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Parenting styles and early childhood behavioural functioning: A comparison between self-reported and observed parenting styles

by

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Abstract

The current study investigated mothers' and fathers' self-reported and observed parenting styles, and determined how self-report and observation measures each predicted the social and emotional behaviours of toddlers. Thirty-one families participated in the study (18 boys and 13 girls between 29- and 46-months old; $M = 36.2$, $SD = 4.9$; 31 mothers and 31 fathers between 26 and 55 years old). Mothers and fathers completed a questionnaire concerning their child's behavioural functioning and parent-child dyads were individually videotaped interacting in teaching and clean up tasks. Parents were assessed using the Parenting Styles and Dimensions coding scheme. Overall, low correspondence was found between self-reported and observed parenting styles. Mothers' correspondence between measures was stronger than fathers', and self-reported parenting styles were stronger predictors of parent reported children's behavioural functioning. Findings are discussed in relation to previous research on parenting styles and children's social and emotional behaviours.

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Introduction

Parents play a key role in the social development of children. As the primary caregivers of a child, parents are fundamentally invested in their child's survival, socialization and education (Bornstein, 2006). Parents play many different roles in a child's life such as a nurturer, protector and teacher and through these roles parents contribute to their child's cognitive, behavioural, social and emotional development (e.g., Luyckx et al., 2011; Williams et al., 2009). One of the most important duties parents have is to prepare their children to be functioning and contributing members of society. There are varied approaches to parenting which lead to many different outcomes for children. As such, researchers have been interested in investigating different types of parenting approaches in order to assist parents in shaping children into competent individuals ready to thrive in society.

There is a large body of research dedicated to parenting behaviours and practices and how these factors contribute to child development (e.g., Aunola & Nurmi, 2005; Mcleod, Wood, & Weisz, 2007; van der Bruggen, Stams, Bogels, & Paulussen-Hoogeboom, 2010). One of the most common and widely accepted ways of conceptualizing and studying parenting behaviours and practices is through the use of a typology. Typologies are composed of qualitatively different combinations of parenting factors. Researchers have found that parents employ a variety of parenting behaviours and practices, and therefore prefer to consider the aggregated effects of multiple parenting factors (Stewart & Bond, 2002). As such, examining a combination of parenting behaviours (typology) may provide a more

accurate picture of a parent's actions and how they are connected to a child's development (Darling, 1999). Diana Baumrind's parenting styles typology (Baumrind, 1967; 1971a) has been widely studied, criticized, modified and expanded upon. Baumrind's typology is based on three parenting dimensions that have been used to assess parenting styles for the past 50 years: warmth, control and autonomy support (Skinner, Johnson, & Snyder, 2005). Different combinations of these three dimensions have been shown to be associated to child outcomes such as social and emotional functioning (Gadeyne, Ghesquiere, & Onghena, 2004) and academic achievement (Areepattamannil, 2010). Although parenting and children change over time and parenting styles have been studied for many years, there are still gaps in the research. Most parenting studies have focused on children in later childhood or adolescents and have examined mostly mothers when studying parenting practices and their contributions to children's social development. In addition, questionnaires in the form of self-reports have been the main form of information collected in studies on parenting practices. There is a need to expand the research to younger children and multiple caregivers and collect information in multiple forms to further understand how parenting practices influence children's social development.

Parenting occurs across the lifespan and the contributions of parenting have been examined with many age groups from infanthood to adulthood. One age group in particular, early childhood (age two to four years old), has been identified by researchers and theorists alike to be a critical period in child development (Bornstein, 2006). Early childhood is a developmental stage filled

with learning and exploration. This developmental stage is thought to be a period in life when individuals are especially "plastic" and open to influences that will contribute to their life long after they leave their parent's home (Bornstein, 2006). It is also the stage in which children have limited exposure to people outside of their family therefore parents have a large influence on their child's development and socialization (Shaffer, Kipp, Wood, & Willoghby, 2010). Therefore it is important to examine how parents contribute to their child's development at this foundational stage in life to understand how parents can optimize their child's long-term development. Parenting research with this population has recently increased but only one parent is normally the participant in the study, the mother.

The majority of parenting research has been based on mothering instead of parenting. Mothers have consistently been the primary caregivers of children and this has led researchers to focus on the contributions of mothers. However, there is a growing body of research on fathers that has shown that fathers play a unique role in a child's life (Lamb, 2010). Research on fathers' parenting behaviours has shown that fathers contribute to many aspects of a child's development and these contributions are separate from mothers' contributions (Cabrera, Shannon, & Tamis-LeMonda, 2007; Lamb, 2010). In many cases, regardless of whether parents are cohabitating, children are exposed to multiple caregivers and often are exposed to various parenting styles and practices from both mothers and fathers; therefore focusing on one parent does not provide a complete picture of parenting.

Similar to the need to study both mothers and fathers, it is important to look at both parenting perceptions and actions. A significant amount of parenting

studies have relied on parent self-reports, which examine parent perceptions. A parent's self-perspective provides important information about parenting, but self-reports have limitations that may decrease the validity of a study. The limitations of self-reports have led some researchers to use observations in addition to self-reports. Observing real-time parenting behaviours provides data about daily parenting that self-reports cannot capture. However, observational studies also have limitations such as observer bias that threaten the validity of a study. To increase the strength of parenting studies, a third research method that includes self-reports and observations has been used to study parenting (e.g., Gaertner, Spinrad, & Eisenberg, 2008; Yucel & Downey, 2010). Multi-method studies provide information about parenting perceptions and real behaviours. Information from each method can be used to piece together a more detailed representation of parenting.

When using multi-methods in parenting studies researchers have come across an interesting issue. Self-report data of parenting practices and observed parenting practices have not consistently correlated with each other (Gardner, 2000). This has led to a long discussion on the importance of the correspondence between self-report and observation data, and the meaning of the incongruence between the two methods. The debate focuses on the importance of methodology and application in parenting research. Some researchers claim that the lack of correspondence between self-report and observation data is a methodological issue (Bornstein, 2006). Self-reports commonly include global or long-term behaviours whereas observations examine specific behaviours (Holden, Ritchie,

& Coleman, 1992). Researchers have found that correspondence can be achieved when parenting measures are conceptually close to each other (Goodnow, 1988; Sigel, 1986). However, there are many factors in a parent's life that may influence the connection between parental perceptions of their behaviors and their actual actions, therefore self-report and observation data may provide different information. This debate has led to mixed findings about how self-reports and observations can be utilized to examine parenting practices. There are many questions about how and when self-reports and observations should be used and what kind of information comes from each method. More research is needed on the correspondence between self-report and observation methods and what the relationship between these two methods means for parenting practices and children's social development.

The present study aims to further the understanding of the correspondence between parent self-reports and observations through examining parenting styles with mothers and fathers. Furthermore, an investigation will be conducted on the unique relationship each method has with predicting social and emotional early childhood behaviours.

Literature Review

Parenting Styles and Childhood Development

Parenting styles defined. Parenting is a complex role that involves a combination of values, beliefs and practices. As a parent develops these values (e.g., obedience, autonomy), beliefs (e.g., spoiling, discipline methods) and practices (e.g., time out, grounding), a pattern of parenting emerges and forms a stable parenting style (Bornstein, 2001; Darling & Steinberg, 1993; Luster, Rhoades, & Haas, 1989). Many studies have shown that combinations of parenting variables (e.g., a parenting style) appear to be a better predictor of child well-being than individual practices (Darling, 1999; Rothbaum & Weisz, 1994). Diana Baumrind's parenting styles have been the most widely cited (Darling, 1999) and her parenting style typology has been challenged by many researchers for not accounting for variances in context and culture (Darling & Steinberg, 1993; McWayne, Owsianik, Green, & Fantuzzo, 2008). Based on Baumrind's original conceptualization (Baumrind, 1967; 1971a), parenting styles include: parents' attitudes and values about parenting, beliefs about child development and specific parenting practices that parents use to socialize their children (Robinson, Mandleco, Olson, & Hart, 1995). Over the years, Baumrind's conceptualization of parenting styles has formed a consistent picture of the type of parenting that is beneficial to the successful socialization of children in North America (Darling & Steinberg, 1993) and other parts of the world (e.g., Taiwan; Pong, Johnston, & Chen, 2010).

Parenting styles are different from parenting practices or specific parenting behaviours. A parenting style provides an emotional climate that forms an overarching pattern of parenting that is expressed towards a child across a wide range of situations (Darling & Steinberg, 1993). Parenting styles include two important dimensions of parenting: parental warmth/responsiveness and parental control/demandingness (Maccoby & Martin, 1983). Parental warmth/responsiveness refers to the degree in which parents promote individuality, self-regulation and self-assertion by being aware, supportive and understanding of children's unique needs and demands (Baumrind, 1991). Parental control/demandingness refers to the standards parents put in place for children to become integrated into the family whole through maturity demands, supervision, discipline and willingness to address disobedience (Baumrind, 1991). These two dimensions form four parenting styles: authoritative, authoritarian, permissive and uninvolved (see Figure 1).

Parenting Dimensions	**High** Control/Demandingness	**Low** Control/Demandingness
High Warmth/Responsiveness	**Authoritative**	**Permissive**
Low Warmth/Responsiveness	**Authoritarian**	**Uninvolved**

Figure 1. Four parenting styles. Adapted from "Developmental Psychology: Childhood and Adolescence," by D. R. Shaffer, K. Kipp, T. Willoughby, and E. Wood, 2010, p. 601. Copyright 2009 by Nelson College Indigenous.

The four parenting styles. Research over the years has formed four clear parenting styles that have been theoretically and empirically associated to children's social and emotional outcomes (McWayne, Owsianik, Green, & Fantuzzo, 2008). Baumrind's parenting typology, created in the 1960s, provided

the foundational literature for the four parenting styles and these parenting styles have been widely studied and extended or modified by other researchers such as Maccoby and Martin (1983). The four parenting styles are described below.

Authoritative parenting style. Authoritative parents are high in both warmth/responsiveness and control/demandingness. They are assertive and enforce clear standards for their child's behaviour, but are not intrusive or restrictive (Baumrind, Larzelere, & Owens, 2010). Authoritative parents are supportive instead of punitive and are open and responsive towards their child's needs (Baumrind, 1991). They value responsibility, self-regulation and cooperation (Baumrind, 1991).

Authoritarian parenting style. Authoritarian parents are categorized as high in control/demandingness and low in warmth/responsiveness. Authoritarian parents are also assertive and enforce clear standards, but assert power without warmth, nurturance or two-way communication (Paulussen-Hoogeboom, Stams, Hermanns, Peetsma, & van den Wittenboer, 2008). Authoritarian parents value obedience and respect for authority and monitor their children's activities closely (Baumrind, 1991).

Permissive parenting style. Permissive parents are high in warmth/responsiveness and low in control/demandingness. They are nondirective and lenient, allow great independence and avoid confrontation (Darling, 1999). Permissive parents are tolerant or accepting towards children's impulses and use little punishment or restrictions with their children (Maccoby & Martin, 1983).

Uninvolved parenting style. Uninvolved parents are low in both warmth/responsiveness and control/demandingness. They are emotionally distant from their children and display indifferent and rejecting behaviours towards their children. In the extreme form, this parenting style may involve neglectful parenting (Darling, 1999).

By crossing the two parenting dimensions (warmth/responsiveness and control/demandingness) four parenting styles are formed each with a different level of warmth/responsiveness and control/demandingness. These four patterns of parenting contribute to a child's development in different ways by influencing a parent's practices and behaviours across contexts and providing a specific emotional climate in which the child is parented in and develops over time (Darling & Steinberg, 1993).

Parenting styles and childhood outcomes. Parenting styles are considered to be an important determinant of several aspects of child development and socialization such as academic achievement, social skills and internalizing and externalizing behaviour problems. Researchers have studied parenting styles as a mediator, moderator and direct contributor to child adjustment (e.g., Gadeyne, Ghesquiere, & Onghena, 2004; Paulussen-Hoogeboom et al., 2008; Williams et al., 2009). Out of the four parenting styles, there is substantial support for the authoritative parenting style being the most beneficial towards child adjustment. Children who have authoritative parents have been reported to have higher academic achievement (Areepattamannil, 2010), high levels of self-esteem and social behaviour (Lamborn, Mounts, Steinberg, & Dornbusch, 1991) and

fewer internalizing and externalizing behaviour problems (Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994). For instance, in an eight-year longitudinal study on parenting styles and children's and adolescent's maladaptive behaviours, children and adolescents from authoritative homes had the lowest level of parent reported internalizing symptoms and antisocial behaviour throughout the eight years (Luyckx et al., 2011). In contrast, the uninvolved parenting style has consistently and significantly been related to negative child adjustment (Fletcher, Walls, Cook, Madison, & Bridges, 2008; Lee, Daniels, & Kissinger, 2006; Luyckx et al., 2011). Children who have uninvolved parents have been shown to have higher rates of drug and alcohol use and antisocial behaviour in adolescence (Luyckx et al., 2011). Studies also reported lower math and reading skills (Lee, Daniels, & Kissinger, 2006) and higher school dropout rates compared to children with authoritative or authoritarian parents (Blondal & Adalbjarnardottir, 2009).

Unlike the authoritative and uninvolved parenting styles, authoritarian and permissive parenting styles have mixed findings in relation to children's development. The authoritarian parenting style is often measured by limit setting, discipline and child monitoring and studies have shown that strict, demanding and punitive parenting (characteristic of authoritarian parenting) is related to negative psychosocial outcomes for children and adolescents. For example, Fletcher, Walls, Cook, Madison, and Bridges (2008) found that authoritarian mothers who used more punitive discipline had children with high levels of internalizing and externalizing behaviours. However, authoritarian parenting has also been associated with both positive and negative academic achievement in children.

Studies conducted with Chinese and Chinese American families, where authoritarian parenting is common, have shown a positive association between authoritarian parenting and academic success (Chao, 2001; Kang & Moore, 2011). In contrast, Gadeyne et al. (2004) and Lee et al. (2006) both found a negative association between authoritarian parenting in Belgium (Gadeyne et al.) and Caucasian (Lee et al.) families and student academic achievement. This has led many researchers to suggest that there may be culturally specific associations for the authoritarian parenting style (Li, Costanzo, & Putallaz, 2010) and that for some families control (limit setting) or demandingness is not necessarily associated to harsh and cold parenting and in turn maladjusted children (Chao, 1994). For example, in the Chinese culture, strict discipline is seen as beneficial to children (Shek, 2008) and adolescents value obedience to their parents therefore, in Chinese families obedience and strictness may be equated with parental concern, caring and involvement (Chao, 1994). This suggests that the effectiveness of authoritarian parenting may depend on a parent and child's interpretation of the behaviours associated with this parenting style (Chao, 2001). In addition, parenting in Chinese cultures may be an example of the limitations of Baumrind's parenting typology. For instances, Chinese parents would not associate Baumrind's authoritarian parenting style with their own parenting style. Chinese parents may endorse and practice authoritarian parenting values but do not necessarily endorse the rejecting and cold parenting attitudes and beliefs that accompany Baumrind's authoritarian parenting definition (Li, Costanzo, & Putallaz, 2010).

The permissive parenting style is typically related to poorer psychological and behavioural outcomes (Driscoll, Russell, & Crockett, 2008; Slicker, 1998; Williams et al., 2009). Although permissive parenting includes high warmth or responsiveness, Driscoll et al. (2008) found that third generation adolescents from permissive families had higher levels of depression, delinquency and alcohol problems. However, along with the authoritative parenting style, studies have reported that the warmth that permissive parenting provides is positively associated to children's social functioning. Studies have found that permissive parenting is associated with high self-confidence, self-esteem and social competence (Driscoll et al., 2008; Garcia & Garcia, 2009; Kazemi, Ardabili, & Solokian, 2010). This shows the importance of parental warmth and responsiveness when fostering positive social development. The emotional climate parents provide for their children continually influences a child's functioning. Therefore, it is important to study how parenting styles contribute to children's development at all ages.

Although there is a large amount of research conducted with the early childhood population, compared to the amount of studies conducted with school aged or adolescent children and their parents there is considerably less research focused on parents and the early childhood years. In recent years, there has been a dramatic shift to paying more attention to early childhood development. However, it is a complex population to study for a variety of reasons. Early childhood is a critical developmental period where children accomplish many developmental milestones, but it also can be a difficult developmental stage for parents. Studies

have shown that parenting behaviours in the preschool period predict childhood socio-emotional and cognitive outcomes (Gilliom & Shaw, 2004; Landry, Smith, & Swank, 2003; Zaslow et al., 2006). As such, it is important to expand the research on early childhood and parenting styles to understand how parents contribute to the foundation and future of a child's development and socialization in the early formative years.

The Toddler Years

The importance of studying toddlerhood. Toddlerhood is an important and sensitive developmental stage in early childhood. Although there is no professional consensus on when toddlerhood begins and ends, it is commonly referred to the two years between 12 and 36 months of age (Pope-Edwards & Liu, 2002). Toddlerhood is a time of rapid growth and change. It is the beginning of several basic but necessary life skills. Toddlerhood marks the emerging development of the self, awareness of standards and self-regulation (Houck & Lecuyer-maus, 2004). Toddlers begin to understand and form an individual self-concept, become aware that the self is the root of feelings, ideas and actions and begin to be able to understand expectations and standards of their family and wider community (Pope-Edwards & Liu). In particular, toddlers make great strides in self-regulation. With the advent of walking and talking, there is an increase in mobility, autonomy and communication, which allows toddlers to develop their ability to manage their behaviour and communication skills independently and according to social demands (Houck & Lecuyer-maus). Toddlers are able to wait, self-soothe, delay gratification and follow rules and

directions. Children at this age do not achieve an optimal level of self-regulation, but they are able to demonstrate a set of recognizable behaviours that reflect self-regulation (Houck & Lecuyer-maus). Pro-social behaviours are also emerging at this age. Toddlers are developing the ability to demonstrate pro-social behaviours and form meaningful relationships with family members and peers. Coinciding with the emergence of self-regulation and social competent behaviours are children's first displays of intentional defiance and non-compliance. O'Brien (1996) conducted a study about child-rearing difficulties in infancy and toddlerhood and reported that more than a third of parents reported problems with toddlers' non-compliance and 30 percent of parents reported problems with defiant or out of control behaviour in toddlerhood. O'Brien also found that parents reported the highest amount of problem behaviours when their child was two years old. The growth children experience in this developmental stage creates challenges for parents that are unique and different from parenting in infancy and older childhood (Pope-Edwards & Liu).

With the emergence of many new abilities and skills, the opportunities for socialization increase. Toddlers are starting to understand family rules and standards and parents are eager to prepare their child socially and emotionally for school and interacting with others outside of the home. Parents invest a great deal of time and energy socializing their children. For example, parents frequently inform their child about safety rules, hygiene, etiquette and cooperation with siblings and peers (Pope-Edwards & Liu, 2002). Toddlers also have an increased desire to explore their environment and this elicits many warnings and commands

from parents about dangers and inappropriate behaviour. As a result, parents have to "multi-task" in the toddler years. "Parents have to provide love, comfort, and a secure base for their child to explore from, but also set firm boundaries and provide age-appropriate discipline" (Hay & Cook, 2007, p. 121) to develop socially competent children ready for the next stage of development. Children encounter many changes at this stage of life and parents are one of the most important and influential figures that contribute to their development.

Parenting styles and toddlerhood. The quality of a child's development is strongly influenced by parenting style. Studies have shown that parenting styles, during the toddler years, are related to early differences in emotional regulation and self-regulation and these foundational developments are important for later social and psychological functioning (Thompson & Goodvin, 2007). In two studies by Calkins and her colleagues (Calkins & Johnson, 1998; Calkins, Smith, Gill, & Johnson, 1998), emotional regulation in 18 and 24 month old children was related to maternal interactive styles in a play context. Effective emotional regulation in 18-month-old children was related to maternal positive guidance (praise, affection, guidance) (Calkin & Johnson, 1998) and maternal negative control (scolding, restricting, directing) was related to non-adaptive regulation strategies in 24-month-old children (Calkin et al., 1998). Cheah, Leung, Tahseen, and Schultz (2009) also found that parenting styles were associated to child behavioural problems through the child's behavioural and attention regulation development at age four. An authoritative parenting style predicted increased behavioural and attention regulation, which in turn was

associated to fewer child behaviour problems (Cheah et al., 2009). Parenting styles have also been directly associated to behaviour problems in toddlerhood. Xing Tan, Camras, Deng, Zhang, and Lu (2012) found that authoritarian and permissive parenting styles were positively correlated to behaviour problems in adopted girls age two to six years old while authoritative parenting was found to have the opposite effect. Adopted girls' externalizing and overall problem behaviour scores were negatively correlated with authoritative parenting. Permissive parenting has also been found to be associated with greater internalizing preschool problems and authoritarian parenting related to greater externalizing preschool problems (Williams et al., 2009). In general, authoritative parenting in the toddler years has shown to be the most beneficial for social and emotional development while authoritarian and permissive parenting styles are consistently associated with less optimal child adjustment. Kuczynski and Kochanska (1995) found that authoritative parents promote a proactive competence-oriented style of parenting that incorporates age appropriate demands, pro-social behaviours and the avoidance of reactive and restrictive interventions. The balance between parental control and warmth/responsiveness appears to be essential in the development of appropriate self-regulation, social competence and pro-social behaviours in toddlerhood.

A parent's parenting style in toddlerhood has long-term contributions to childhood development (Kuczynski & Kocanska, 1995; Williams et al., 2009). Chen, Wang, Chen, and Liu (2002) found that parenting styles in toddlerhood were associated to aggression two years later and Williams et al. (2009) found

similar results in relation to internalizing problems across ages four, seven and 15. In both studies authoritative parenting was associated to better child outcomes (lower aggression and internalizing problems) and authoritarian and permissive parenting was positively associated to aggression (authoritarian) and internalizing problems (permissive). A recent study found that parenting in toddlerhood was associated to many adolescent outcomes. Baumrind et al. (2010) found that authoritative parenting during the preschool years was associated to better adolescent outcomes such as social competence, self-efficacy and lower internalizing problems and permissive and uninvolved parenting was associated with lower competence. Clearly, a parent's support, guidance and structure is key to helping a child through the toddler years (Pope-Edwards & Liu, 2002) and setting the foundation for their future development in childhood and adolescence.

Mothers and Fathers

The importance of fathers. The majority of parenting research has focused on mothers being responsible for raising and meeting their children's needs. Mothers have consistently been the primary caregivers of children, consequently this has led to an abundance of research on the mother-child relationship and how it relates to childhood development. In contrast, the role of the father has changed more substantially over time from the colonial father, to the breadwinner, to the involved father, to the father as a co-parent (Paquette, 2004; Pleck & Pleck, 1997; Statistics Canada, 2012). Fathers have not been consistently involved in children's lives and this led past researchers to assume that fathers had little influence on children's development (Cabrera, Tamis-

LeMonda, Bradley, Hofferth, & Lamb, 2000). In the past three decades, the role of the father has developed into a co-parent who has a high level of involvement in their children's lives (Pleck, 1997; Yeung, Sandberg, Davis-Kean, & Hofferth, 2001). Currently, there are a growing number of studies that have examined the role of the father and how fathers contribute to childhood development (Lamb, 2010), but this literature is considerably less than the research done on mothers and their contribution to their children's development. It is important to continue studying fathers to further understand how they influence their children's lives.

A number of studies have shown that along with mothers, fathers influence the cognitive, academic, social and emotional development of a child (Cabrera et al., 2000; Lamb, 2010). Fathers play an important role in the early childhood developmental stage. Shannon, Tamis-LeMonde, London, and Cabrera (2002) and Tamis-LeMonda, Shannon, Cabrera, and Lamb (2004) found that fathers' positive engagement with their toddlers had significant effects on toddlers' cognition and language at two and three years old. Particularly, Cabrera, Shannon and Tamis-LeMonda (2007) found that father supportiveness was specifically associated with cognitive development and emotional regulation in two and three year olds but not in four years olds (pre-kindergarten). These and many other studies highlight some important findings in parenting research because they show that fathers uniquely contribute to young children's cognitive, social and emotional development independently from the contributions of mothers (Cabrera et al., 2007).

In later childhood and adolescence, fathers continue to influence children's lives independently from the mothers' contribution. Studies have shown that paternal parenting styles are related to a child's academic performance (Lamb, 2010). McBride, Schoppe-Sullivan, and Ho (2005) found that a father's active involvement in a child's education had a positive impact on student achievement. Paternal support for autonomy is associated to the development of self-reliance and this has shown to be associated with gains in reading and math achievement from grades one to three (National Institute of Child and Health and Human Development Early Child Care Research Network [NICHHDECCRN], 2008). Along with influencing children's education, fathers' involvement and interaction with their children contribute to the development of pro-social behaviours. Rah and Parke (2008) found that paternal involvement influenced children's understanding of peer relationships, which was associated to peer acceptance. Parke et al. (2004) found that father-child physical play time, affection and engaging father-son interactions predicted later popularity in school. Paternal involvement has also been linked to lower levels of police contact in adolescents (Flouri & Buchanan, 2002a) and father-child closeness has been associated with children's depression and marital satisfaction in adulthood (Flouri & Buchanan, 2002b). Some researchers have suggested that "fathers more than mothers encourage the development of competence that children will need in functioning outside the family" (NICHHDECCRN, p. 903). For instance, Parke et al. suggested that father-child interactions teach children to read emotional expressions and this skill helps children with later interactions with their peers.

Currently, many fathers are involved in the rearing of their children. Research that attempts to understand a child's development without the influence of fathers is leaving out an important factor in the development of children. Fathers play an important role in their children's lives and therefore cannot be left out when studying parents and their contribution to child adjustment.

Comparisons between mothers and fathers and child outcomes.

Mothers and fathers contribute to their children's development together as parents and independently as individuals (mother and father). Differences and similarities in mother and father parenting styles have been noted in many studies and these variances in parenting styles have been found to be associated with variances in childhood development (Berkien, Louwerse, Verhulst, & van der Ende, 2012; Dwairy, 2008). In most studies mothers have been found to use an authoritative parenting style more than fathers and fathers have been found to use a authoritarian parenting style more than mothers (McKinney & Renk, 2008; Russell et al., 1998). Russell et al. (1998) using Baumrind's conceptualization of parenting styles found this pattern of parenting with a sample of parents and their preschool aged children. Mothers were found to use an authoritative parenting style more than fathers and fathers were found to use an authoritarian parenting style more than mothers (Russell et al., 1998). Similar results have been found with a sample of parents and their late adolescent children (McKinney & Renk, 2008). Studies have found more variance in fathers' parenting styles. Along with an authoritarian parenting style, fathers have also been shown to be more

permissive than mothers (Russell et al., 1998) or equally authoritative (Conrade & Ho, 2001; Gamble, Ramakumar, & Diaz, 2007).

According to Role Theory (Hosley & Montemayor, 1997), mothers and fathers adopt parenting styles based on their usual roles as parents and their expected roles as a female or male. Mothers have traditionally been the caregiver; socialized to provide warmth and care for their children (Hosley & Montemayor, 1997). In contrast, fathers have traditionally been the provider and disciplinarian; socialized to assume these parenting roles and not be responsible for the warmth and care of children (Hosley & Montemayor, 1997). Therefore, mothers and fathers adopt different parenting styles (e.g., authoritative for mothers, authoritarian for fathers) as a result of their traditional parental responsibilities. Role Theory also supports the changing roles of fathers and mothers (Hosley & Montemayor, 1997; McKinney & Renk, 2008). In recent decades, there has been a growing prevalence of women joining the workforce and therefore an increased number of fathers who are more involved with child rearing (Hosley & Montemayor, 1997). As a result, fathers are spending more time with their children, which requires more warmth and care. This may result in fathers adopting a more authoritative or permissive parenting style and in turn a decrease in the difference between mother and father parenting styles (Hosley & Montemayor, 1997).

Although parents tend to be more alike than not, there is also evidence in support of mothers and fathers using different parenting styles with their children and studies have found that incongruent parenting styles between mothers and

fathers is associated with emotional and behaviour problems in children. Berkien et al. (2012) found that child reported differences in parental emotional warmth and overprotection was related to internalizing and externalizing problems. Dwairy (2008) found similar results with a sample of adolescents. In his study, inconsistent parenting between mothers and fathers was related to psychological disorder symptoms such as general anxiety and depression in adolescents aged 16 to 17 years old. Congruent parenting styles between mothers and fathers are not necessarily related to more positive child outcomes. Studies have shown that only when parents both use an authoritative parenting style do children and adolescents have more beneficial outcomes (Fletcher, Steinberg, & Sellers, 1999; McKinney & Renk, 2008). In a recent study, McKinney and Renk (2008) found that in a sample of late adolescents, congruent authoritative parenting was associated with higher emotional adjustment but congruent authoritarian parenting was related to lower emotional adjustment (e.g., self-esteem, depression and anxiety levels).

The literature discussed above is mainly conducted with middle childhood and adolescent populations. Based on the literature search completed there are no studies specifically looking at congruent parenting styles and child outcomes in early childhood. However, studies examining co-parenting, a similar concept in which childrearing agreement is a component (Feinberg, 2003), have reported comparable results with younger populations. Supportive co-parenting (mutual support for each parents parenting behaviours) has been associated with peer competence and lower externalizing problems in toddler and preschool aged children (Lindsey & Mize, 2001; Schoppe, Mangelsdorf, & Frosch, 2001).

Agreement or disagreement between parents' parenting styles appears to be an important factor in the emotional and social development of children. More research concerning congruent parenting styles and early childhood outcomes is needed to understand how consistency between parents influences development in the early years.

Research has shown that mothers and fathers have different parenting styles and these practices are independently related to child and adolescent outcomes. Therefore, it is important to assess mother and father parenting styles separately when studying parenting styles and how they contribute to child development. This supports the importance of including fathers in parenting research and allows the shared and unique contributions of both mother and father parenting styles to be examined.

Parenting Research Methods

Parental self-report. One of the most popular methods for studying parents and parenting in general, has historically been parental self-reports (Domenech Rodrigues, Donovick, & Crowley, 2009; Ramey, 2002). Parental self-reports represent a parent's perception of their own feelings, thoughts, attitudes or behaviours (Gardner, 2000). These self-reports are used to expand the knowledge about parenting and how a parent's thoughts and actions are associated to childhood development outcomes.

Compared to other methods such as observations, self-reports have various advantages. Through self-reports, researchers are able to have a large sample size in a short period of time and collect data about parenting across many contexts

and overtime. Researchers can also examine many different parenting variables such as style, practices or beliefs within one package of self-reports (Holden, 2001). This allows a researcher to obtain a broad picture of a family's interactions without spending many hours and expenses collecting data (Zaslow et al., 2006). Self-reports also have the least amount of burden on the researcher. The financial cost is small and minimal training is required (Zaslow et al., 2006). The financial, training and time saving advantages self-report measures offer have led to numerous self-report parenting studies in various topics and populations. The focus of this study is on the early childhood population therefore this section will focus on self-report studies concerning parenting and children in the early childhood developmental stage.

The majority of parenting self-report studies have used maternal self-reports (Ramey, 2002). These reports along with self-report data from fathers and children have successfully contributed to determine how parenting styles are related to many early childhood outcomes such as a toddler's cognitive ability (Coley, Lewin-Bizan, & Carrano, 2011), social skills (Nelson et al., 2006) and internalizing and externalizing behaviours (McNamara, Selig, & Hawley, 2010; Mills et al., 2012). Many studies relying on self-reports have examined Baumrind's three parenting styles (authoritarian, permissive and authoritative) in relation to early childhood outcomes and found that parental reported authoritarian and permissive parenting in early childhood is associated with negative child outcomes (e.g., aggression, lower grades, less popular in school) and parental reported authoritative parenting is associated with positive child

outcomes (e.g., lower internalizing problems, higher cognitive and academic skills) (Coley et al., 2011; McNamara et al., 2010; Mills et al., 2012; Williams et. al., 2009). Through self-report measures researchers have been able to provide extensive information about how parenting styles contribute to the development of toddlers in diverse populations and in many contexts.

Although parent self-reports are correlated to child outcomes, some researchers have found that self-reports are the weakest predictor of child outcomes compared to observational or multi-method studies (Zaslow et al., 2006). For example, in a meta-analysis reviewing parenting and childhood anxiety, McLeod, Wood, and Weisz (2007) found that self-reports underestimated the magnitude of association between parenting and child anxiety compared to observational studies. There are also studies where there has been no significant correlation found between self-reported parenting styles and early childhood outcomes (e.g., McWayne, Owsianik, Green, & Fantuzzo, 2008). The variance found among self-report research may be related to the limitations that are inherent when using self-reports in parenting research.

Parental self-reports are a reflection of the interaction between many different elements such as the characteristics of the report (e.g., content, wording of items, reading level) and the participant (e.g., age, sex, ethnicity, response style), the participant's expectations, the setting and the purpose of the study (Sattler & Hoge, 2006). The interaction of these elements leads to many factors that can compromise the validity of self-reports (Morsbach & Prinz, 2006). Tourangeau, Rips and Rasinski (2000) identified three main factors within self-

report measures that can compromise the validity of data: social desirability, intrusiveness and risk of disclosure. Social desirability is one of the most noted limitations in relation to self-report measures. Social desirability is when participants choose to report inaccurately on sensitive topics to present themselves in the best possible light (Sattler & Hoge, 2006). For parenting research, parents may choose to report inaccurately on sensitive topics such as discipline and child behaviour problems to appear as a "normal" family. Parents may also find self-reports intrusive. Parenting reports often ask about parenting behaviours such as discipline techniques and parents may find this offensive even though they strongly support their own discipline techniques (Morsbach & Prinz, 2006). Risk of disclosure also applies when examining parenting behaviours. Parents may choose not to respond accurately for fear of legal actions taken if they reported their true actions (e.g., physical punishment or neglectful parenting) (Morsbach & Prinz, 2006). Social desirability, intrusiveness and risk of disclosure all limit a parent from completing a self-report honestly, which damages the validity of the data collected from the self-report.

The main participants of self-report parenting studies can also distort self-reported data and results. As previously mentioned, mothers are the most common participants in self-report studies. When mothers are the sole respondent in a self-report study it increases the risk of response bias (the desire to present self or child as well or troubled) and response sets (the tendency to choose high ratings on Likert-type scales) occurring, which tends to lead to increased correspondence between surveys and inflated correlations (McLeod et al., 2007). The high

correlation may be misleading because the self-reports reflect only the mother's perspective. McNamara et al. (2010) used mothers and teachers in their study about maternal parenting patterns and young children's (three to six years old) behaviour and social reception to avoid inflated correlations. McNamara et al. found links between mothers' report of parenting and mothers' report of child outcomes but there was no significant relationship found between mothers report on parenting and teacher's report on child outcomes. McNamara suggested that this may not be a methodology problem, but it does show the limitations of relying on self-reports. When a study relies on a single informant there tends to be limitations with the validity and generalizability of the data.

Similar to the McNamara et al. (2010) study, many self-report studies use multiple informants to increase the validity of self-reports. By using multiple informants, participants tend to be more accurate when responding, the data collected can be triangulated to provide more in depth and accurate information compared to a single informant and the differences between the reports can be assessed for further understanding about the participants in the study (Morsbach & Prinz, 2006). In the parenting literature, researchers have recently begun to use spouse-reported measures to help boost validity (Yang et al., 2004). Parents who live together can observe the other parent's behaviour over a long period of time and since spouses report on the other parent's behaviour the spouse report may be less prone to social desirability (Yang et al., 2004). Some researchers also have parents report their own and their spouse's parenting behaviours (e.g., Parenting Styles and Dimensions Questionnaire, Robinson, Mandleco, Olsen, & Hart,

2001), which provides a way to compare and contrast parental reports (Rinaldi & Howe, 2012). Researchers who have included both mother and father reports agree that it is important to use multiple informants when multiple caregivers are involved in a child's life (Parke & Buriel, 2006; Rinaldi & Howe, 2012). In addition to multiple informants, researchers are also using multi-method research designs to further increase validity. Observational studies are key in studying young children and combining self-reports and observational methods adds another level of understanding to the relationship between parenting styles and child developmental outcomes (Yang et al; Zaslow et al., 2006). Observational and multi-methods will be discussed later in this literature review.

Parental self-reports have many limitations to over come but it is important to keep using self-reports in parenting research. Self-reports uncover a parent's perception of their own parenting style, parenting behaviours, beliefs about child rearing or how they choose to present themselves to others (Ramey, 2002). Despite the risk of bias reports, it is important to study and understand parents' views about parenting. A parent's point of view of their own parenting is important to parent interventions and training and is likely the key to helping a parent change and try new ways of interaction with their child (Ramey, 2002).

Observation methods. Observation methods are important and versatile tools for examining research and clinical questions about social interactions such as parent-child interactions (Gardner, 2000; Sattle & Hoge, 2006). Observations can take place in laboratory or naturalistic settings, such as the home, and can quantify many different types of behaviours, in many settings and the observation

can be uniquely tailored to the needs of the study (Ramey, 2002; Sattler & Hoge). The majority of parenting observation studies are conducted with children of two age groups: young children, under the age of three, and adolescent children whose families have already experienced difficulty with their children (Ramey, 2002). Studies with young children are usually examining typically developing or at risk children in the following contexts: free play, teaching, feeding, caretaking and separation and reunion situations (Ramey, 2002).

Observations are a way of capturing real processes and outcomes that are of interest to the researcher (Aspland & Gardner, 2003). In parenting research, observations provide opportunities to examine the complexities of parent-child interactions that are not available using other types of methods such as self-reports (Hops, Davis, & Longoria, 1995). When observing a parent-child interaction, overt processes are being watched as they take place in real time. The fine details researchers can obtain from observing parent-child interactions would be difficult to capture with self-reports because the behaviours of interest in observations (e.g., responding to child) are usually automatic (Gardner, 2000) and parents who do not regularly reflect on their actions may inaccurately report these behaviours in a self-report measure (Ramey, 2002). Observation methods can provide an overall picture of naturally occurring family interactions (naturalistic observations) or through structured observations, task-oriented activities can filter out certain aspects of parenting such as autonomy in a play task or parental control in a teaching task (Zaslow et al., 2006). Therefore, through observations, researchers can collect unique information about parenting that cannot be

collected from self-report techniques. Observation methods also have an advantage over self-reports. Compared to self-report methods, where definitions of parenting and/or child behaviours are based on the parent's definition when completing the self-report, parent behaviours of interest in observation studies are defined consistently and reliably by the researcher, which decreases susceptibility to bias (Aspland & Gardner, 2003). Furthermore, through training and inter-observer reliability checks, observers are able to collect valid and reliable information from an observation session. Training ensures observers are familiar with the target behaviour and the definition assigned to it and inter-observer reliability ensures that observers agree whether the target behaviour occurred or not. The advantages of observation methods have led many researchers to choose observation methods over self-report methods in parenting research (Ramey, 2002).

Observation methods have been used to study children for many years (Hops et al., 1995). Grand theorists such as Jean Piaget and Lev Vygotsky utilized observation methods to help develop theories that are still influential today such as Piaget's cognitive development theory (Shaffer, Kip, Wood, Willoughby, 2010). In parenting research, observation studies have contributed to the understanding of how parent-child interactions contribute to children's developmental outcomes (Domenech Rodrigues, Donovick, & Crowley, 2009; Gardner, 2000). Observation studies have yielded similar results compared to self-reports in relation to parenting styles and early childhood outcomes (Ramey, 2002). For instance, similar to studies that utilize self-reports, observation studies

have found that more authoritarian parenting is related to higher levels of toddler peer inhibition and social reticence (Rubin, Cheah, & Fox, 2001; Rubin, Burgess, & Hastings, 2002) and more authoritative parenting is related to toddler's language and cognitive development (Tamis-LeMonda et al., 2004). Furthermore, researchers and practitioners have suggested that observations are of great value when studying early childhood development (Zaslow et al., 2006). Zaslow et al. (2006) found that structured observations of parenting behaviours during the preschool period, compared to self-reports and interviewer observations, produced the strongest predictor of socio-emotional and cognitive outcomes in middle childhood in a sample of low-income families. For three out of four child outcomes, the observation variable added significantly to the prediction of child outcomes with family background and other parenting measures controlled for (Zaslow et al., 2006). Zaslow et al. suggested that: "when prediction of child outcomes is of high priority, it is best to include structured observational measures" (Zaslow et al., p. 36). In two meta-analyses, McLeod et al. (2007) and Rothbaum and Weisz (1994) also found that observation studies yielded stronger predictions of childhood anxiety and externalizing behaviour problems than parent and child reports. In both studies, observation studies showed that eight percent of variance in both child anxiety and externalizing behaviours was associated with the variance in parenting (McLeod et al., 2007). This is strong evidence towards the importance of observation studies, especially when studying children in early childhood.

Supporters of observation methods have argued the superiority of this method over self-reports (Maccoby & Martin, 1983) but observation studies are expensive and time consuming, involving training, observing and coding (Gardner, 2000). The high cost and time limits the size of the sample (Zaslow et al., 2006) and may decrease the amount of observations completed, which may lead to low stability of data (e.g., Stool-miller, Eddy, & Reid, 2000). There are also limitations, in relation to the observer and the family being observed, that may affect the reliability and validity of observation measures.

Personal qualities of the observer can distort the recording of behaviour. This is referred to as observer bias and can be in the form of expectations, preferred categories or scale positions, exercising leniency or variable attention on a family or being influenced by extraneous cues such as a phone or a doorbell ringing (Sattler & Hoge, 2006). Along with personal qualities an observer's behaviour may change when being observed by another person (e.g., supervisor) or when informed that their scores will be compared with another observer (Sattler & Hoge, 2006). Being watched might make the observer more careful and attentive in the observation session than they would regularly be. The behaviours being observed can also raise a problem for the observer. Broad behaviours such as "inappropriate behaviour" require more inference than a specific behaviour such as "hitting" or "yelling" at a child (Sattler & Hoge, 2006). Researchers assign detailed definitions to each behaviour but some behaviours are more difficult than others to categorize (Sattler & Hoge, 2006). If observers are not

trained well or let their personal biases influence their observations the reliability and validity of an observation study could be affected.

The family unit being observed also influences the validity of the observation. The behaviour of parents and children may change with the knowledge that they are being observed (Gardner, 2000). This is commonly referred to as reactivity. The level of reactivity depends on several factors that may include: how obvious the process of being observed is, whether the family has habituated to the observer's presence and if the family understands the purpose of the observation (Aspland & Gardner, 2003). Currently, the use of video in daily life has increased compared to past years. Many parents frequently display videos of themselves and their children on social media websites such as Facebook and YouTube therefore parents and children may be less "camera shy". However, high reactivity may influence the generalizability of the data collected during the observation session to other periods of the family's life (Aspland & Gardner, 2003). Therefore, the observation period may not be representative of the family's typical day-to-day behaviour.

The nature of the task in a structured observation can also affect the validity of the observation. By providing a task for all parents and children to do increases the reliability of the observational measure but it can also decrease the validity of the study. In a structured observation, the task is usually something familiar to the parent and child but there will always be a family where it will not be a familiar task (e.g., completing a puzzle) (Gardner, 2000). The task may feel more unnatural to the parent and child and in turn the observation may not capture

a realistic account of how parent and child interact (Gardner, 2000). The actual act of being observed may decrease the ability to represent a true picture of natural parent or child behaviour.

There are many ways to minimize the limitations brought on by the observer and the family being observed. Clear and specific definitions of behaviours, systematic and precise observation protocols, practice observations and observation sessions that are not extremely long can decrease the risk of observer bias and increase the reliability of the observation measure (Sattler & Hoge, 2006). Reactivity from the family can be decreased by allowing time for the family to become comfortable with the observation procedures, have the same observation team return to the family for each observation session and minimize the obtrusiveness of the observation equipment (Aspland & Gardner, 2003). Studies that have examined change in behaviour in relations to observations have found that reactivity factors are least likely to effect young children (Aspland & Gardner, 2003; Gardner, 2000) and do not pose a overall threat to the validity of the observation data being collected (Gardner, 2000). Observation studies are costly and time consuming but have made a great contribution to the study of parent-child interactions and can also be used for planning and evaluating parenting interventions (Gardner, 2000).

The multi-method approach. The strengths and limitations of self-report and observation methods have led many researchers to use a multi-method approach to study parenting (Maccoby & Martin, 1983). Instead of using a single method, researchers include a variety of methods such as self-reports and

observations in their study. Self-reports and observations both provide valid and unique information about parenting. Omitting self-reports would lead to the loss of parental perceptions of parenting and omitting observations would lead to a loss of objective information about actual parenting practices (Karp, Serbin, Stack, & Schwartzman, 2004). Therefore, by combining two sound measurements of parenting, the multi-method approach can maximize the measurement accuracy of each method and minimize individual method issues (Zaslow et. al., 2006). Multi-methods also allow multiple perspectives (parents and researcher) to be collected and compared (Karp et al., 2004). This can lead to a deeper understanding of the complexities of parenting and childhood development.

Clinicians commonly use a multi-method approach when assessing children and adolescents. A variety of assessment methods with different informants, sources and settings are used and this leads to a comprehensive representation of the child's behavioural, social or emotional functioning and reduces the amount of bias brought on by using a single method (Merrell, 2008). In contrast, the multi-method approach is not the most common method applied when researching parenting (McLeod, et al., 2007). Using a variety of methods in one study is time consuming and expensive and usually requires more training and supervision to achieve sufficient reliability (Smith, 2011). However, neither self-reports or observations alone can be fully comprehensive measures of parenting (Smith, 2011) therefore it is important to assess parenting by using a variety of measures to ensure multiple aspects of parenting are examined.

Studies examining parenting styles that apply multi-methods have yielded similar results to self-report and observation studies. These studies have consistently incorporated maternal self-report and observations of parent-child dyads (Sessa, Avenevoli, Steinberg, & Morris, 2001). Parents usually complete a questionnaire about parenting or child-rearing style and then are videotaped or observed live interacting with their child. Questionnaire data is then compared to observations and in many cases maternal self-report of parenting is related to observed child or parent behaviours. Chen et al. (2002) found that maternal self-reported child-rearing style at age two predicted observed child aggression two years later at age four. Gaertner, Spinrad, Eisenberg (2008) also found that maternal self-report of emotional support and control predicted toddlers observed focused attention. For observed parenting behaviours, Kochanska (1990) found that maternal reported parenting style predicted maternal behaviours such as child management strategies and disciplinary practices.

Similar to Zaslow et al.,'s (2006) study about evaluating different parenting research methodologies, Yucel and Downey (2010) assessed the advantages of a multi-method approach when studying mothering. Yucel and Downey found that using a multi-method approach provided unique information about mothering and how mothering predicted infant and toddler cognitive development that would have been missed if only self-reports were used in the study. By using self-reports, interviewer observations and videotaped mother child interactions, the variation in infant and toddler cognitive development explained by mothering aspects doubled when compared to any single method.

Yucel and Downey concluded that studies using multi-methods have an advantage in measuring the effectiveness of mothering. This research advantage can also spill over to a practical advantage. By using multiple methods more feedback about parenting is available to the parent. The advantages of multi-methods are also echoed in multi-method studies that specifically examine parenting styles. Baumrind et al. (2010), Gaertner et al. (2008) and Williams et al. (2009) all noted that using multi-methods was a strength in their studies. For instance, Baumrind et al. stated that through a multi-method approach the study was able to minimize method and rater biases common to self-report or observation studies. Multiple methods, multiple sources and trained observers provided an exceptionally comprehensive, valid and reliable assessment of children's characteristics and parents disciplinary practices (Baurmrind et al.). There are many advantages to using multi-methods when studying parenting but the issue of correspondence between self-report and observation data has been questioned for many years in socialization research (Kochanska, 1990).

In past research, the relationship between parenting perceptions and parenting behaviours has been inconsistent. Researchers have failed to demonstrate a systematic association between mothers reported perceptions and their actual behaviours towards their children (e.g., Bornstien, Cote, & Venuti, 2001; Holden, 1995; Holden, Ritchie, & Coleman, 1992). A modest correlation, at most, has been found between parental self-report and observation data (Gardner, 2000). Therefore, a parent's report of their parenting and their observed parenting behaviours often do not match up. This raises the issue of the type of information

each method (self-report and observation) is providing and the importance of correspondence between self-reports and observations.

Correspondence between self-reports and observations. Parenting perceptions and behaviours frequently influence each other. Perceptions may encourage, support or reinforce particular parenting behaviours and vice versa (Barnett, Shanahan, Deng, Haskett, & Cox, 2010). Therefore, it can be argued that parenting perceptions are related to parenting behaviours and parenting self-reports are related to observed parenting behaviours. However, few studies have looked at the relationship between parent reported perceptions and observed behaviours and there have been mixed findings (Gardner, 2000) with some studies showing no relationship between parent reported perceptions and observed behaviours (e.g., Bornstien et al., 2001; Cote & Bornstien, 2000; Metsapelto & Pulkkinen, 2005). The mixed findings in parenting research about correspondence between self-reports and observations have led to two paths of research: 1) examining the factors that prevent self-reports and observations from matching and 2) examining how correspondence can be achieved. These two paths of research are now discussed.

Parent perceptions and actual behaviours do not match. As previously mentioned, parental self-reports provide a parent's perception of their parenting. Depending on the study, perceptions may include thoughts, beliefs, ideas or values about child rearing (Bornstein, 2001). Parenting behaviours, on the other hand, are actions parents take such as praising a child. Many studies have shown, through multi-method studies, that a parent's perception of parenting and a

parent's behaviour do not always correspond. Metsapelto and Pulkkinen (2005) examined the relationship between self-reported and observed parenting with children age eight to 13 years old and found that parents' self-reported nurturance (involving affection, acceptance and involvement) was not correlated with observed parenting behaviours (involving enjoyment, positive affect, autonomy granting, interest and assistance) that corresponded closely with aspects of the parent self-report. Similarly, Bornstein and his colleagues (Bornstein et al. 2001; Cote & Bornstien, 2000) examined social and didactic parenting behaviours and beliefs in different cultures and found that mothers' self-reported use of social and didactic parenting was the opposite of what was observed. Mothers reported engaging in more social than didactic interactions with their infants but were observed to engage in more didactic than social interactions (Bornstein et al., 2001; Cote & Bornstien, 2000). Metsapelto and Pulkkinen and Bornstein and his colleagues both concluded that the relationship between self-reports and observations is modified by a third variable, which can act as a mediator or a moderator. Metaspelto and Pulkkinen found that personality moderated the link between parent reported and observed behaviours and Bornstein and his colleagues found that mothers responded to their child's developmental stage instead of following their reported behaviours (Bornstien et al.). Researchers have found many other factors that may be responsible for the low association between self-reported parenting perceptions and observed behaviours such as maternal depression (Kochanska, 1990), child characteristics (Barnett et al., 2010), culture and traditional values (Bornstien et al., 2001; Cote & Bornstein, 2000) and

parenting and environmental stressors (Smith, 2011). There are many factors outside and inside parenting that prevent a parent's perceptions and actions from being congruent. Consequently, self-reports and observations will not correspond with each other rather together they provide information about two different aspects of parenting.

Additionally there are distinct differences between the reported perspectives of parents (involving subjective experiences of events) and observers (involving objective reports of parent-child interactions) (Sessa et al., 2001). Therefore, self-reports and observations also represent the difference in the perspectives of parents and observers (Metsapelto & Pulkkinen, 2005; Sessa et al., 2001). Different perspectives of parenting in multi-method studies and assessments is a strength, self-reports describe a parents' thoughts, attitudes or beliefs about parenting and observations add objective data about real events that can be compared and contrasted to parental self-reports. Therefore, self-reports and observations can be used to provide an in depth picture of parenting.

In relation to child adjustment, the match or mismatch between parenting perceptions and behaviour has been shown to be associated to children's social and emotional development (Barnett et al., 2010). The match between high control beliefs and harsh parenting practices has been suggested to be a great risk to the development of child problem behaviours (Bugental & Johnston, 2000). Bugental and Johnston note that harsh parenting may amplify high control beliefs. In contrast, the mismatch between parenting perceptions and parenting behaviours may pose as a risk or protection for child development. Weis (2002) found that

preschool behaviour problems were not related to high control beliefs reported by adolescent mothers only when the mothers displayed low levels of harsh parenting. Alternatively, McLoyd, Kaplan, Hardaway, and Wood (2007) found that the mismatch between parent endorsement of physical punishment and actual use of physical punishment could be detrimental to children's adjustment. Parents who did not endorse physical punishment but used physical punishment had children with elevated levels of behaviour problems (McLoyd et al., 2007). Clearly, correspondence between perceptions and behaviours is not always equated with positive child outcomes.

Striving for correspondence. Although many studies have shown that self-reports and observations do not correspond with each other parental beliefs are assumed to play an important role in determining parental actions (Holden & Edwards, 1989). Some researchers have found that the correspondence between parent reported perceptions and observed parent behaviours depends on conceptual and methodological issues and have searched for how correspondence can be achieved. The association between parenting measures (self-reports and observations) tends to increase when (a) there is a close fit between the verbal statement reported and the action taken (Goodnow, 1988; Sigel, 1986) therefore the self-report and observation measures are similar, (b) patterns of reported statements are examined instead of single statements (Sigel, 1986), and (c) behaviour is examined across different parenting situations (Goodnow, 1988). Following the above recommendations, Kochanska and her colleagues (Kochanska, Kuczynski & Radke-Yarrow, 1989; Kochanska, 1990) found a long-

term association between maternal reported child-rearing attitudes and actual child management behaviours. Authoritarian parenting attitudes corresponded with direct restrictive management strategies and authoritative parenting attitudes corresponded with indirect, positive and non-confrontational forms of control (Kochanska et al., 1989; Kochanska, 1990).

Holden et al. (1992) also noted methodology issues specifically in relation to self-reports that could account for the low to modest association between parental perceptions and behaviours. Human error in self-reports influenced by retrospective memory, social desirability and being unaware of one's parenting behaviours and choosing to measure broad or vague constructs can decrease the association between parental perceptions and actual behaviours. Holden et al. conducted two studies examining mother's reported and observed behaviour while shopping with their children. In the second study, Holden et al. revised his self-reports according to the above recommendations and found more correspondence between mother's self-reported and observed behaviours. Carefully selected researcher methods, procedures and analysis are important when seeking correspondence between self-reported and observed parenting measures.

Striving for correspondence between self-reports and observations highlights the importance of using a comprehensive parenting research method. The recommendations and issues mentioned above emphasize accuracy between and within self-report and observation methods. There is a focus on striving for similarity between self-report and observation measures, avoiding common self-report weaknesses and accounting for variances in parenting behaviours. This

ensures that both parenting perceptions and behaviours are examined with rigorous methods and measures to result in a comprehensive picture of parenting. In addition to increasing correspondence between self-report and observation methods the Goodnow (1988) and Sigel (1986) recommendations are valuable for multi-methods studies, especially when measuring the same concept in each method (e.g., parenting styles). Correspondence may not be necessary between self-report and observation methods but attempting to achieve it could lead to stronger reliability and validity in a multi-method study and tap into what type of and when parenting perceptions and behaviours can correspond.

In conclusion, the relationship between parenting perceptions and actual behaviours is complex. Research shows that there are many factors that prevent a direct relationship between perceptions and behaviours. Parenting is not predetermined and parenting measures such as self-reports and observations help understand the many different aspects of parenting. Understanding that self-reports and observations can provide different information has practical importance. It informs clinicians that using only self-reports or observations may not provide a comprehensive picture of a family and also can be used as an educational tool to inform parents about differences between their thoughts and actions, what prevents correspondence between their thoughts and actions and how this contributes to their child's development. However there is value in seeking correspondence between parenting measures. Strengthening research methodology is important for producing valid results and expanding what types of methodologies can be used in parenting research. Additionally, this methodology

will further the understanding of the long standing issue of the association between self-reported and observed parenting behaviours and the importance of consistent parenting. Parenting is an important role in society and furthering research concerning the relationship between self-reported and observed parenting will benefit researchers, clinicians, and parents.

Present Study

In the current study, parenting styles were examined using self-report and observation methods. Parents completed a questionnaire about their own parenting styles and parent-child dyads were videotaped engaging in a teaching and clean up task at their homes. Trained observers using a parenting style coding scheme coded video data. Toddler's social and emotional behaviour was also examined through parent report. Associations between self-report and observation data and the predictive value of each method for child behaviours was examined.

The purpose of this present study was to examine the relationship between parent self-reported perceptions of parenting styles and observed parenting styles and to see which parenting styles (both self and observation) are most predictive of child social and emotional behaviours. Although there are four types of parenting styles, the uninvolved parenting style will not be investigated in this study. The uninvolved parenting style has not been readily observed in early childhood and most parenting measures for young children do not include this parenting style. Parenting style is a global concept that includes a parent's beliefs, values and practices and how it influences a child's development in early childhood has long-term social, emotional and behavioural consequences. This

study contributes to the literature by evaluating the relationship between self-report and observation methods and by including both mothers and fathers in the study. Furthermore, this study takes into consideration the recommendations provided by Goodnow (1988), Segiel (1986), and Holden et al. (1992) about achieving correspondence between self-report and observation methods. Finally, the current study examined the predictive value of mother and father self-reported and observed parenting styles for mother and father reported child social and emotional behaviours.

Research Questions and Hypotheses

1. What is the relationship between parent self-reported parenting styles and observed parenting styles? Are self-report and observation data highly correlated?

It is expected that by following the recommendations provided by Goodnow (1988), Seigel (1986) and Holden et al. (1992) self-reported parenting styles and observed parenting styles will be positively correlated. The parenting self-report and observation measures are similar, patterns of responses will be examined and parent's actions will be examined across two contexts. It is difficult to predict the level of correlation (low, moderate or high) because past research has found an inconsistent relationship between self-reported and observation measures. Previous studies have found correspondence between self-report and observation methods (e.g. Kochanska et al., 1989, Kochanska, 1990 and Holden et al., 1992) to be low to moderate.

2. Is there a difference in correspondence between self-report and observation data for mothers and fathers?

Due to the lack of literature including fathers in this area, it is difficult to predict if there will be a difference between mothers and fathers in the correspondence between parent perceived parenting style and observed parenting style. However, studies have shown both similarities and differences between mother and father parenting styles (Berkien, Louwerse, et al., 2012; Dwairy, 2008). As such, similar to parenting style studies, differences may be found between mother and father's self-reported and observed parenting style correspondence.

3. Do self-report and observation methods differentially (or uniquely) predict child behaviours?

It is expected that observations will be a stronger predictor of child social and emotional behaviours. Self-report and observation measures have both been found to be predictive of middle childhood and adolescent behavioural and emotional outcomes however when predicting child outcomes some researchers have specifically recommended observational measures over self-report measures (Zaslow et al., 2006).

Methods

Participants

The present study aimed to (a) measure mothers' and fathers' self-reported and observed parenting styles, and (b) determine how self-reports and observations each predict the social and emotional behaviours of toddlers as measured by parents' reports. Families were recruited through infant and preschool programs in the greater Edmonton Area and central Alberta (e.g., Child,

Adolescent and Family Mental Health (CASA), Alberta Home Visitation Network Association and Early Head Start), and postings in local daycares. Thirty-six families agreed to participate in a larger project. Six families did not speak English in the observation sessions with one family's observation session translated therefore data from 31 families was used in the current study. Participants were composed of 18 boys and 13 girls between 29 and 46 months old (M = 36.2, SD = 4.9) and 31 mothers and 31 fathers between 26 and 55 years old. Families identified their ethnic backgrounds as Caucasian (61.3%), Mixed (16.1%), South Asian (6.5%), and Central American, Asian, Mexican, Caribbean or North African (3.2%). All parents except for one couple were co-habiting at the time of data collection. Parents were either married (87.1%), common law (9.7%) or separated (3.2%). The majority of parents had college/university or professional/graduate level education (mothers 74.2%, fathers 48.4%); the remaining parents were divided between high school diploma (mothers 9.7%, fathers 12.9%), certificate in trade/technology (mothers 6.5%, fathers 16.1%), partial university/college (mothers 3.2%, fathers 6.5%), partial high school (mothers 3.2%, fathers 12.9%) and less than eight years of schooling (mothers 3.2%, fathers 3.2%). Finally, for annual income, 54.8% of mothers and fathers reported incomes of $70 000 or over, 22.6% of mothers and 19.4% of fathers reported incomes between $35 000 and $69 999 and 22.6% of mothers and 25.8% of fathers reported incomes of $35 000 or under.

Procedure

The current study was part of the Parent and Child Engagement study (PACE), a larger study conducted at the University of Alberta. A complete proposal of the larger study's purpose, methodology, consent process, and potential harms was prepared for and accepted by the University of Alberta's Research Ethics Board. There were no new measures added and no new data collected; therefore, the present project was accepted under the larger study's ethics approval. At Time 1, two separate home visits were conducted for mother-child and father-child dyads. Mothers and fathers consented to completing a package of questionnaires about parenting and their child's behaviours and engaged in teaching, emotions cards, play and clean up tasks with their child in their home; the teaching and clean up tasks are included in the present project. A trained PhD student and two research assistants (RAs) collected data. Prior to data collection the RAs received instructions for implementing the study's procedures and standardized protocol. The presentation of the three tasks (teaching, emotions cards and play) were counterbalanced however, the clean up task happened directly after the play task. For the teaching and clean up tasks, mothers and fathers were videotaped teaching their child how to complete a puzzle (different puzzle for mothers and fathers) and parent and child were asked to clean up after playing together with a set of toys for 15 minutes. Parents and children were instructed with the following scripts: (1) "For this task I am interested in children's learning. Here is a puzzle. Please teach your child how to complete this puzzle. Thanks." The parent and child were given a puzzle and left alone to

complete it. (2) After playing for 15 minutes the dyad is approached and the RA states: “It’s time to stop now and move on to the next task; I’ll give you a few minutes to clean up.” The parent and child were given the toy bag and left alone to clean up. Two trained graduate students coded the teaching and clean up tasks for parenting style using the Parenting Styles and Dimensions coding scheme adapted from the Parenting Styles and Dimensions Questionnaire (Robinson, Mandleco, Olsen, & Hart, 2001). Mothers and fathers were each given a $25 gift certificate to Safeway for participating in the project.

Measures

Demographics questionnaire. Mothers and fathers completed a questionnaire about general family and child information. The questionnaire included: child’s name, age, gender, birth date, enrollment in a preschool program, child and parent’s ethnicity, parents’ age, citizenship, years lived in Canada, level of education, annual income and parents’ relationship status.

Parenting styles. Mothers and fathers independently self-reported their parenting style by completing an abbreviated form of the *Parenting Styles and Dimensions Questionnaire* (PSDQ; Robinson, Mandleco, Olsen, & Hart, 2001). The abbreviated PSDQ is a 32-item questionnaire designed to measure self and spouse parenting practices for parents of preadolescent children using a 5-point Likert scale response format (1 = Never to 5 = Always). Only self-reported parenting practices are relevant to the current study. Parents were asked to report their general parenting practices for the child participating in the study The abbreviated versions of the PSDQ were developed using Structural Equation

Modeling on 1900 mothers and fathers of preschool and school-aged children (Robinson et al., 2001). The PSDQ consists of three subscales that are consistent with Baurmrind's (1967) three parenting styles: authoritative, authoritarian, and permissive. The authoritative subscale consists of 15 items measuring connection (e.g., "I am responsive to our child's feelings"), regulation (e.g., "I explain the consequences of the child's behaviour") and autonomy granting (e.g., "I allow our child to give input into family rules"). The authoritarian subscale consists of 12 items measuring physical coercion (e.g., "I grab our child when being disobedient"), verbal hostility (e.g., "I yell or shout when our child misbehaves") and non-reasoning (e.g., "I use threats as punishment with little or no justification"). The permissive subscale consists of 5 items measuring indulgent practices (e.g., "I find it difficult to discipline our child"). Scores were computed for each subscale by calculating the mean of all items per subscale. The authors reported internal consistency reliabilities (Cronbach *alphas*) for both mothers' and fathers' reports to be .86 (authoritative), .82 (authoritarian) and .64 (permissive). In the present study, reliabilities for mothers' self-reports were .71, .80 and .68, for authoritative, authoritarian, and permissive subscales, respectively. For fathers, reliabilities were .86, .59 and .62, for authoritative, authoritarian, and permissive subscales, respectively. The current reliabilities for mothers' authoritative parenting style and fathers' authoritarian parenting style are considerably lower than the original authors' reliabilities. This may be due to the small sample size of the present project, or although the PSDQ was designed for

parents with preadolescent children the authors may not have designed the PSDQ for parents with children as young as toddlers.

Children's social and emotional functioning. Mothers and fathers independently reported their child's social and emotional functioning by completing the Parent Rating Scale-Preschool report (PRS-Preschool) of the Behavioural Assessment System for Children (BASC-2; Reynolds, & Kamphaus, 2004). The PRS-Preschool report consists of 134 items describing positive and negative behaviours (e.g., argues when denied own way). For each item mothers and fathers reported how often their child displayed each of the behaviours (Never, Sometimes, Often, Almost Always). The BASC-2 is a standardized measure of social behaviours designed to assist in the differential diagnosis and educational classifications of emotional and behavioural disorders. Behaviours are classified into four composite scales: externalizing problems, internalizing problems, behavioural symptoms index and adaptive skills. Children may be classified as at-risk (*T-score* = 60-69) or clinical (*T-score* = 70 or greater) based on standardized *T-Scores* (*M*=50, *SD*=10). The authors reported reliability alpha coefficients of composite scales (children two to three years old) to be .87 (externalizing problems), .85 (internalizing problems), .93 (behavioural symptoms index) and .93 (adaptive skills).

Parenting style observations. Mother-child and father-child dyad videos of teaching and clean up tasks were coded using the *Parenting Styles and Dimensions* coding scheme (see Table 1 or Appendix A). This coding scheme was adapted from the PSDQ self-report and designed specifically for the current study.

The coding scheme consists of three subscales attempting to replicate Baumrind's three original parenting styles: authoritative, authoritarian, and permissive. The ***authoritative subscale*** consisted of three dimensions: connection (warmth and support), structure and regulation (reasoning and induction) and autonomy granting (democratic participation). The ***authoritarian subscale*** consisted of two dimensions: non-supportive control (non-reasoning/punitive) and verbal hostility. The ***permissive subscale*** consisted of one dimension: indulgent behaviour. The items for each subscale and subscale dimensions where adapted from the PSDQ self-report in order to achieve as much similarity between the self-report and observation measures as possible. The *Parenting Styles and Dimensions* coding scheme is coded on a scale from 1 (no displays of behaviour) to 5 (consistent display of behaviour). Five minutes of each task was coded for parenting behaviours in the three subscales. Scores were computed for each subscale by calculating the mean of all items per subscale. The parenting style with the highest score represented the strongest parenting style displayed in the video tapped interaction. Therefore, the PSDQ coding scheme observes parenting behaviours in one task and codes for parenting style while the PSDQ self-report measures the general parenting style of mothers and fathers.

Table 1
Parenting Styles and Dimensions Coding Scheme (Adapted from PSDQ Self-Report (Robinson et al., 2001))

Authoritative Parenting Style

Connection Dimension (warmth and support): parent is responsiveness towards child's behaviours, feelings or needs, parent uses comfort when child is upset, parent uses praise and parent has warm and intimate moments with child.

1) No connection shown

2) Few/some instances of connection shown; 1-3 instances of warmth or supportive behaviour displayed.
3) Moderate amounts of connection shown; parent is warm and supportive towards child during half the interaction
4) Substantial amounts of connection shown; only one or two instances of non-supportive or cold behaviour displayed
5) Consistent connection between parent and child. Parent consistently displays warm and supportive behaviours towards child.

Structure and Regulation Dimension (reasoning and induction): parent clearly states and enforces rules, parent emphasizes the importance of rules, parent gives reasons for rules, and parent explains consequences of the child's behaviour.

1) No structure or regulation shown
2) Few/some instances of structure or regulation shown; 1-3 instances of enforcing rules or reasoning behaviour displayed.
3) Moderate amounts of structure or regulation shown; parents enforce rules or uses reasoning techniques during half the interaction with child.
4) Substantial amounts of structure and regulation shown; only one or two instances of not enforcing rules or displaying non-reasoning behaviour.
5) Consistent displays of structure and regulation throughout interaction. Parent consistently enforces rules and provides reason and/or explanation for requests and actions.

Autonomy Granting Dimension (democratic participation): parent respects child's opinion, parent encourages child to express opinion, parent allows child's input in task rules, parent takes child's desires into account before asking child to do something

1) No autonomy granting shown
2) Few/some instances of autonomy granting shown; 1-3 instances of democratic participation shown.
3) Moderate amounts of autonomy granting shown; parent includes child in decision making processes during half the interaction.
4) Substantial amounts of autonomy granting shown; only one or two instances of controlling or directive behaviour displayed.
5) Parent consistently displays autonomy granting throughout interaction. Parent consistently includes child in decision making processes throughout the interaction.

Authoritarian Parenting Style

Non-Supportive Control Dimension (non-reasoning/punitive): parent uses threats as punishment with little or no justification (e.g., "because I said so"), parent repetitively states commands without reasons, parent is overly strict in regards to rules, parent is controlling of child's choices/actions, parent uses

physical punishment when disciplining child and parent spanks, slaps or grabs child when child is being disobedient or misbehaves

1) No non-supportive control shown
2) Few/some instances of non-supportive control shown; 1-3 instances of non-reasoning and/or punitive behaviour shown.
3) Moderate amounts of non-supportive control shown; parent uses non-reasoning and/or punitive behaviour during half the interaction.
4) Substantial amounts of non-supportive control shown; only one or two instances of reasoning used.
5) Parent consistently displays non-supportive control throughout interaction. Parent consistently uses non-reasoning, punitive or physical coercion in the interaction

Negative Affect Dimension: parent uses stern, negative or demanding tone of voice when communicating with child, parent explodes in anger towards child, parent yells or shouts when child misbehaves and parent scolds and criticizes child to make child improve or when child's behaviour does not meet parent's expectations.

1) No negative affect shown.
2) Few/some instances of negative affect shown; 1-3 instances of a stern, negative or demanding tone of voice used or 1-3 instances of anger, criticism or scolding used.
3) Moderate amounts of negative affect shown; parent uses negative tone of voice or criticizes, scolds or is angry with child during half the interaction.
4) Substantial amounts of negative affect shown; only one or two instances of positive verbal interactions displayed.
5) Parent consistently displays negative affect throughout interaction. Parent consistently is angry with child or yells, shouts, scolds or criticizes child throughout the interaction.

Permissive Parenting Style

Indulgent Dimension: parent states rules but does not enforce rules, parent states punishments to child but does not enforce them, parent gives into child when child causes a commotion about something, parents ignore misbehaviour and parent finds it difficult to discipline child.

1) No indulgent behaviour shown
2) Few/some instances of indulgent behaviour shown; 1-3 instances of inconsistent parenting practices displayed (e.g., not enforcing/ignoring rules or giving into child's request that is against parents request).
3) Moderate amounts of indulgent behaviour shown; parent displays inconsistent parenting practices during half the interaction. Parent often has difficulty enforcing rules and disciplining child.
4) Substantial amounts of indulgent behaviour shown; only one or two instances of directive behaviour shown.

5) Parent consistently displays indulgent behaviour throughout the interaction. Parent consistently has difficulty following through on commands, ignores misbehaviour and has difficulty disciplining their child.

After a series of training sessions conducted over a two-week period, that included practice coding and discussion over video content, two graduate students coded 31% of the videos for agreement. Cohen's Kappa was utilized to achieve appropriate inter-observer reliability. The following Kappa's were achieved: .67 (authoritative parenting style), .64 (authoritarian parenting style), and .80 (permissive parenting style). Cohen's Kappa is often used to assess observer agreement and its point-by-point agreement is considered one of the most stringent ways to determine observer agreement (Bakeman & Gottman, 1997). In contrast the percent agreements for each sub-scale were higher: 71%, 79%, and 81% for the authoritative, authoritarian and permissive parenting style subscales respectively. Cronbach's Alpha was also computed to demonstrate strong consistency within each observer. The following Alpha's were achieved: .98 (authoritative parenting style), .93 (authoritarian parenting style), and .98 (permissive parenting style). Cronbach's Alpha is often used in observation studies to demonstrate the extent to which the ratings from all observers hold together to measure the construct being examined (Osborne, 2008). To prevent observer drift 20% of the videos that were coded after reliability training were randomly assessed for reliability. The following Kappa's were achieved: .71 (authoritative parenting style), .68 (authoritarian parenting style), and .74 (permissive parenting style).

Results

In the following section, the analyses conducted to answer the current study's research questions and the results of the current study are presented. Descriptive statistics about the measures used in the study are presented first followed by the analyses and results of the current study's three research questions. Three different statistical analyses were used to analyze the parent questionnaire and observation data. To examine the correspondence between self-report and observation data of mothers and fathers (question one), a bivariate correlation was conducted to determine the relationship between self-report and observation data. Mother and father data were analyzed separately. To examine the difference between mothers' and fathers' correspondence between self-report and observation data (question two), a Fisher Transformation was conducted to assess if there is a significant difference between mothers' correspondence between self-report and observation data and fathers' correspondence data. A Fisher Transformation is a test of the difference between two independent correlation coefficients. Finally, to examine the predictive relationship between self-reported parenting style and child behaviours and observations of parenting style and child behaviours (question three), simultaneous multiple regressions were conducted to assess if self-reports and observations differentially predict child behaviours. Separate regressions were conducted for mothers and fathers, and observation tasks.

Descriptive Statistics

Means, standard deviations and ranges of the BASC-2, PSDQ and PSDQ coding scheme variables are reported in Table 2. One mother failed to fully complete the BASC-2 report and one mother and two fathers in the observation sessions did not speak English in one of the tasks. For self-reported and observed parenting styles, mothers and fathers reported or displayed a range of the three parenting styles examined in the current study. Mothers and fathers had similar means for both variables and predominantly reported or displayed an authoritative parenting style. The authoritarian parenting style was reported or displayed the least in the parent self-report and observed parent-child clean up task. The permissive parenting style was displayed the least in the parent-child teaching task. A wide range of variability in parent reported child behaviours (BASC-2) was found. Scores at or above 60 on the BASC-2 behavioural symptom index, externalizing and internalizing subscales fall into the at-risk or clinical range and suggest problem behaviours. The range of scores in the current study indicates that parents rated their children's behaviour as typical for their age and generally within the normal (not clinical) range.

Table 2

Means and Standard Deviations and Ranges for BASC-2, PSDQ and PSDQ Coding Scheme

	Mother				Father			
BASC Composite Scales	*n*	*M*	*SD*	Range	*n*	*M*	*SD*	Range
Behaviour Symptom Index	31	55.93	14.68	30-91	31	56.84	13.81	37-104
Externalizing Behaviour	31	54.37	13.26	36-89	31	55.65	12.56	38-96
Internalizing Behaviour	31	58.32	16.49	38-93	31	57.16	9.42	37-87
	n	*M*	*SD*	Range	*n*	*M*	*SD*	Range
Parent Self-Report of Parenting Style								
Authoritative	31	3.87	0.44	2.87-4.60	31	3.61	0.68	2.27-4.73
Authoritarian	31	1.78	0.49	1.17-3.17	31	1.87	0.40	1.00-2.55
Permissive	31	2.38	0.72	1.25-4.00	31	2.40	0.75	1.00-4.50
	n	*M*	*SD*	Range	*n*	M	*SD*	Range
PSDQ Coding Scheme								
Teaching Task								
Parenting Style								
Authoritative	31	3.05	0.71	1.30-5.00	30	3.09	0.54	2.30-4.00
Authoritarian	31	1.87	0.50	1.00-3.00	30	1.88	0.54	1.00-3.00
Permissive	31	1.55	1.10	1.00-5.00	30	1.30	0.70	1.00-4.00
Clean Up Task								
Parenting Style								
Authoritative	30	2.62	0.79	1.30-4.30	29	2.51	0.50	1.70-3.70
Authoritarian	30	1.65	0.57	1.00-3.50	29	1.71	0.43	1.00-3.00
Permissive	30	2.53	1.40	1.00-5.00	29	2.41	1.21	1.00-5.00

Question 1: The Relationship Between Self-Reported and Observed Parenting Styles

The first research question examined the relationship between parent self-reports and observations of parenting behaviours. In order to investigate this

question a bivariate correlation was conducted to determine whether self-report and observation data are significantly related to each other. Separate correlations were conducted for each parent, parenting style and observation task. For mothers, self-reported authoritarian parenting style was positively related to observed authoritarian parenting style in the parent-child clean up task (see Table 3). A positive trend was found between mothers' self-reported authoritarian parenting style and observed authoritarian parenting style in the parent-child teaching task. No significant relationship was found between self-reported and observed (both tasks) authoritative and permissive parenting styles.

For fathers, self-reported authoritative, authoritarian and permissive parenting styles were not related to observed (both tasks) authoritative, authoritarian and permissive parenting styles (see Table 3). A negative trend was found for self-reported authoritarian parenting style and observed authoritarian parenting style in the parent-child clean up task. Although this relationship is not significant it displays a pattern of fathers' self-reported and observed authoritarian parenting style being negatively related to each other which is the opposite of mothers' positive relationship between self-reported and observed authoritarian parenting style in the parent-child clean up task. Overall, in the present study, parental self-reports and observations of parenting styles had low correspondence. For two out of the three parenting styles there was no relation between self-report and observation data and only mothers' self-report and observation of authoritarian parenting was positively correlated.

Table 3

Pearson Correlations Between Self-Reported Parenting Styles and Observed Parenting Styles

	Self-Reported Parenting Style		
	Mother		
Observed Parenting Style	Authoritative	Authoritarian	Permissive
Teaching Task			
Authoritative	0.33		
Authoritarian		0.35	
Permissive			0.24
	Authoritative	Authoritarian	Permissive
Clean Up Task			
Authoritative	0.07		
Authoritarian		0.37*	
Permissive			0.21
	Father		
	Authoritative	Authoritarian	Permissive
Teaching Task			
Authoritative	0.02		
Authoritarian		-0.12	
Permissive			-0.28
	Authoritative	Authoritarian	Permissive
Clean Up Task			
Authoritative	0.00		
Authoritarian		-0.34	
Permissive			0.11

* $p < 0.05$

Question 2: Comparing Mothers' and Fathers' Correspondence Between Self-report and Observation Data.

The second research question investigated whether mothers' and fathers' correspondence between self-report and observation data differ. In order to investigate this question a Fisher Transformation was conducted on mothers' and fathers' Pearson correlations presented in Table 3. A Fisher Transformation

examines the difference between two independent correlation coefficients. The transformation compares the two coefficients and produces a *z score* ($p < 0.05$). Parenting styles and observation tasks were analyzed separately. Mothers' correlation coefficient between self-reported and observed authoritarian parenting style (both tasks) was significantly different from fathers' correlation coefficient between self-reported and observed authoritarian parenting style (see Table 4). As mentioned in the results for research question 1, mothers' self-reported authoritarian parenting style is positively related to mothers' observed authoritarian parenting style and this relationship is stronger than fathers' correspondence between self-reported and observed authoritarian parenting style. Specifically, there was a large difference between mothers' and fathers' correspondence between self-reported authoritarian parenting style and observed authoritarian parenting style in the parent-child clean up task. Mothers' correlation coefficient between self-reported and observed permissive parenting style in the teaching task was also significantly different from fathers' correlation coefficient between self-reported and observed permissive parenting style in the teaching task. Although neither of the original correlation coefficients for mothers' and fathers' self-report and observation correspondence were significant, the direction of mothers' and fathers' correlation coefficients are opposite from each other and therefore are significantly different from each other. Mothers' self-reported and observed permissive parenting style has a positive relationship whereas fathers' self-reported and observed permissive parenting style has a negative relationship. This is similar to the relationship between mothers' and

fathers' correspondence between self-reported and observed authoritarian parenting style mentioned above. No significant difference was found between mothers' and fathers' correspondence between self-reported and observed authoritative parenting styles in both tasks and parents' permissive parenting style in the clean up task. This echoes the results of the first research question where only mothers' self-reported and observed authoritarian parenting styles have a significant positive relationship and highlights the opposite direction mothers' and fathers' correspondence between self-reported and observed data travels in two out of three parenting styles.

Table 4
Correspondence Between Self-Reported and Observed Parenting Styles

	Pearson *r* (Mother)	Pearson *r* (Father)	*Z-score*	Sig. (2-tailed)
Self-report and Observation (Teaching Task)				
Authoritative Parenting Style	0.33	0.02	1.22	0.22
Authoritarian Parenting Style	0.35	-0.12	1.95*	0.05
Permissive Parenting Style	0.24	-0.28	2.39*	0.02
Self-report and Observation (Clean up Task)				
Authoritative Parenting Style	0.07	0.00	0.24	0.81
Authoritarian Parenting Style	0.37	-0.34	2.77*	0.01
Permissive Parenting Style	0.21	0.11	0.39	0.70

* $p < 0.05$

Question 3: The Predictive Relationship Between Self-Reports and Observations and Parent Reported Child Behaviours

The third research question focused on whether self-report and observation data differently predicted parent reported child social and emotional behaviours. To investigate this question separate multiple regressions were conducted for

mothers and fathers, research method (self-report and observation), behavioural subscale (behavioural symptom index, externalizing and internalizing) and observation task (teaching and clean up). For self-reported parenting styles, mothers' self-report of parenting styles accounted for a significant proportion (33%) of variance in mothers' report of children's internalizing behaviours R^2 = 0.33, F (3,27) = 4.47, $p < 0.05$. In particular, mothers' report of the permissive parenting style significantly predicted mothers' report of children's internalizing behaviours β = .40, t (27) = 2.12, $p < 0.05$ (see Table 5), therefore accounting for most of the variance in mother reported child internalizing behaviours R^2_{adj} = .26. A higher permissive parenting style score predicted higher internalizing scores. No significant relationship was found between mothers' self-report of parenting styles and mothers' report of children's behavioural symptom index R^2 = 0.12, F (3,26) = 1.17, p = 0.34. No significant relationship was found between mothers' self-report of parenting styles and mothers' report of children's externalizing behaviours R^2 = 0.08, F (3,26) = 0.72, p = 0.55.

For fathers, self-reported parenting styles accounted for a significant proportion of variance (35%) in fathers' report of children's behavioural symptom index R^2 = 0.35, F (3,27) = 4.81, $p < 0.05$. Fathers' self-report of parenting styles also explained a significant proportion of variance (27%) in fathers' report of children's externalizing behaviours R^2 = 0.27, F (3,27) = 3.40, $p < 0.05$. Specifically, self-reported authoritarian parenting style significantly predicted fathers' report of children's behavioural symptom index β = .61, t (27) = 3.50, $p <$ 0.05 and externalizing behaviours β = .51, t (27) = 2.79, $p < 0.05$ (see Table 7).

Father's self-reported authoritarian parenting style accounted for the most variance in fathers' report of children's behavioural symptom index and externalizing behaviours (behaviour symptom index: $R^2_{adj} = 0.28$; externalizing behaviours $R^2_{adj} = 0.19$). A higher self-reported authoritarian parenting style score predicted a higher behavioural symptom index and externalizing behaviour score. A trend was found between fathers' self-reported parenting style and fathers' report of children's internalizing behaviours $R^2 = 0.22$, F (3,27) = 2.60, $p = 0.07$. The relationship between fathers' self-report of permissive parenting style and fathers' report of children's internalizing behaviours was marginally significant $\beta = .324$, t (27) = 1.83, $p = 0.08$. This is similar to the significant relationship between mothers' self-reported permissive parenting style and mothers' report of children's internalizing behaviours.

For observed parenting styles, mothers' observed parenting style in the clean up task accounted for a significant proportion (27%) of variance in mothers' report of children's behavioural symptom index $R^2 = 0.27$ F (3,26) = 3.24, $p < 0.05$. Out of the three parenting styles examined, mothers' self-reported authoritative parenting style significantly predicted mothers' report of children's behavioural symptom index $\beta = -0.70$, t (27) = -2.22, $p < 0.05$ therefore accounting for the most variance in mothers' report of children's behavioural symptom index $R^2_{adj} = 0.19$ (see Table 6). A higher observed authoritative parenting style score predicted lower behavioural symptom index scores. A trend was found between mothers' observed parenting style in the clean up task and mothers' report of children's internalizing behaviours $R^2 = 0.21$, F (3,26) = 2.30,

$p = 0.10$. Mothers' observed authoritative, authoritarian and permissive parenting styles were not specifically linked to mothers' reports of children's internalizing behaviours. No significant relationship was found between mothers' observed parenting styles in the teaching task and mothers' report of children's internalizing behaviours $R^2 = 0.09$, F (3,27) = 0.93, $p = 0.44$. No significant relationship was found between mothers' observed parenting style (both tasks) and mothers' report of children's externalizing (teaching: $R^2 = 0.13$, F (3,26) = 1.32, $p = 0.29$; clean up: $R^2 = 0.19$, F (3,26) = 2.06, $p = 0.13$) behaviours. For fathers, no significant relationship was found between fathers' observed parenting styles (both tasks) and fathers' report of children's behavioural symptom index (teaching: $R^2 = 0.13$, F (3,26) = 1.28, $p = 0.30$; clean up: $R^2 = 0.14$, F (3,25) = 1.35, $p = 0.28$), externalizing (teaching: $R^2 = 0.10$, F (3,26) = 0.99, $p = 0.41$; clean up: $R^2 = 0.10$, F (3,25) = 0.91, $p = 0.45$) and internalizing (teaching: $R^2 = 0.05$, F (3,26) = 0.41, $p = 0.75$; clean up: $R^2 = 0.14$, F (3,25) = 1.38, $p = 0.21$) behaviours. Tables 5 to 8 summarize the results from these regression analyses. Overall, self-reported parenting styles, particularly fathers' reports, were found to predict parent reported child behaviours.

Table 5

Multiple Regressions of Mothers' Self-Reported Parenting Style Predicting Mothers' Reported Child Behaviours

Variables	*B*	*SE B*	β
Dependent Variable: Behaviour Symptom Index			
Self-report			
Authoritative	3.27	6.39	0.10
Authoritarian	5.89	6.69	0.20
Permissive	4.04	4.42	0.20
Dependent Variable: Externalizing Behaviour			
Self-report			
Authoritative	5.87	5.91	0.20
Authoritarian	3.56	6.18	0.14
Permissive	2.66	4.09	0.15
Dependent Variable: Internalizing Behaviour			
Self-report			
Authoritative	5.30	6.21	0.14
Authoritarian	8.98	6.52	0.27
Permissive	9.13	4.32	0.40*

Note. * $p < 0.05$

Table 6

Multiple Regressions of Mothers' Observed Parenting Style Predicting Mothers' Reported Child Behaviours

Variables	*B*	*SE B*	β
Dependent Variable: Behaviour Symptom Index			
Teaching Task			
Authoritative	-6.19	5.85	-0.31
Authoritarian	-4.63	6.73	-0.16
Permissive	1.92	3.31	0.14
Clean Up Task			
Authoritative	-13.05	5.89	-0.70*
Authoritarian	-9.30	5.66	-0.36
Permissive	-2.03	3.14	-0.19
Dependent Variable: Externalizing Behaviour			
Teaching Task			
Authoritative	-9.31	5.32	-0.51
Authoritarian	-6.07	6.11	-0.23
Permissive	-1.56	3.01	-0.13
Clean Up Task			
Authoritative	-10.82	5.61	-0.64
Authoritarian	-6.48	6.39	-0.28
Permissive	-2.56	2.99	-0.23

Dependent Variable: Internalizing Behaviour			
Teaching Task			
Authoritative	-4.56	6.72	-0.12
Authoritarian	4.89	7.54	0.15
Permissive	0.21	3.82	0.01
Clean Up Task			
Authoritative	-9.75	7.01	-0.46
Authoritarian	2.67	6.73	0.09
Permissive	-0.77	3.74	-0.07

Note. * $p < 0.05$

Table 7

Multiple Regressions of Father's Self-Reported Parenting Style Predicting Father's Reported Child Behaviours

Variables	*B*	*SE B*	β
Dependent Variable: Behaviour Symptom Index			
Self-report			
Authoritative	0.87	3.39	0.04
Authoritarian	21.03	6.02	0.61*
Permissive	-0.18	2.99	- 0.01
Dependent Variable: Externalizing Behaviour			
Self-report			
Authoritative	1.91	3.25	0.10
Authoritarian	16.09	5.77	0.51*
Permissive	1.76	2.87	0.11
Dependent Variable: Internalizing Behaviour			
Self-report			
Authoritative	0.50	2.52	0.04
Authoritarian	6.54	4.48	0.28
Permissive	4.06	2.23	0.32

Note. * $p < 0.05$

Table 8

Multiple Regressions of Father's Observed Parenting Style Predicting Father's Reported Child Behaviours

Variables	*B*	*SE B*	β
Dependent Variable: Behaviour Symptom Index			
Teaching Task			
Authoritative	-0.69	8.75	-0.03
Authoritarian	-5.21	8.48	-0.20
Permissive	5.72	4.42	0.29
Clean Up Task			
Authoritative	-11.13	7.19	-0.39

Authoritarian	-4.99	6.18	-0.15
Permissive	-1.57	2.95	-0.14
Dependent Variable: Externalizing Behaviour			
Teaching Task			
Authoritative	-0.05	8.06	0.00
Authoritarian	-4.37	7.81	-0.18
Permissive	4.51	4.08	0.25
Clean Up Task			
Authoritative	-8.37	6.73	-0.32
Authoritarian	-3.86	5.78	-0.13
Permissive	-1.03	2.76	-0.10
Dependent Variable: Internalizing Behaviour			
Teaching Task			
Authoritative	4.74	6.24	0.27
Authoritarian	3.25	6.05	0.18
Permissive	3.35	3.15	0.25
Clean Up Task			
Authoritative	-9.22	4.96	-0.47
Authoritarian	4.00	4.26	0.18
Permissive	-1.86	2.03	-0.23

Note. * $p < 0.05$

Discussion

The goal of the current study was to further the understanding of the relationship between self-report and observation research methods within parenting research by examining the correspondence between self-reported and observed parenting styles. Furthermore, an investigation was conducted on the relationship between mothers' and fathers' own correspondence between the two research methods and how self-reports and observations each predict child behaviours. In this section, an interpretation of the results from the current study will be discussed in relation to previous research. In addition, a discussion of the limitations and possible future directions and implications of the current study will be presented.

Correspondence Between Self-report and Observation Methods

Based on past research reviewing the models and methods used to investigate the connection between parental beliefs/ideas and actions (Goodnow, 1988; Sigel, 1986) it was hypothesized that parents' self-reported and observed parenting styles would be positively related when certain recommendations were followed. Goodnow (1988) and Sigel (1986) suggested that parenting beliefs and actions are connected to each other only under certain circumstances. The current study followed three of the recommendations suggested by Goodnow and Sigel to increase the correspondence between parental perceptions and behaviours: a) a close fit between the verbal statement reported and the action taken, b) patterns of parent reported statements are examined instead of single statements, and c) parent behaviours are examined across different parenting situations. The

hypothesis that parental self-report and observation of parenting styles would be positively related was not supported in the current study. Only the positive relationship between mothers' self-reported and observed authoritarian parenting style in the clean up task was significant. Other authors that have found correspondence between self-reported and observed parenting have found similar results. For example, Kochanska, Kuczynski, and Radke-Yarrow (1989) found that mothers' endorsement of authoritarian attitudes was related to her observed authoritarian actions (e.g., direct commands, reprimands and physical enforcement), and these results were stable a year later for non-depressed mothers (Kochanska, 1990). Kochanska and her colleagues also found correspondence between mothers' authoritative attitudes and observed actions, which was not found in the present study. Mothers' self-reported and observed authoritative and permissive parenting styles (in both tasks) were not significantly related to each other. Additionally, fathers' self-reported and observed parenting of all three parenting styles (in both tasks) was not significantly related to each other. Low correspondence between self-report and observation measures was unexpected. Researchers who have applied the above recommendations have found moderate correspondence between self-reported and observed parenting behaviours (Kochanska, et al., 1989; Kochanska, 1990, Holden, Ritchie, & Coleman, 1992). However, there are some key differences between the current study and the studies that found moderate correspondence between self-report and observation measures that may have prevented the current study from achieving this goal.

Past studies that have achieved moderate correspondence between self-reported and observed parenting may have established more alignment between the self-report and observation measures used. Kochanska et al. (1989) and Kochanska (1990) both used the Q-Sort for the parental self-report and only used the factors that involved mothers' attitudes relating to everyday control and discipline. Kochanska and her colleagues paired the specific Q-Sort factors with observations of maternal control strategies (e.g., direct commands, positive incentives). Holden et al. (1992) fine-tuned their self-report and observation measures over two studies to achieve moderate to substantial agreement between self-reported and observed parenting. Higher agreement was achieved when context was included in the questions and mothers were given flexibility in the number of responses they could give. Furthermore each study also included additional assessments that included information about other variables that may have contributed to self-reported or observed parenting behaviours. For example, Kochanska and her colleagues included an assessment of mothers' affect during the observations and following the observation session Holden et al. (1992) asked participants to rate how typical their own and their child's behaviour was in the observation session. More alignment between the self-report and observation measures and additional parental information to isolate the relationship between parent perceptions and behaviours helped clarify how self-reports and observations specifically correspond with each other.

A second plausible explanation is that incongruency is not unusual. As mentioned in the literature review, previous parenting research has come across

similar findings of low to moderate correspondence in many studies about parenting self-reports and observed parenting behaviour. Specifically, Metsapelto and Pulkkinen (2005) used parental self-report and observation methods that closely corresponded and included two tasks in their study but failed to find a positive relationship between self-reports of parenting and observed parenting. Metsapelto and Pulkkinen suggested that although parenting perceptions influence parenting behaviours self-report and observation measures provide different information about parenting. Sessa, Avenevoli, Steinberg, and Morris (2001) add that the discrepancies between self-report and observation measures may be real differences in perspectives between parents and observers. Therefore, self-reports and observations provide different and separate accounts of parenting. In self-reports, parents are asked to report their subjective experience of parenting, whereas in observations observers are asked to assess the objective phenomena in the family (Sessa et al., 2001). This is apparent in the current study's findings by the low positive correlations between mothers' and fathers' self-report and observed parenting styles and the negative correlations between fathers' self-report and observed authoritarian and permissive parenting styles. It is clear that in the current findings parents' subjective experience of parenting is different from observers' report of parents' actual behaviours. Alternatively, disagreement between self-report and observation measures is not an undesired result but highlights one of the strengths in multi-method studies. Self-reports and observations may bring two different sets of information about parenting to one study, which allows two perspectives to be compared and contrasted adding a

richer interpretation of what factors contribute to parenting. As such, striving for high correspondence may always be difficult but using both methods in one study is beneficial to furthering the understanding of the complex role of parenting.

Low correspondence between self-report and observations also supports previous research that suggests an indirect relationship between parent perceptions and behaviours. Many studies that have investigated the relationship between parent perceptions and behaviours, through self-reports and observations, have included a third variable that is predicted to modify the relationship between perceptions and behaviours and in turn also modify the relationship between self-report and observation measures. Specifically, studies have shown that parent characteristics (e.g., personality; Metsapelto & Pulkkinen, 2005), mental health (e.g., Kochanska, 1990) and culture (e.g., Bornstein, Cote, & Venuti, 2001) can contribute to the relationship between parent perceptions and behaviours. Kochanska (1990) found that non-depressed mothers' self-report of maternal beliefs and observed maternal behaviours were positively related, but depressed mothers' self-report of maternal beliefs and observed behaviours were not associated. Bornstein et al. (2001) found that even though Italian mothers reported engaging in social activities more than didactic activities, a value in the Italian culture, mothers were observed to engage in longer periods of didactic behaviours than social behaviours. The current study did not include a third variable but the diverse ethnicity and income of this study's sample may have contributed to the low correspondence between self-reported and observed parenting styles. Parenting is a complicated role where multiple factors contribute to what a parent

thinks and how a parent acts, therefore it may be possible for a parent's self-report and observation of their parenting to match when variables that confound the validity of the correspondence relationship between self-report and observation parenting measures are controlled for.

Comparing Mothers' and Fathers' Correspondence Between Self-Report and Observation Measures

For the second research question the current study explored how mothers' and fathers' congruency between self-reports and observations of parenting styles differ. For two out of three parenting styles (authoritarian and permissive), mothers' and fathers' congruency between self-report and observation measures were significantly different from each other. For both authoritarian and permissive parenting styles mothers' self-report scores were positively related to observers' scores in the teaching task. This was also true for maternal self-reported and observed authoritarian parenting style in the clean up task. However, fathers' self-reported scores were negatively related to observers' scores in both tasks. Although fathers' original correspondence coefficients were not significant this suggests that when fathers' reported a low score for the authoritarian or permissive parenting style observers most likely reported a high score for both parenting styles. These findings show that for the authoritarian and permissive parenting styles mothers' perceptions of her parenting style and her actual parenting behaviours were congruent more often then fathers' perceptions and actual parenting behaviours.

Reflection on parenting behaviours may contribute to the congruency between a parent's perception of their parenting style and their actual parenting behaviours. After studying the fluctuations of parents' self-report responses over two report periods (three to four weeks apart) Ramey and her colleagues (Landesman, Jaccard, & Gunderson, 1991; Wan, Jaccard, & Ramey, 1996; Reid. Ramey, & Burchincal, 1990) suggested that the difference between parents who provided the same report over both collection times and the parents who did not was how frequently and thoroughly the parent reflected on their own parenting practices and attitudes. Therefore, parents who provided consistent reports reflected on their parenting practices more often then the parents who did not provide consistent reports. This could be transferred over to the congruency between parenting perceptions and parenting behaviours. The more parents reflect on their daily parenting behaviours the more congruent these behaviours are with their perceptions of their own parenting. In the current study, mothers' self-report and observation scores were more congruent than fathers' self-report and observation scores for the authoritarian and permissive parenting styles. One possible explanation for this finding may be that mothers may reflect on their parenting practices more frequently than fathers. In a family, the mother is usually the primary caregiver for the children (Statistics Canada, 2012). Therefore mothers may spend more time interacting with their children, which may lead mothers to reflect on their actions more than fathers.

Although the current results are not compelling, these findings also highlight the importance of collecting multiple perspectives when investigating

parenting styles and assessing mothers and fathers parenting styles separately. Many parenting style studies only use maternal data or combine mother and father data together to represent parenting in a family. This is not an ideal way of assessing parenting in a family when each parent has a unique pattern of perceptions and behaviours. This study adds to the current literature that supports the importance of including mothers and fathers in parenting research and assessing mother and father parenting styles separately to understand how each parent uniquely contributes to a child's development.

Self-Reports and Observations Predicting Children's Behavioural Functioning

Mothers' self-report predicting children's behavioural functioning.

Mothers' self-report of parenting style predicted mothers' report of children's internalizing behaviours. Particularly, mothers' report of permissive parenting was significantly related to children's internalizing scores. A higher permissive parenting style score was related to a higher children's internalizing behaviour score. These findings are consistent with a large body of parenting literature involving maternal parenting and children's behavioural functioning (e.g., Fletcher, Walls, Cook, Madison, & Bridges, 2008; Mills et al., 2012; Querido, Warner, & Eyberg, 2002). Some researchers have also found a specific link between maternal permissive parenting and children's internalizing behaviours. For instances, Williams et al. (2009) (preschool aged children) and Driscoll, Russell, and Crockett (2008) (adolescents) both found that maternal permissive parenting was specifically related to internalizing problems such as depression

and anxiety. Being responsive towards children is an important component of parenting and has been shown to contribute to positive child adjustment (Laundry, Smith, Swank, Assel, & Vellet, 2001), but highly responsive mothers may respond too often to their children's needs. This may result in a mother minimizing the opportunities for her children to learn how to cope successfully with challenges (Baumrind, Larzelere, & Owens, 2010). High responsiveness may lead to highly dependable children, which could result in a child developing internalizing problems such as anxiety. Today, mothers more than fathers are still the main caregivers of children (Statistics Canada, 2012; Parke & Buriel, 2006) and therefore are more likely to adopt a more responsive parenting style (Parke, 2002; Volling, McElwain, Notaro, & Herrera, 2002). Therefore, mothers may be more prone to displaying a permissive parenting style and in turn contribute to children's internalizing behaviour problems.

Fathers' self-report predicting children's behavioural functioning. Fathers' self-report of parenting style predicted fathers' report of children's behavioural symptom index and externalizing behaviours. The BASC behavioural symptom index is an overall estimate of a child's behavioural functioning and includes hyperactivity, aggression, attention problems, atypicality and withdrawal. Externalizing behaviours overlap with the behavioural symptom index and include hyperactivity and aggression. Therefore fathers' self-report of parenting style predicted a range of child behaviours. In particular, fathers' report of authoritarian parenting style (low responsiveness/warmth, high control/demandingness) was significantly related to children's behavioural

functioning. A higher authoritarian parenting style score predicted a higher behavioural symptom index and externalizing behaviour score. Recent literature has shown that fathers contribute to children's social, emotional and behavioural development (Lamb, 2010). Studies have also shown that fathers are more likely to practice an authoritarian parenting style (McKinney & Renk, 2008; Russell et al., 1998) and that paternal authoritarian parenting has been associated to children's externalizing behaviours (Rinaldi & Howe, 2012; Russell, Hart, Robinson, & Olsen, 2003). Similar to permissive parenting practices high parental control in authoritarian parenting also limits a child's opportunity to learn how to cope successfully with challenges. Rigid rules and high expectations may contribute to the development of aggression problems (Russell et al., 2003) or high levels of withdrawal (Luyckx, et al. 2011). Based on Role Theory (Hosley & Montemayor, 1997), fathers have traditionally been the provider and disciplinarian in the family and in turn are more likely to adopt an authoritarian parenting style. Currently, a father's role in a family is undergoing transformation with many fathers being more involved in their child's development but fathers may maintain the disciplinary role in the family and therefore display a stronger authoritarian parenting style than mothers. As such, fathers parenting practices more than a mother's parenting practices may be more likely to be associated to children's externalizing problems.

Mothers' observations predicting children's behavioural functioning. Mothers' observed parenting style in the clean up task predicted children's behavioural symptom index scores. Specifically, mothers' observed authoritative

parenting style was significantly related to children's behavioural symptom index scores. A higher observed authoritative parenting style score was related to lower children's behavioural symptom index scores. As mentioned above the BASC behavioural symptom index includes a variety of child behaviours. These results are similar to other studies that have included observations of parenting styles. For instance, Baumrind et al. (2010) included observations of parenting in their study and found that children from authoritative parenting patterns (determined through observations) had the lowest levels of total behaviour problems in adolescents. Janssens and Dekovic (1997) also observed parenting styles and found that a supportive, authoritative and less restrictive child-rearing style was related to more pro-social behaviours. The authoritative parenting style has been consistently associated to positive child development (e.g., Darling, 1999; Luyckx et al., 2011). High responsiveness and high structure provides a balance of warmth and structure that helps children develop appropriate self-regulation, self-competence and pro-social behaviours.

Mothers' observed parenting style in the teaching task was not related to children's behavioural functioning. Studies have shown that parenting behaviours and their predictive relationship to child outcomes can vary across different contexts (Harel & Scher, 2003; Lindsey, Cremeens, & Caldera, 2010; Volling et al. 2002). The current findings indicate that mothers' parenting styles in the teaching and clean up tasks differentially predicted children's behavioural functioning. While teaching and clean up tasks are both parent-led tasks the teaching task is similar to a parent directed play task where the parent and the

child may have a more horizontal relationship quality, in which the parent may be less interested in child compliance and allow the child an equal share of power in the interaction (Lindsey, Cremeens, & Caldera, 2010). In contrast, the clean up task is a caregiving or routine task where the parent may be more interested in child compliance, maintaining their authority, and retaining a greater share of power in the relationship (Lindsey et. al., 2010). These parent-child interaction differences in the teaching and clean up tasks may have contributed to the predictive relationship between mothers' observed parenting style and children's behavioural functioning. As such, for the current study, mothers' parenting style in the clean up task may be a stronger predictor of children's behavioural functioning compared to mothers' parenting style in the teaching task. The current finding adds to the current literature that explores possible contextual differences in parenting styles which furthers the understanding of stability and change in parenting styles across different contexts.

Lastly, mothers' observed authoritarian and permissive parenting styles in both tasks were not related to children's behavioural functioning. Authoritarian and permissive parenting styles are the least favourable parenting styles and mothers may have limited their behaviours that are associated with these two parenting styles to avoid being seen as an ineffective parent. The current findings emphasize the ongoing association between the authoritative parenting style and the healthy social, emotional and behavioural development of children.

Fathers' observations predicting children's behavioural functioning. In contrast to previous research, fathers' observed parenting style in both teaching

and clean up tasks was not related to children's behavioural functioning. Past studies have found that fathers' observed parenting has been associated to children's cognitive, language and emotional development (Cabrera, Shannon, & Tamis-LeMonda, 2007; Shannon, Cabrera, & Lamb, 2004).

At present, it is difficult to produce an adequate explanation for the current findings. The current study did not control for demographic variables such as father's income and education and these variables have been shown to be associated to children's cognitive, social and emotional development (Cabrera et al., 2007). Although fathers' observed parenting styles were not related to children's behavioural functioning perhaps other variables that were unaccounted for in the current study contributed to father's report of children's behavioural functioning. Demographic variables such as father's income and education may also contribute to how a father teaches and cleans up with their child. Therefore observed paternal parenting styles alone may not be as strong a predictor of children's behavioural functioning compared to a combination of income, education and parenting styles (Cabrera et al., 2007).

Alternatively, many fathers today still hold the role as main provider and disciplinarian in the family (Paquette, 2004; Statistics Canada, 2012), therefore some of the fathers in the current study may spend less time with their children compared to mothers and in turn this may influence how a father contributes to their children's behavioural functioning. Kochanska, Aksan, Prisco, and Adams (2008) examined mother-child and father-child reciprocal interactions and children's internalization of parents' prohibition (parent told child a toy was off

limits) and found that father-child reciprocal interactions at seven, 15 and 25 months were not related to child's internalization of father's prohibition at 52 months. Kochanska and her colleagues suggested that since mothers continue to spend more time with their children, the father-child relationship may be a less potent socialization context for young children. In relation to the current study, fathers parenting styles may contribute less to children's behavioural functioning compared to mothers. Consequently, the current study provides less information about observed paternal parenting styles and children's behavioural functioning compared to mothers. More research is needed to further the understanding of fathers' unique contributions to children's behavioural functioning in early childhood.

Self-report and observation measures differ in predicting child behaviours. In the current study self-reports and observations differentially predicted parents' report of children's behavioural functioning. The hypothesis that observations would be the stronger predictor of child behaviours was not supported. Self-reports were the strongest predictor of children's behavioural functioning in the current study.

This was a surprising finding. Many observation studies have consistently shown a relationship between observed parenting behaviours and children's behavioural functioning (e.g., Jennings et al. 2008; Rubin, Burgess, & Hasting, 2002; van der Bruggen, Stams, Bogels, & Paulussen-Hoogeboom, 2010) and researchers have discussed many advantages to using observation methods and many limitations to using self-reports when studying parenting and child

outcomes (Morsbach & Prinz, 2006; Ramey, 2002; Sattler & Hoge, 2006). Furthermore, Zaslow et al. (2006) compared self-report, observation interviews and structured observations and found that the more burdensome the method, structured observations having the most burden on the researcher, the stronger a predictor it was for children's behavioural functioning (determined by mother, child and teacher reports). Zaslow et al. recommended that research that include predictions of children's adjustment should include structured observations. Some explanations exploring why the current study did not produce similar results are discussed below.

While the current study's goal was to observe parenting styles and examine how parenting styles contribute to children's behavioural functioning many observation studies have observed parenting behaviours, and examined how individual behaviours contribute to children's behavioural functioning. For example van der Bruggen et al. (2010) observed mothers' and fathers' autonomy granting, psychological control, emotional warmth and rejection and examined how each behaviour contributed to children's negative emotionality, depression and anxiety. All of the above parenting behaviours can form different parenting styles if combined but less studies have chosen to observe parenting styles even though many researchers support the investigation of a group of parenting behaviours (parenting style) instead of individual behaviours (Darling, 1999). Parents employ a variety of parenting behaviours therefore considering a combination of parenting behaviours provides a more accurate picture of a parent's actions. The current study supports this idea, as parenting styles were

measured by self-reports and observations. Parenting styles have been observed in the past (Domenech Rodriguez, Donovick, & Crowley, 2009) but more research is needed to understand how to best assess parenting styles through observation methods. Although the current study's observation instrument was adapted from a widely used parenting styles self-report measure (PSDQ), it may have lacked necessary components of a strong observation instrument such as a piloting period and in depth research into the items used to form each observed parenting style. As such, parenting styles may not have been represented accurately in the current study and this may have contributed to the lack of association between parenting styles and children's behavioural functioning.

Length of observation session may have also contributed to the weak relationship between observed parenting styles and child behaviours. The current study evaluated parenting styles within a five-minute period of each task. Many observation studies have assessed parenting behaviours within a five-minute parent-child interaction (e.g., Jennings et al., 2008), but longer periods of observed parent-child interactions may provide a better representation of day-to-day parenting. Furthermore, mothers, fathers and/or children may have had an especially bad or good day or a bad or good five minutes. This may have distorted the more long-term level of parenting quality that the observation measure aimed to examine.

The current results suggest that self-reports are a stronger predictor of children's behavioural functioning than observations. This is similar to Yucel and Downey's (2010) multi-method study assessing parenting and infant cognitive

development. Similar to Zaslow et al.'s (2006) study, Yucel and Downey examined parenting styles through self-report, interviewer observations and structured observations. Out of the three methods used, self-reports were the best predictor of infant's cognitive growth. Mothers' self-report of how often they read books and told stories to their infant ended up being the best predictors of infant's cognitive growth (Yucel & Downey, 2010). Similar to the current study, Yucel and Downey did not expect this finding. Many researchers have written extensively about the limitations of self-reports and the advantages of observations and multi-methods but the current study is a reminder of the value of self-reports. Although self-reports have many limitations, they capture a parent's perspective of their own parenting which is a meaningful dimension of parenting that contributes to early child development.

The current finding is encouraging for the future of self-report methods in parenting research, but it also highlights a potential caveat in the current study. Only one source, the parent, was used to complete the parenting questionnaire and the report of children's behavioural functioning. Although mothers and fathers were both used in this study each parent's parenting report was compared to their own report of children's behavioural functioning. This is not an uncommon way to investigate parenting and child behaviours (e.g., Coley, Lewin-Bizan, & Carrano, 2011; Mills et al., 2012), but the relationship between parent self-report and parent reported child behaviours may be due to shared method variance instead of a valid association between measures (McLeod, Wood, and Weisz, 2007). Since parents completed both questionnaires the connection between

parenting style and child behaviours may only be a result of the response style or response set the parent used. Other studies that have discussed this issue have often used teachers as an additional source in reporting children's behavioural functioning (Casas et al., 2006; Daglar, Melhuish, & Barnes, 2001; McNamara, Selig, & Hawley, 2010). Using teacher-reported child behaviours decreases the risk of biased results and adds an "outsider's" perspective of children's behavioural functioning. Children's behaviour at home and at school may differ therefore multiple sources of children's behaviour can increase the validity of a study and provide valuable information when studying parenting and child development. Observation and self-report methods both have strengths and limitations. One method is not superior to the other. Instead each method brings valuable information to understanding parenting and child development.

An Authoritarian Parenting Style Pattern Throughout

In each research question the authoritarian parenting style contributed to the results in a significant way. In the first research question mothers' self-report of authoritarian parenting style was positively related to observed authoritarian parenting style, which contributed to the results of the second research question. Mothers' congruency between self-reported and observed authoritarian parenting style was stronger (within both observation tasks) than fathers' congruency. Finally, in the third research question fathers' self-reported authoritarian parenting style significantly predicted a variety of children's behaviours such as hyperactivity, aggression, and withdrawal. The authoritarian parenting style is composed of high control and low responsiveness. Authoritarian parents value

obedience and respect. This parenting style is more common in the Asian culture where the values of the culture are similar to the values of the authoritarian parenting style. Almost 10 percent of the current study's sample reported an ethnicity from an Asian culture and this may have contributed to the results, specifically the results of the first two research questions. Coming from a culture that accepts the authoritarian parenting style and associates it to positive outcomes for their children (Chao, 2001; Kang & Moore, 2011) mothers may have answered the parenting self-report more honestly and shown authoritarian parenting behaviours in the observation session because they support this parenting style. This would lead to stronger correspondence between self-report and observed parenting styles. While North American parents may have chosen to respond less honestly to questions related to the authoritarian parenting style and restricted themselves from showing authoritarian parenting behaviours because the authoritarian parenting style is a less favourable parenting style in North America.

Finally, many studies have reported a positive association between the authoritarian parenting style and externalizing and internalizing behaviours (e.g., Gadeyne, Ghesquiere, & Onghena, 2004; Lee, Daniels, & Kissinger, 2006). Some of the current sample's children had internalizing and externalizing BASC scores that were in the at-risk or clinical range and this may have contributed to the significant relationship between fathers' authoritarian parenting style and children's maladjustment. The authoritarian parenting style is a parenting style surrounded by great debate. Researchers have found positive and negative child

outcomes related to the authoritarian parenting style (Chao, 2001; Gadeyne et al., 2004; Kang & Moore, 2011; Lee et al., 2006). The current study adds depth to the authoritarian parenting literature by showing that authoritarian parents, specifically mothers, may have more congruency between their parenting perceptions and actions and this may contribute to the development of their children's behavioural functioning.

Limitations

Many of the findings of the present study are consistent with previous research but there are some limitations that need to be considered when interpreting the results. Therefore, caution should be used when generalizing the results to other populations. First, the study's sample size was small (n = 31 families) and the majority of the sample was Caucasian (61.3%) therefore the sample was not representative of all the parents and children of this age group and ethnic backgrounds. A larger and more diverse sample would provide a wider variety of parenting styles and children's behavioural functioning which would provide more power for exploring self-report and observation correspondence and predicting children's behavioural functioning.

Second, only mothers and fathers were included when assessing parenting and children's behavioural functioning and this raises the issue of shared method variance. As a solid practice, clinicians frequently use multiple sources when assessing children's behaviours. Both parents and teachers are often used and using all three of these sources would have been beneficial to the current study. Using multiple sources decreases the threat of biases contributing to the

relationship between parenting styles and children's behavioural functioning (Mcleod et al., 2007).

Third, the current study did not consider other variables that contribute to the formation of a parenting style. Previous research on the correspondence between self-report and observation measures have included additional questionnaires and/or observations of factors that influence a parent's actions on a daily basis. One important question that was absent in the current study was "how typical was your interaction with your child today?" This would have contributed to the validity of the correspondence between self-report and observation measures by filtering out which observations were not accurate representations of typical parent behaviours. Previous studies also included various questionnaires such as mental health (Kochanska, 1990) and personality (Metsapelto & Pulkkinen, 2005). The intention is to have additional data to control for certain factors that contribute to parenting styles such as parent mental health and personality, in order to isolate the relationship between perceptions and behaviours.

Finally, the coding scheme used for the observation sessions was designed specifically for the current study and was not piloted before it was used. Piloting a measure helps the researcher become aware of any problems the measure might have when it is used with real participants. Ideally every questionnaire and observational instrument should be piloted before use to refine the measure to best fit the research question and to make it an effective instrument or to discard the observation instrument and start over (Robson, 2011). Piloting the PSDQ coding

scheme would allow an evaluation of the scheme with a similar population and the ability to understand the validity of the coding scheme. However, this coding scheme is similar to other parenting styles or behaviour coding schemes (e.g., Domenech Rodriguez, Donovick, & Crowley, 2009; van der Burggen et al., 2010; Seesa, et al., 2001) that have examined parenting styles or the correspondence between self-report and observation measures. Observation studies commonly examine parental warmth, control and autonomy granting when investigating parenting styles (e.g., Domenech Rodriguez, et al., 2009; Kuczynski & Kochanska, 1990; van der Burggen et al., 2010) and rating parenting behaviours through the use of a Likert scale is also a common practice (e.g., Domenech Rodriguez, et al., 2009; Metsapelto & Pulkkinen, 2005; Rubin, Burgess, & Hastings, 2002). Therefore the current study can serve as a pilot study or an exploration of the PSDQ's capability to assess parenting styles through self-report and observation measures. Although the current study has its limitations, the current findings still contribute to the ongoing investigation of parenting and how parenting styles contribute to the well-being of young children.

Future Directions and Implications

The findings from this study support the use of multi-methods and to include mother and father measures of parenting when assessing two-parent families. In the present study, self-report and observation data of parenting styles had low correspondence and mothers and fathers had different patterns of self-report and observation congruency. This suggests that mothers, fathers, and observers each have a unique perspective on parenting styles and behaviours. No

individual perspective is superior to the other and therefore if possible, all perspectives should be collected and examined. Currently, the majority of parenting studies with young children still rely on maternal self-reports to represent parenting (Ramey, 2002). The current findings suggest that a mother's report of parenting may not provide a complete picture of parenting in a two-parent family and research needs to continue to incorporate mothers, fathers, as well as the use of multi-informants and multi-methods to further the understanding of parenting styles and how they contribute to children's behavioural functioning. However, multi-methods can be burdensome to many researchers, requiring a large amount of time, resources and expenses that are not always available. Therefore future studies should continue to investigate the correspondence between self-reports and observations to further understand under what conditions and in which situations it is best to use self-reports, observations or a combination of methods when studying parenting styles and young children's behavioural functioning.

Additionally, further investigation into appropriately observing and coding parenting styles is needed. The PSDQ coding scheme was designed specifically for the current study and the lack of use and evaluation may have impacted the current findings. Parenting styles are commonly measured by self-reports instead of observations, but there is support available for the observation of parenting styles and the ongoing examination of parenting styles through observations may bring a new depth of understanding to parenting research that self-reports are unable to provide.

The findings of this study have implications for both practice and research. For the clinical field, the findings suggest that parenting perceptions and behaviours differ and this is valuable information for parenting interventions and education. Past research has shown that incongruent parenting perceptions and behaviours can contribute to children's positive and negative social and emotional development (Barnett, Shanahan, Deng, Haskett, & Cox, 2010). For instance, Weis (2002) found that high control beliefs and low levels of harsh parenting was not related to young children's behavioural problems, but McLoyd, Kaplan, Hardaway, and Wood (2007) found that the mismatch of parent endorsement of physical punishment and actual use of physical punishment can contribute to higher levels of children's problem behaviours. Many parenting programs focus on the development of optimal parenting skills including sensitivity, emotional and disciplinary communication and positive parent-child interactions (Centers for Disease Control and Prevention, 2009; Child Welfare Information Gateway & U.S. Department of Health and Human Services, 2008) with some programs including video-feedback where parents watch their own parenting behaviours and discuss how to improve their parenting (e.g., Juffer, 2008). Adding a reflection component about parenting perceptions and behaviours and what factors may contribute to parent perceptions and behaviours may help parents improve their parenting skills but also gain a better understanding of how their own perceptions and behaviours, individually and combined, contribute to their children's development. Furthermore, the findings support the ongoing use of multiple sources when assessing parenting and children's behavioural functioning.

Clinicians need to continue to collect mother and father information about parenting and child behaviours to appropriately assess the dynamics of a two-parent home and their child's behavioural functioning.

In the research field, the current findings add to the current literature about the correspondence between self-report and observation measures. The scope of literature for this topic is small, the number of studies found about the correspondence between parent self-reported parenting and observed parenting for the present literature review was small with many studies dating 10 to 15 years ago, therefore these findings can inform future researchers about the current state of the issue of correspondence between methods. The current study reviewed the issues involved in striving for correspondence and extended the topic by comparing mothers and fathers self-report and observation congruency.

Conclusion

The current study emphasizes the importance of carefully considering the type and source of information to be used when studying parenting styles and children's behavioural functioning. Consistent with previous research the current study concludes that the association between parenting perceptions and behaviours is complex and adds that the congruency between parenting perceptions and behaviours is different for mothers and fathers. Furthermore, the current findings also found that self-report and observation measures differentially predict children's behavioural functioning supporting a transfer from the heavy reliance on self-report data to the use of multiple sources and methods when studying parenting styles. Self-reports and observations provide different

perspectives of parenting and cannot be assumed to provide the same information or replace the other method in a study. It is hoped that researchers will continue investigating the methodology behind parenting studies along with parenting and how it contributes to children's development. Parenting is one of the most important roles in an adult's life therefore it is important to continue looking for the most accurate ways to study parenting especially in the early childhood years when parents are helping their children lay down the foundations for their later development.

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Appendix A: Parenting Styles and Dimensions Coding Scheme

Adapted from the PSDQ Questionnaire
(PSDQ; Robinson, Mandleco, Olsen, & Hart, 2001)

- For all dimensions include non-verbal aspects of parenting when applicable (e.g., being responsive to a child's behaviours can be shown verbally and non-verbally)

Authoritative Parenting Style

Connection Dimension (warmth and support): parent is responsiveness towards child's behaviours, feelings or needs, parent uses comfort when child is upset, parent uses praise and parent has warm and intimate moments with child.

1) No connection shown
2) Few/some instances of connection shown; 1-3 instances of warmth or supportive behaviour displayed.
3) Moderate amounts of connection shown; parent is warm and supportive towards child during half the interaction
4) Substantial amounts of connection shown; only one or two instances of non-supportive or cold behaviour displayed
5) Consistent connection between parent and child. Parent consistently displays warm and supportive behaviours towards child.

Structure and Regulation Dimension (reasoning and induction): parent clearly states and enforces rules, parent emphasizes the importance of rules, parent gives reasons for rules, and parent explains consequences of the child's behaviour.

1) No structure or regulation shown
2) Few/some instances of structure or regulation shown; 1-3 instances of enforcing rules or reasoning behaviour displayed.
3) Moderate amounts of structure or regulation shown; parents enforce rules or uses reasoning techniques during half the interaction with child.
4) Substantial amounts of structure and regulation shown; only one or two instances of not enforcing rules or displaying non-reasoning behaviour.
5) Consistent displays of structure and regulation throughout interaction. Parent consistently enforces rules and provides reason and/or explanation for requests and actions.

Autonomy Granting Dimension (democratic participation): parent respects child's opinion, parent encourages child to express opinion, parent allows child's input in task rules, parent takes child's desires into account before asking child to do something

1) No autonomy granting shown
2) Few/some instances of autonomy granting shown; 1-3 instances of democratic participation shown.

3) Moderate amounts of autonomy granting shown; parent includes child in decision making processes during half the interaction.
4) Substantial amounts of autonomy granting shown; only one or two instances of controlling or directive behaviour displayed.
5) Parent consistently displays autonomy granting throughout interaction. Parent consistently includes child in decision making processes throughout the interaction.

Authoritarian Parenting Style

Non-Supportive Control Dimension (non-reasoning/punitive): parent uses threats as punishment with little or no justification (e.g., "because I said so"), parent repetitively states commands without reasons, parent is overly strict in regards to rules, parent is controlling of child's choices/actions, parent uses physical punishment when disciplining child and parent spanks, slaps or grabs child when child is being disobedient or misbehaves

1) No non-supportive control shown
2) Few/some instances of non-supportive control shown; 1-3 instances of non-reasoning and/or punitive behaviour shown.
3) Moderate amounts of non-supportive control shown; parent uses non-reasoning and/or punitive behaviour during half the interaction.
4) Substantial amounts of non-supportive control shown; only one or two instances of reasoning used.
5) Parent consistently displays non-supportive control throughout interaction. Parent consistently uses non-reasoning, punitive or physical coercion in the interaction

Negative Affect Dimension: parent uses stern, negative or demanding tone of voice when communicating with child, parent explodes in anger towards child, parent yells or shouts when child misbehaves and parent scolds and criticizes child to make child improve or when child's behaviour does not meet parent's expectations.

1) No negative affect shown.
2) Few/some instances of negative affect shown; 1-3 instances of a stern, negative or demanding tone of voice used or 1-3 instances of anger, criticism or scolding used.
3) Moderate amounts of negative affect shown; parent uses negative tone of voice or criticizes, scolds or is angry with child during half the interaction.
4) Substantial amounts of negative affect shown; only one or two instances of positive verbal interactions displayed.
5) Parent consistently displays negative affect throughout interaction. Parent consistently is angry with child or yells, shouts, scolds or criticizes child throughout the interaction.

Permissive Parenting Style

Indulgent Dimension: parent states rules but does not enforce rules, parent states punishments to child but does not enforce them, parent gives into child when child causes a commotion about something, parents ignore misbehaviour and parent finds it difficult to discipline child.

1) No indulgent behaviour shown
2) Few/some instances of indulgent behaviour shown; 1-3 instances of inconsistent parenting practices displayed (e.g., not enforcing/ignoring rules or giving into child's request that is against parents request).
3) Moderate amounts of indulgent behaviour shown; parent displays inconsistent parenting practices during half the interaction. Parent often has difficulty enforcing rules and disciplining child.
4) Substantial amounts of indulgent behaviour shown; only one or two instances of directive behaviour shown.
5) Parent consistently displays indulgent behaviour throughout the interaction. Parent consistently has difficulty following through on commands, ignores misbehaviour and has difficulty disciplining their child.