Manitoba, and I am supervised by Dr. Warren Eaton, a Senior Scholar at the Department of Psychology. This project has been reviewed and approved by the University of Manitoba's Psychology/Sociology Research Ethics Board. If you have questions or concerns about this study, please contact me (UMlalld@myumanitoba.ca, [redacted] Dr. Eaton (warren.eaton@umanitoba.ca, 204-474-9739) or the Human Ethics Secretariat, Pinar Eskicioglu (humanethics@umanitoba.ca, 204-474-7122).

If you would like to help us with this study, please call or email me to schedule a time for your child's visit.

Yours truly,

[redacted]

Debra Lall, PhD Candidate
Department of Psychology,
[redacted] UMlalld@myumanitoba.ca

UNIVERSITY OF MANITOBA

Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

INFORMATION AND CONSENT FORM

Project title: Understanding the Connection Between Thoughts and Experience on Children's Emotions

Principal Researcher: Debra Lall, PhD Candidate, Department of Psychology, University of Manitoba, Email: UMlalld@myumanitoba.ca, Tel: [redacted]

Academic Advisor: Dr. Warren Eaton, Department of Psychology, University of Manitoba, Email: Warren.Eaton@ad.umanitoba.ca

---

My name is Debra Lall, and I am a doctoral student in Developmental Psychology in the Department of Psychology, University of Manitoba. I will be conducting this university-based research about children's emotional development with supervision from Dr. Warren Eaton, a Senior Scholar in the Department of Psychology, University of Manitoba. The goal of this research is to learn as much as we can about children's emotional development, by studying the influence of children's thoughts and experience on their emotions. You probably want to learn as much as you can about your child's emotional development. A better understanding is important, because emotions affect many aspects of a child's psychological, social and physical health, as well as their academic achievement. You and your child's participation in this study will increase our understanding of children's emotions.

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

If you decide to participate in this study, we will only be scheduling one visit with your child at his/her school. We will also send you some questionnaires to complete and return to us prior to your child's visit with us. To compensate you for your time, and as an expression of our appreciation for your help, your child will receive a gift card of $20.00 to McNally Robinson at the end of the visit. Your child's visit with us at his or her school will last about an hour-and-a half, or more. The research area will be equipped with a video camera that would allow us to record activities with your child (videos allow us to concentrate on interacting with your child during the visit and study his or her responses at a later time). When the study ends, all video recordings will be erased, unless you give permission otherwise (see below).

We will ask you some questions about how you interact with your child, and your family circumstances. We are also very interested in how your child thinks and feels in different social situations. We will describe some hypothetical everyday situations and then ask your child how he or she would think if they occurred, and how he would react to each situation as if it actually happened to him or her. We would also give your child some brief tests of cognitive abilities. For example, I will show your child some pictures and ask your child to tell us how others would think about these pictures. We will give you a call after you have consented to participate in the study and received the questionnaires, to see if you have any questions

The Psychology/Sociology Research Ethics Board at the University of Manitoba has approved this study. This means that the research will pose no risks beyond those of daily life. The University of Manitoba may look at the research records to ensure that the research is being done in a safe and proper way. The confidentiality of every family member participating in this study would be protected. However, if child abuse were to be indicated, I would be legally obligated to report it. If you participate, the information you provide, along with you and your child's name would be kept confidential, securely transmitted, securely stored under lock and key, and accessible only by Dr. Warren Eaton, two immediate research assistants and me. The results from this study would be reported for all the parents and children as a group, not for individuals. Your collective knowledge will help us learn more about children's emotional development, than we could have learnt without your help. You and other parents may benefit from the results of the study, which will be made available by December 2016. If you like, we will send you a summary of the results of the study once they are available (see below).

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

Your signature on this form indicates that you have understood and are satisfied with the information regarding participation in the research project and ***agree that you and your child*** **(insert child's full name)** _____ ***will participate in this study***. Participation does not waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and or refrain from answering any questions you prefer to omit, without prejudice or consequence. If you decide to withdraw from the study, you will still receive the thank you gift card. Your continued participation should be as informed as your initial consent so you should feel free to ask for clarification or new information though out your participation. Please do not hesitate to call me (Debra Lall) at [redacted]

If you have any concerns about this project you may contact me, or my PhD advisor Dr. Warren Eaton, or the Human Ethics Secretariat at 204-474-7122; e-mail: humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference.

_____
Signature of Parent or Guardian Date

_____
Signature of Researcher and/or Delegate Date

The videotape of your child will be erased at the end of the study, unless you (or both of you) permit it to be kept so that it could be used to train research assistants in the procedure, or for demonstration purposes in presentations of this research. If kept, it would be stored in a secure place and would not be used for any other purposes. If you wish to give your permission, please sign below.

_____
Signature of Parent or Guardian Date

If you would like a copy of the summary of the results, please complete below and return along with your consent to participate form in the attached envelope.
I would like a copy of the summary of the results: ____ Yes ____ No

_____
Participant's Signature Date

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

Your signature on this form indicates that you have understood and are satisfied with the information regarding participation in the research project and ***agree that you and your child*** **(insert child's full name)**_____ ***will participate in this study***. Participation does not waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and or refrain from answering any questions you prefer to omit, without prejudice or consequence. If you decide to withdraw from the study, you will still receive the thank you gift card. Your continued participation should be as informed as your initial consent so you should feel free to ask for clarification or new information though out your participation. Please do not hesitate to call me (Debra Lall) at [redacted]

If you have any concerns about this project you may contact me, or my PhD advisor Dr. Warren Eaton, or the Human Ethics Secretariat at 204-474-7122; e-mail: humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference.

_____
Signature of Parent or Guardian Date

_____
Signature of Researcher and/or Delegate Date

The videotape of your child will be erased at the end of the study, unless you (or both of you) permit it to be kept so that it could be used to train research assistants in the procedure, or for demonstration purposes in presentations of this research. If kept, it would be stored in a secure place and would not be used for any other purposes. If you wish to give your permission, please sign below.

_____
Signature of Parent or Guardian Date

If you would like a copy of the summary of the results, please complete below and return along with your consent to participate form in the attached envelope.
I would like a copy of the summary of the results: ____ Yes ____ No

_____
Participant's Signature Date

Is there someone we could contact should there be a next phase of this study and we cannot locate you?

Name: _____

Telephone: _____

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

October 3, 2016

Dear PSYC 1200 Student,

Re: Invitation to participate in a study on children's emotional development

Do you have a child between 7 and 9 1/2 years of age? If so, I invite you, your spouse and your child to participate in a research study. It's about children's emotional development and their early experiences. A better understanding of children's emotions is important because knowing more will help us to greatly improve the quality of programs and services available to children. If you choose to participate in Part 1 of this study, you will receive 2 research participation credits. Your spouse and child will receive a thank-you $30 gift card for McNally Robinson Bookstore for their participation in Part 2 of this study.

What would be involved? You and your spouse would each be asked to complete a questionnaire about you and your child. Your child will visit with us once at the university for about an hour-and-a-half. During the visit, we will ask your child how he or she thinks and feels in some hypothetical everyday situations that children may encounter. We will also give your child some brief tests of cognitive abilities. For example, I will show your child some pictures and ask your child to tell us how others could think about these pictures. We would also play some picture games much like the picture games your child would do at school. All the information you share with us will be kept confidential. You, your spouse and your child would be free to stop your participation at any time for any reason.

Who am I? I am a doctoral student in developmental psychology at the University of Manitoba, and I am supervised by Dr. Warren Eaton, a Senior Scholar in the Department of Psychology. This project has been reviewed and approved by the University of Manitoba's Psychology/Sociology Research Ethics Board. If you have questions or concerns about this study, please contact me (UMlalld@myumanitoba.ca, [redacted] Dr. Eaton (warren.eaton@umanitoba.ca, 204-474-9739) or the Human Ethics Secretariat (humanethics@umanitoba.ca, 204-474-7122.

If you would like to help us with this study, please sign-up for a Part 1, one-hour timeslot on the Psychology Sub-pool website, so that you and I can meet for the informed consent process, and for you to complete your questionnaire. During this one-hour timeslot, which constitutes Part 1 of this study, I will give to you a consent form for Part 2 of this study and a questionnaire for you to give to your spouse, and schedule a time for your child's visit. Your spouse's completion of the parent questionnaire and your child's visit to the lab constitutes Part 2 of this study. Please bring along the signed Part 2 consent form and your spouse's questionnaire to your child's scheduled visit with us at the university.

Yours truly,

[redacted]

Debra [redacted]

UNIVERSITY OF MANITOBA Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

INFORMATION AND CONSENT FORM

Project title: Understanding the Connection Between Thoughts and Experience on Children's Emotions

Principal Researcher: Debra Lall, PhD Candidate, Email: UMlalld@myumanitoba.ca

Academic Advisor: Dr. Warren Eaton, Email: Warren.Eaton@umanitoba.ca

My name is Debra Lall, and I am a doctoral student in Developmental Psychology in the Department of Psychology, University of Manitoba. I will be conducting this university-based research about children's emotional development with supervision from Dr. Warren Eaton, a Senior Scholar in the Department of Psychology, University of Manitoba. The goal of this research is to learn as much as we can about children's emotional development, by studying the influence of children's thoughts and experience on their emotions. You probably want to learn as much as you can about your child's emotional development. A better understanding is important, because emotions affect many aspects of a child's psychological, social and physical health, as well as their academic achievement. You and your child's participation in this study will increase our understanding of children's emotions.

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

If you decide to participate in this study, you will receive 1 research credit for each half-hour you spend participating in Part 1 of this study. Part 1 of this study involves you completing the informed consent process, completing your parent questionnaire, and making arrangements for your spouse and child to participate in Part 2 of this study. Arrangements for Part 2 of this study involves giving you a Part 2 consent form, a parent questionnaire for your spouse and scheduling your child's visit with us. We will be scheduling one visit with your child at the Social Cognition and Emotional Development Lab, at the University of Manitoba. It is expected that Part 1 of this study should last approximately 1 hour, and you will earn 2 research credits. As an expression of our appreciation of your spouse and child's participation in Part 2 of this study, they will receive a gift card of $30.00 to McNally Robinson Bookstore at the end of the child's visit. Your child's visit with us at the university could last about an hour-and-a half, or more. The research area will be equipped with a video camera that would allow us to record activities with your child (videos allow us to concentrate on interacting with your child during the visit and study his or her responses at a later time). When the study ends, all video recordings will be erased, unless you give permission otherwise (see below).

We will ask you some questions about how you interact with your child, and your family circumstances. We are also very interested in how your child thinks and feels in different social situations. We will describe some hypothetical everyday situations and then ask your child how he or she would think if they occurred, and how he would react to each situation as if it actually happened to him or her. We would also give your child some brief tests of cognitive abilities. For example, I will show your child some pictures and ask your child to tell us how others would think about these pictures.

The Psychology/Sociology Research Ethics Board at the University of Manitoba has approved this study. This means that the research will pose no risks beyond those of daily life. The University of Manitoba may look at the research records to ensure that the research is being done in a safe and proper way. The confidentiality of every family member participating in this study would be protected. However, if child abuse were to be indicated, I would be legally obligated to report it. If you participate, the information you provide, along with you and your child's name would be kept confidential, securely transmitted, securely stored under lock and key, and accessible only by Dr. Warren Eaton, two immediate research assistants and me. The results from this study would be reported for all the parents and children as a group, not for individuals. Your collective knowledge will help us learn more about children's emotional development, than we could have learnt without your help. You and other parents may benefit from the results of the study, which will be made available by July 2017. If you like, we will send you a summary of the results of the study once they are available (see below).

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

Consent to participate in Part 1(copy):

Your signature on this form indicates that you have understood and are satisfied with the information regarding participation in Part 1 of the research project and ***agree that you will participate in Part 1 of this study***. Participation does not waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from Part 1 of this study at any time, and or refrain from answering any questions you prefer to omit, without prejudice or consequence. If you decide to withdraw from Part 1 of this study, you will still receive 2 research participation credits. Your continued participation should be as informed as your initial consent so you should feel free to ask for clarification or new information throughout your participation. Please do not hesitate to call me (Debra Lall) at [redacted]

If you have any concerns about this project you may contact me, or my PhD advisor Dr. Warren Eaton, or the Human Ethics Secretariat at 204-474-7122; e-mail: humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference.

Signature of PSYC 1200 Parent or Guardian Date

Signature of Researcher and/or Delegate Date

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

Consent to participate in Part 2 (copy):

You and your spouse's signature on this form indicates that you have understood and are satisfied with the information regarding participation in Part 2 of the research project and ***agree that your child*** **(insert child's full name)** _____***will participate in Part 2 of this study***. Participation does not waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw your child from the child interview at any time, and or refrain from answering any questions you prefer to omit, without prejudice or consequence. If you decide to withdraw your child during the interview at the university, you will still receive the thank you gift card. Your continued participation should be as informed as your initial consent so you should feel free to ask for clarification or new information though out your participation. Please do not hesitate to call me (Debra Lall) at [redacted]

If you have any concerns about this project you may contact me, or my PhD advisor Dr. Warren Eaton, or the Human Ethics Secretariat at 204-474-7122; e-mail: humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference.

_____
Signature of PSYC 1200 Parent or Guardian Date

_____
Signature of Spouse Date

_____
Signature of Researcher and/or Delegate Date

The videotape of your child will be erased at the end of the study, unless you (or both of you) permit it to be kept so that it could be used to train research assistants in the procedure, or for demonstration purposes in presentations of this research. If kept, it would be stored in a secure place and would not be used for any other purposes. If you wish to give your permission, please sign below.

_____
Signature of Parent or Guardian Date

If you would like a copy of the summary of the results, please complete below and return along with your consent to participate form in the attached envelope.
I would like a copy of the summary of the results: ____ Yes ____ No

_____
Participant's Signature Date

Is there someone we could contact should there be a next phase of this study and we cannot locate you?

Name: _____
Telephone: _____

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

Consent to participate in Part 1:

Your signature on this form indicates that you have understood and are satisfied with the information regarding participation in Part 1 of the research project and ***agree that you will participate in Part 1 of this study***. Participation does not waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from Part 1 of this study at any time, and or refrain from answering any questions you prefer to omit, without prejudice or consequence. If you decide to withdraw from Part 1 of this study, you will still receive 2 research participation credits. Your continued participation should be as informed as your initial consent so you should feel free to ask for clarification or new information though out your participation. Please do not hesitate to call me (Debra Lall) at [redacted]

If you have any concerns about this project you may contact me, or my PhD advisor Dr. Warren Eaton, or the Human Ethics Secretariat at 204-474-7122; e-mail: humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference.

Signature of PSYC 1200 Parent or Guardian Date

Signature of Researcher and/or Delegate Date

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

Consent to participate in Part 2:

You and your spouse's signature on this form indicates that you have understood and are satisfied with the information regarding participation in Part 2 of the research project and ***agree that your child*** **(insert child's full name)** _____ ***will participate in Part 2 of this study***. Participation does not waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw your child from the child interview at any time, and or refrain from answering any questions you prefer to omit, without prejudice or consequence. If you decide to withdraw your child during the interview at the university, you will still receive the thank you gift card. Your continued participation should be as informed as your initial consent so you should feel free to ask for clarification or new information though out your participation. Please do not hesitate to call me (Debra Lall) at [redacted]

If you have any concerns about this project you may contact me, or my PhD advisor Dr. Warren Eaton, or the Human Ethics Secretariat at 204-474-7122; e-mail: humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference.

_____
Signature of PSYC 1200 Parent or Guardian Date

_____
Signature of Spouse Date

_____
Signature of Researcher and/or Delegate Date

The videotape of your child will be erased at the end of the study, unless you (or both of you) permit it to be kept so that it could be used to train research assistants in the procedure, or for demonstration purposes in presentations of this research. If kept, it would be stored in a secure place and would not be used for any other purposes. If you wish to give your permission, please sign below.

_____
Signature of Parent or Guardian Date

If you would like a copy of the summary of the results, please complete below and return along with your consent to participate form in the attached envelope.
I would like a copy of the summary of the results: ____ Yes ____ No

_____
Participant's Signature Date

Is there someone we could contact should there be a next phase of this study and we cannot locate you?

Name: _____
Telephone: _____

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

October 11, 2016

Dear Parent,

Re: Invitation to participate in a study on children's emotional development

Do you have a child between 7 and 9 1/2 years of age? If so, I invite you and your child to participate in a research study. It's about children's emotional development and their early experiences. A better understanding of children's emotions is important because knowing more will help us to greatly improve the quality of programs and services available to children. If you and your child choose to participate, you will receive a thank-you $40 gift card for McNally Robinson Bookstore.

What would be involved? You would be asked to complete a questionnaire about you and your child. Your child will visit with us once at the university for about an hour-and-a-half. During the visit, we will ask your child how he or she thinks and feels in some hypothetical everyday situations that children may encounter. We will also give your child some brief tests of cognitive abilities. For example, I will show your child some pictures and ask your child to tell us how others could think about these pictures. We would also play some picture games much like the picture games your child would do at school. All the information you share with us will be kept confidential. You and your child would be free to stop your participation at any time for any reason.

Who am I? I am a doctoral student in developmental psychology at the University of Manitoba, and I am supervised by Dr. Warren Eaton, a Senior Scholar at the Department of Psychology. This project has been reviewed and approved by the University of Manitoba's Psychology/Sociology Research Ethics Board. If you have questions or concerns about this study, please contact me (UMlalld@myumanitoba.ca, [redacted] Dr. Eaton (warren.eaton@umanitoba.ca, 204-474-9739) or the Human Ethics Secretariat (humanethics@umanitoba.ca, 204-474-7122.

If you would like to help us with this study, please call or email me to schedule a time for your child's visit.

Yours truly,

[redacted]

Debra Lall, PhD Candidate
Department of Psychology,
[redacted] UMlalld@myumanitoba.ca

UNIVERSITY OF MANITOBA Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

INFORMATION AND CONSENT FORM

Project title: Understanding the Connection Between Thoughts and Experience on Children's Emotions

Principal Researcher: Debra Lall, PhD Candidate, Department of Psychology, University of Manitoba, Email: UMlalld@myumanitoba.ca, Te[redacted]

Academic Advisor: Dr. Warren Eaton, Department of Psychology, University of Manitoba, Email: Warren.Eaton@ad.umanitoba.ca

My name is Debra Lall, and I am a doctoral student in Developmental Psychology in the Department of Psychology, University of Manitoba. I will be conducting this university-based research about children's emotional development with supervision from Dr. Warren Eaton, a Senior Scholar in the Department of Psychology, University of Manitoba. The goal of this research is to learn as much as we can about children's emotional development, by studying the influence of children's thoughts and experience on their emotions. You probably want to learn as much as you can about your child's emotional development. A better understanding is important, because emotions affect many aspects of a child's psychological, social and physical health, as well as their academic achievement You and your child's participation in this study will increasing our understanding of children's emotions.

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

If you decide to participate in this study, we will only be scheduling one visit with your child at the University of Manitoba. We will also send you some questionnaires to complete and return to us prior to/or at the time of your child's visit with us. To compensate you for your time, and as an expression of our appreciation for your help, you and your child will receive a gift card of $40.00 to McNally Robinson at the end of the visit. Your child's visit with us at the Social Cognition and Emotional Developmental Lab in the Department of Psychology will last about an hour-and-a half, or more. The research area will be equipped with a video camera that would allow us to record activities with your child (videos allow us to concentrate on interacting with your child during the visit and study his or her responses at a later time). When the study ends, all video recordings will be erased, unless you give permission otherwise (see below).

We will ask you some questions about how you interact with your child, and your family circumstances. We are also very interested in how your child thinks and feels in different social situations. We will describe some hypothetical everyday situations and then ask your child how he or she would think if they occurred, and how he would react to each situation as if it actually happened to him or her. We would also give your child some brief tests of cognitive abilities. For example, I will show your child some pictures and ask your child to tell us how others would think about these pictures. We will give you a call after you have consented to participate in the study and received the questionnaires, to see if you have any questions

The Psychology/Sociology Research Ethics Board at the University of Manitoba has approved this study. This means that the research will pose no risks beyond those of daily life. The University of Manitoba may look at the research records to ensure that the research is being done in a safe and proper way. The confidentiality of every family member participating in this study would be protected. However, if child abuse were to be indicated, I would be legally obligated to report it. If you participate, the information you provide, along with you and your child's name would be kept confidential, securely transmitted, securely stored under lock and key, and accessible only by Dr. Warren Eaton, two immediate research assistants and me. The results from this study would be reported for all the parents and children as a group, not for individuals. Your collective knowledge will help us learn more about children's emotional development, than we could have learnt without your help. You and other parents may benefit from the results of the study, which will be made available by July 2017. If you like, we will send you a summary of the results of the study once they are available (see below).

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

Your signature on this form indicates that you have understood and are satisfied with the information regarding participation in the research project and ***agree that your child*** **(insert child's full name)** _____***will participate in this study***. Participation does not waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and or refrain from answering any questions you prefer to omit, without prejudice or consequence. If you decide to withdraw from the study, you will still receive the thank you gift card. Your continued participation should be as informed as your initial consent so you should feel free to ask for clarification or new information though out your participation. Please do not hesitate to call me (Debra Lall) at [redacted]

If you have any concerns about this project you may contact me, or my PhD advisor Dr. Warren Eaton, or the Human Ethics Secretariat at 204-474-7122; e-mail: humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference.

_____
Signature of mother Date

_____
Signature of father Date

_____
Signature of researcher and/or delegate Date

The videotape of your child will be erased at the end of the study, unless you (or both of you) permit it to be kept so that it could be used to train research assistants in the procedure, or for demonstration purposes in presentations of this research. If kept, it would be stored in a secure place and would not be used for any other purposes. If you wish to give your permission, please sign below.

_____
Signature of mother Date

_____
Signature of father Date

If you would like a copy of the summary of the results, please complete below and return along with your consent to participate form in the attached envelope.
I would like a copy of the summary of the results: ____ Yes ____ No

_____
Participant's Signature Date

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

Your signature on this form indicates that you have understood and are satisfied with the information regarding participation in the research project and ***agree that your child*** **(insert child's full name)** _____***will participate in this study***. Participation does not waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and or refrain from answering any questions you prefer to omit, without prejudice or consequence. If you decide to withdraw from the study, you will still receive the thank you gift card. Your continued participation should be as informed as your initial consent so you should feel free to ask for clarification or new information though out your participation. Please do not hesitate to call me (Debra Lall) at [redacted]

If you have any concerns about this project you may contact me, or my PhD advisor Dr. Warren Eaton, or the Human Ethics Secretariat at 204-474-7122; e-mail: humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference.

_____
Signature of mother Date

_____
Signature of father Date

_____
Signature of researcher and/or delegate Date

The videotape of your child will be erased at the end of the study, unless you (or both of you) permit it to be kept so that it could be used to train research assistants in the procedure, or for demonstration purposes in presentations of this research. If kept, it would be stored in a secure place and would not be used for any other purposes. If you wish to give your permission, please sign below.

_____
Signature of mother Date

_____
Signature of father Date

If you would like a copy of the summary of the results, please complete below and return along with your consent to participate form in the attached envelope.
I would like a copy of the summary of the results: ____ Yes ____ No

_____
Participant's Signature Date

Is there someone we could contact should there be a next phase of this study and we cannot locate you?

Name: _____

Telephone: _____

APPENDIX D

Child Consent Form

UNIVERSITY OF MANITOBA Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID #____

INFORMATION AND CONSENT FORM FOR CHILDREN AGE 7 to 9

Project title: Understanding the Influence of Thoughts and Experience on Children's Emotions

Researcher: Debra Lall, PhD Candidate, Department of Psychology, University of Manitoba

Academic Advisor: Dr. Warren Eaton, Department of Psychology, University of Manitoba

---

I want to tell you what you would be doing, so that you can decide if you still want to be part of this learning project. We'll do some activities that are similar to the ones you do at school, and some that are different. We'll do some knowledge activities – a bit like what you do in school, e.g., some picture games. But most of the time, I will be asking you what you think about lots of different things. There are no right or wrong answers, I'm just interested in what you think and feel. I'll also tell you some stories and ask you to pretend they're happening to you, because this is a fun and easy way to find out what you think. I will also show you some pictures and then ask you how someone else would react to them, as if they actually saw these pictures.

When I do this learning project, I always talk to people privately and keep everything they tell me to myself – I never tell anyone what someone else said, not even other people in the family. So just like I will talk to your parents in private if you decide to do these activities with me, you and I will talk in private. However, you may discuss our conversation with your parents if you want to. It will take us about an hour-and-a-half or more, so we'll stop for a break and a snack when we feel like it.

If you decide you'd like to do this learning project and change your mind, that is quite all right and I will understand. Or, if there's a certain question you would rather not answer, that's ok too. Also, I promise that if I see that you are uncomfortable in any way, we will stop right away.

Would you like to ask me any questions?

UNIVERSITY OF MANITOBA Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID #____

Understanding the Influence of Thoughts and Experience on Children's Emotions

Now, I'm going to ask you a few questions just to make sure you've understood everything that I've been saying:

1. Do you understand that I have asked you to be part of a learning project? Yes____ No____

2. Did I explain clearly what you would do? Yes___ No____
   Have I answered all your questions? Yes___ No____

3. Do you understand that it's ok if you change your mind and stop at anytime? Or decide not to answer a question? And you know that I will stop if I see that you're uncomfortable?
   Yes___ No___

4. Do you understand that I am the only person who will know your answers, and that I will not tell anyone what you say?
   Yes___ No___

Do you think you'd like to go ahead and be part of this learning project? Yes___ No___

_____ _____
Name of child Signature of child

This sheet will be kept by you. The attached duplicate copy is will be kept by the principal investigator.
Thank you for your assistance with this project

_____ _____
Signature of researcher Date

UNIVERSITY
OF MANITOBA Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID #____

Understanding the Influence of Thoughts and Experience on Children's Emotions

Duplicate Copy

1. Do you understand that I have asked you to be part of a learning project? Yes____ No____

2. Did I explain clearly what you would do? Yes___ No____
   Have I answered all your questions? Yes___ No____

3. Do you understand that it's ok if you change your mind and stop at anytime? Or decide not to answer a question? And you know that I will stop if I see that you're uncomfortable?
   Yes___ No___

4. Do you understand that I am the only person who will know your answers, and that I will not tell anyone what you say?
   Yes___ No___

Do you think you'd like to go ahead and be part of this learning project? Yes___ No___

_____ _____
Name of child Signature of child

This sheet will be kept by the principal investigator. The attached duplicate copy is for you to keep.
Thank you for your assistance with this project

_____ _____
Signature of researcher Date

APPENDIX E

Thank-you/debriefing letters

Parent:

A. School
B. Undergraduate Subject Pool
C. Notice Board

Principal

Teacher

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

November 25th, 2016

Dear Parent,

Your and contribution to the completion of this research project on children's emotional development is greatly appreciated. We are sending you a small thank-you gift for you and , for participating in our study.

Enclosed with this letter is a $20 gift card from McNally Robinson. We hope that you and enjoy it!

If you indicated that you would like a copy of the summary of the results when you consented to participate in this study, we will send you copy of the summary of the results at the end of the study.

Sincerely,

Debra Lall

Dr. Warren Eaton

The Social Cognition and Emotional Development Research Lab Team

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

October 8th, 2016

Dear Parent,

Your and ---------- contribution to the completion of this research project on children's emotional development is greatly appreciated. We are giving you a small thank-you gift for you and ----------, for participating in our study.

Enclosed with this letter is a $30 gift card from McNally Robinson. We hope that you and ---------- enjoy it!

If you indicated that you would like a copy of the summary of the results when you consented to participate in this study, we will send you copy of the summary of the results at the end of the study.

Sincerely,

Debra Lall

Dr. Warren Eaton

The Social Cognition and Emotional Development Research Lab Team

UNIVERSITY OF MANITOBA

Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

ID#____

November 25th, 2016

Dear Parent,

Your and contribution to the completion of this research project on children's emotional development is greatly appreciated. We are sending you a small thank-you gift for you and , for participating in our study.

Enclosed with this letter is a $40 gift card from McNally Robinson. We hope that you and enjoy it!

If you indicated that you would like a copy of the summary of the results when you consented to participate in this study, we will send you copy of the summary of the results at the end of the study.

Sincerely,

Debra Lall

Dr. Warren Eaton

The Social Cognition and Emotional Development Research Lab Team

UNIVERSITY OF MANITOBA

Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

October 5th, 2016

Dear Principal _____,

Your and your school's contribution to the completion of this research project on children's emotional development is greatly appreciated. We are sending you this note to say thank you for your contribution in helping the children at the _____ School to participate in our study.

Sincerely,

Debra Lall

Dr. Warren Eaton

The Social Cognition and Emotional Development Research Lab Team

UNIVERSITY OF MANITOBA
Department of Psychology

177 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9338
Fax (204) 474-7599

November 25th, 2016

Dear Teacher,

Your contribution to the completion of this research project on children's emotional development is greatly appreciated. We usually send the teachers a small gift to thank them for their tremendous contribution in helping the children in their class to participate in our study.

Enclosed with this letter is a $30 gift card from McNally Robinson Bookstore. We hope you enjoy it.

Sincerely,

Debra Lall

Dr. Warren Eaton

The Social Cognition and Emotional Development Research Lab Team

APPENDIX F

Parent Questionnaire

The parent questionnaire booklet for this study contained the following easily obtainable measures:

1) The Parenting Styles and Dimensions Questionnaire (PSDQ):

    a. Reference: Robinson, C.C., Mandeleco, B.L., Olsen, S.F., & Hart, C. H. (2001). Parenting Styles and Dimensions Questionnaire (PSDQ). In J. Touliatos, F.F. Perlmutter, & M. A. Straus (Eds.), *Handbook of family measurement techniques* (3rd ed., pp. 188-189). Thousand Oaks, CA: Sage.

2) The Centrality of Religiosity Scale (CRS):

    a. Reference: Huber, S., & Huber, O.W. (2012). The Centrality of Religiosity Scale (CRS). *Religions, 3,* 710-724. http://dx.doi.org/10.3390/rel3030710

The parent questionnaire booklet also contained the following demographic questions:

1. Your child's grade in school: _____

2. Your child's date of birth: _____ (mm/dd/yyyy)

3) What is the highest level in school or university you have completed (circle one)?

    1. 1st to 8th grade
    2. partial high school (9th, 10th, 11th grade)
    3. high school graduate
    4. trades certificate
    5. community college certificate or diploma
    6. university degree (including professional training)
    7. graduate degree (M.A., PhD)

4) Subjective Socioeconomic Status Ladder:

    a. The instructions and ladder is found at the following reference:

        i. Adler, N., & Stewart, J. (2007, March published). *The MacArthur Scale of Subjective Social Status (summary)*. Retrieved from URL: www.macses.ucsf.edu/research/psychosocial/subjective.php

ii. Additional reference:
Adler, N., Epel, E., Castellazzo, G., Ickovics, J., & Krantz, D. S. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: preliminary data in healthy white women. *Health Psychology, 19,* 586-592.

5) Approximately how many hours do you work each week for pay (circle one)?

1. Not working for pay
2. 1 to 14 hours a week
3. 15 to 24 hours a week
4. 25 to 39 hours a week
5. 40 hours a week or more

6) If employed, are you working (circle one): 1. Part-time? 2. Full-time?

7) If employed, are you (circle one): 1. Temporary/term? 2. Permanent?

8) What is your present occupation? _____

9) What is your marital status? (circle one):

1. Cohabiting — For how long? _____ yrs.
2. Married — For how long? _____ yrs.
3. Separate/divorced — For how long? _____ yrs
4. Single

10) What is your family income for the past year? So that we can describe the group of families participating in this study, please indicate your family's income for the past year (that is, total income before taxes for ALL members of the family residing in your household), by circling one of these income categories:

1. Under $10,000
2. $10,001 to $20,000
3. $20,001 to $30,000
4. $30,001 to $40,000
5. $40,001 to $50,000
6. $60,001 to $75,000
7. Over $75,000

11) What is the highest level in school or university your spouse has completed (circle one)?

1. 1st to 8th grade
2. partial high school (9th, 10th, 11th grade)
3. high school graduate
4. trades certificate
5. community college certificate or diploma
6. university degree (including professional training)
7. graduate degree (M.A., PhD)

12) Approximately how many hours does your spouse work each week for pay (circle one)?

1. Not working for pay
2. 1 to 14 hours a week
3. 15 to 24 hours a week
4. 25 to 39 hours a week
5. 40 hours a week or more

13) If employed, is your spouse working (circle one): 1. Part-time? 2. Full-time?

14) If employed, is your spouse (circle one): 1. Temporary/term? 2. Permanent?

15) What is your spouse's present occupation? _____

16) How many children live in your household? _____

17) What is your relationship to the child?

1. Biological parent
2. Step parent
3. Adoptive parent
4. Legal guardian
5. Other_____

18) How many days per week do you spend in the same household with the child?

1. 0
2. 1
3. 2
4. 3
5. 4
6. 5
7. 6
8. 7

19) What is the birth-order of your child?

1. First-born
2. Second-born
3. Third-born
4. Fourth-born
5. Other_____

20) Parents responded to a single question from the CHQ, which asked parents to rate their child's global health.

Child Health Questionnaire (Langraff & Abetz, 1997; 1998; Langraff, Abetz, & Ware, 1996).

APPENDIX G

Child Questionnaire

In this study, the child questionnaire contained a single measure of children's self-conscious affects. The Test for Self-Conscious Affects for Children (TOSCA-C) is copyrighted, and permission to utilize this test was obtained from Dr. June Tangney (jtangney@gmu.edu), the first author. A copy of this test was published in:

Tangney, J. P., & Dearing, R. L. (2002). *Shame and Guilt.* New York: Guilford Press.

The reference for the TOSCA-C is:

Tangney, J.P., Wagner, P.E., Burggraf, S. A., Gramzow, R., & Fletcher, C. (1990). *The Test of Self-Conscious Affect for Children (TOSCA-C).* George Mason University , Fairfax, VA.

APPENDIX H

Interpretive Theory of Mind Task

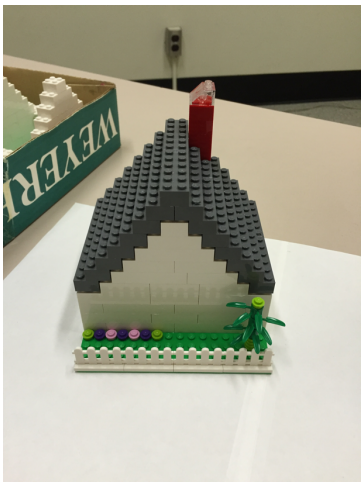
The interpretive theory of mind task I used in this study was obtained from Dr. Kristin Lagattuta, Department of Psychology, University of California, Davis. Please contact Dr. Lagattuta (khlaga@ucdavis.edu) if you would like to use this task.

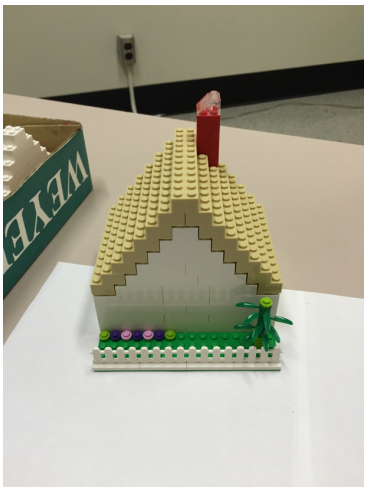
The components of the task I used included:

1) IToM script
2) IToM scoring sheet
3) Irrelevant past task
4) Relevant past task
5) Distinct past task
6) Counterbalanced table

APPENDIX I

Doll Houses (windowless/doorless)





APPENDIX J

Jo/Joe and Alex/Sam (Girls)

APPENDIX K

Jo/Joe and Alex/Sam (Boys)

APPENDIX L

Notice Board Advertisement

University of Manitoba

Department of Psychology

Families with children ages 7 to 9.5 needed for a University of Manitoba research study

Help us learn more about children's **thoughts** & **emotions**!

- Children will complete a single research session
- Each parent will complete a short questionnaire

Want to participate?
Call or email us for more information:

[redacted]

umlalid@myumanitoba.ca

Each participating family receives a **$40** McNally Robinson gift card!

This study has been approved by the Psychology/Sociology Research Ethics Board at the University of Manitoba