Measuring and Predicting Parenting Style Using Self-Determination Theory

by

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ABSTRACT

Research on the influence of parenting styles on child outcomes has been fueled by an interest in promoting optimal child development. The majority of these studies have concluded that an authoritative parenting style is ideal for the successful socialization of children. However, some theorists question whether classifying parents as one of four parenting style types is overly simplistic, or hypothesize that children's behaviours influence parenting style rather than the reverse. Regardless, the majority of parenting experts agree, it is the parent's responsibility to generate a parent-child context that provides for the needs of the child. This dissertation is comprised of three studies that contribute to the existing parenting research by examining parenting style through the lens of Self-Determination Theory (SDT). The first study explores the factor structure and validity of a measure of six dimensions of parenting style. The second study tests the hypothesis that there are meaningful differences in parenting style between groups of parents who perceive their children misbehave infrequently, moderately, or frequently. Last, the third study examines the extent that adult social competence accounts for variance in parenting style. The results of these studies indicate that: 1) the Revised-Parents as a Social Context Questionnaire can be used to assess dimensions of parenting style relevant to SDT, as well as overall parenting style quality; 2) there are significant differences in parenting style based on how frequently parents perceive their children misbehave; and 3) adult social competence accounts for significant differences in overall quality of parenting style. Results support examining parenting style through the lens of SDT.

Preface

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Study one, *Exploring the Factor Structure of the Revised-Parent as a Social Context Questionnaire*, has been submitted for publication, and includes three co-authors. In completing this manuscript, I was responsible for research design, writing, data collection, statistical analysis, interpretation of results, and manuscript revisions. Dr. Rogers contributed to the data analysis plan, interpretation of results, and manuscript edits. Dr. Rinaldi contributed to the research design, data collection, and manuscript revisions. Dr. Ying contributed to the data analysis plan and manuscript revisions.

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CONTENTS

INTRODUCTION

Existing research supports that parenting style influences the social-emotional development of children (Underwood & Rosen, 2011). However, fewer studies have sought to understand what factors determine how people parent (Belsky, 1984; Belsky, Crnic, & Woodworth, 1995). Current research on determinants of parenting style examines characteristics of the environment, child, or parent (e.g., Laukkanen, Ojansuu, Tolvanen, Alatupa, & Aunola, 2014; Ponnet et al., 2013). Such research provides insight into the complexity of factors that can influence how parents interact with their children. However, this research overlooks social competencies as determinants of parenting style. This dissertation begins to attend to this gap in the literature by examining differences in dimensions of parenting style deemed critical for the socialization of children by Self-Determination theorists (Deci & Ryan, 2000; Skinner, Johnson, & Snyder, 2005). The following introduction includes a brief discussion of typologies and dimensions of parenting style, current research on the influence of child misbehaviour on parenting, and adult social competencies anticipated to predict how people parent.

Parenting Style

A strong interest in research on the relationship between parenting style and children's outcomes continues to be fueled by the belief that the nurturing children receive influences the adults they become (Maccoby, 1992). Parenting style is defined as the beliefs, values, and actions parents employ in interactions with their children (Darling & Steinberg, 1993). For nearly 50 years, much of the

research on parenting style has been guided by typologies identified by Baumrind (1966). Employing Baumrind's typologies, researchers have measured authoritative, authoritarian, permissive, or rejecting-neglecting parenting types (e.g., Robinson, Mandleco, Olsen & Hart, 1995; Maccoby & Martin, 1983). Of these four typologies, an authoritative parenting style is believed to contribute to the most optimal outcomes for children (Larzelere, Sheffield Morris, & Harrist, 2013). According to Baumrind,

> The authoritative parent attempts to direct the child's activities in a rational, issue-oriented manner. She encourages verbal give and take, shares with the child the reasoning behind her policy, and solicits his objections when he refuses to conform. Both autonomous self-will and disciplined conformity are valued by the authoritative parent. Therefore, she exerts firm control at points of parent-child divergence, but does not hem the child in restrictions. She enforces her own perspective as an adult, but recognizes the child's individual interests and special ways. The authoritative parent affirms the child's present qualities, but also sets standards for future conduct. She uses reason, power, and shaping by regime and reinforcement to achieve her objectives and does not base her decisions on group consensus or the individual child's desires (p. 891, 1966).

Research supports that authoritative parenting is associated with a wide variety of desirable child characteristics and outcomes for children. For example, Coplan, Arbeau, and Armer (2008) tested the moderating effect of authoritative

parenting on the relationship between child shyness and child maladjustment. In this study authoritative parenting was measured using the warmth, reasoning, and democratic participation subscales of the Parenting Dimensions Questionnaire (Robinson, Mandleco, Olsen, & Hart, 2001). Results of analysis revealed a small and significant correlation between increases in authoritative parenting and decreased peer difficulties (r = -0.15). Moderation analysis further revealed that, at higher levels of shyness, authoritative parenting was associated with decreases in internalizing problems and peer difficulties (Coplan et al., 2008). These results supported that an authoritative parenting style can enhance the resilience of shy children.

Additionally, research conducted by Hoeve, Dubas, Gerris, van der Laan, and Smeek (2011) examined whether an authoritative parenting style was associated with delinquency in adolescents and early adults. Parents completed self-report measures of attachment, granting autonomy, making conformity demands, using punishment and ignoring, and being responsive to the needs/desires of the child. Using participants' responses to the aforementioned measures parents were categorized as authoritative, authoritarian, permissive, or neglectful using cluster analysis. Comparison between emerging groups indicated that adolescents with at least one authoritative parent reported significantly less delinquent behaviours. Adolescents reported the greatest amount of delinquent behaviours when both parents were characterized as neglectful (Hoeve et al., 2011).

In a study conducted by Wolfradt, Hempel, and Miles (2003), parenting was assessed from adolescents' rather than parents' perspectives. Adolescents reported on the warmth, control, and pressure they received from their parents, and, again, cluster analysis was used to categorize parents as authoritative, authoritarian, permissive, or neglectful. Results of analyses revealed that adolescents who perceived their parents were authoritative reported significantly less depersonalization, less trait anxiety, less passive coping, and more active coping than adolescents of authoritarian parents. However, no meaningful differences emerged between authoritative, permissive, and neglectful groups in regards to self-reported depersonalization, trait anxiety, or passive coping (Wolfradt et al., 2003). These results suggest that whether parenting type is assessed from the perspective of parents or children, authoritative parenting appears to have marked benefits in regards to children's outcomes when compared to parents who employed an equally demanding but minimally responsive parenting approach (authoritarian).

In reviewing the existing literature, it is evident that Baumrind's (1966) term "authoritative" is commonly used in parenting research. However, how authoritative parenting is assessed can vary greatly across studies. In conducting her research, Baumrind (2013) typically relied upon observations of responsiveness and demandingness in parent-child interactions as rated by objective observers in a variety of contexts. According to Baumrind (2013),

> Responsiveness refers to parents' emotional warmth and supportive actions that are attuned to children's individual vulnerabilities, cognitions,

> and inputs and are supportive of children's individual needs and plans. Demandingness has two related components, monitoring and confrontive control, and refers to the claims parents make on their children to become integrated into and contribute to the family unit: monitoring, which provides structure, order, and predictability to the child's life; and control, which shapes the child's behaviour and restrains the child's potentially disruptive agentic expression (p. 26).

Commonly, parenting researchers have simplified parenting style by clustering parents as authoritative, authoritarian, or permissive types (Baumrind, 1966; Robinson et al. 1995). In contrast, Baumrind (1989) presents seven possible parenting types that can emerge based on whether parents demonstrated low, moderate or high levels of responsiveness, and demandingness when disciplining their children. These parenting types include: 1) disengaged (low in responsiveness and demandingness), 2) permissive (low in demandingness and high in responsiveness), 3) good enough (moderate in responsiveness and demandingness), 4) democratic (high in responsiveness and moderate in demandingness), 5) directive (high in demandingness and moderate in responsiveness), 6) authoritarian (high in demandingness and low in responsiveness), 7) and authoritative (high in demandingness and high in responsiveness).

Examination of each of the aforementioned parenting types is seldom observed in the parenting literature. A rare example of a study that examined the influence of the seven parenting types and child outcomes was conducted by

Baumrind, Larzelere, and Owens (2010). This longitudinal study examined whether caregivers' parenting style, evaluated when children were of preschool age, predicted later adolescent adjustment. When ranked based on their average overall scores on positive traits including self-efficacy, and cognitive and social competence, the highest mean score was achieved by adolescents of parents categorized as authoritative, followed by directive, democratic, good enough, disengaged, permissive, and last authoritarian. When ranked based on internalizing and externalizing problems, the rank order was reversed with adolescents of authoritarian parents reporting the most difficulties and adolescents of authoritative parents reporting the least. Notably, the differences between adolescents of authoritative, directive, or democratic parents were not significant. However, there was a large effect size when comparing the adjustment of children of authoritative, directive, and democratic parents to those of authoritarian parents, and a moderate effect size when the adjustment of these same three groups were compared to adolescents with permissive parents. Baumrind et al. (2010) refers to authoritative, directive, and democratic parenting approaches as balanced and committed. Parents employing the three aforementioned parenting approaches are both communal and agentic in their interactions with their children. Whereas, parents employing authoritarian, permissive, or rejecting-neglecting parenting approaches are described as "unbalanced and uncommitted." Parents categorized as unbalanced and uncommitted fail to be responsive to either their children's interests (authoritarian), provide adequate structure and guidance (permissive), or both (rejecting-neglectful). In the middle ground, adolescents of

parents moderate in both responsiveness and demandingness (good enough), appeared to fare better than adolescents of authoritarian, permissive, and rejecting-neglectful parents, but not as well as adolescents of authoritative parents (Baumrind et al., 2010).

Similar to her predecessor, Baldwin (1955; cited in Baumrind et al. 2010), who compared autocratic and democratic parenting types, Baumrind et al. (2010) asserted that assessment of parenting typologies was necessary because spurious conclusions would emerge from assessment of any one dimension of parenting style, without consideration to co-occurring dimensions. However, many dimensional approaches to assessing parents consider more than one dimension of parenting style. For example, Schaefer's (1965) dimensional assessment of parenting style is based on three dichotomous variables: 1) accepting versus rejecting, 2) providing lax versus firm behavioural control, and 3) promoting psychological autonomy versus psychological control. When equating her authoritative typology to Schaefer's (1965) dimensional assessment of parenting style, Baumrind et al. (2010) asserted, "Authoritative parents are highly demanding [firm], responsive [accepting], and autonomy supportive" (p. 162).

Stewart and Bond (2010) compared the classification of parents into types, versus dimensional assessments of parenting style, and presented three arguments in favour of a dimensional approach. First, using a dimensional approach allows for parenting styles to emerge from, rather than be placed upon the samples of parents being studied. Second, a dimensional approach allows researchers to determine which of the characteristics being assessed has the greatest influence on

the variable of interest. Third, assessment of basic dimensions of parenting style and their effects may contribute to a better understanding of possible cultural differences in optimal characteristics of parenting style (Stewart & Bond, 2010). In accord with the above perspective, many researchers have employed dimensional approaches to the assessment of parenting style (e.g., Skinner et al., 2005).

An extensive review of the literature on parenting conducted by Skinner et al. (2005) identified three dimensions of parenting style most consistently associated with positive child outcomes (warmth, structure, and autonomy support), and three dimensions associated with diminished outcomes (rejection, chaos, and coercion). Arguably, over the course of a child's development, both positive and negative characteristics of parenting style will emerge from time-to-time. Parenting styles that draw upon greater positive characteristics and fewer negative characteristics are anticipated to be the most beneficial for children. Moreover, research findings support that parental warmth, structure, and autonomy support are associated with better child outcomes (Skinner et al., 2005).

Parental warmth is defined as the expression of affection for a child that includes such things as communication of unconditional regard, emotional support, and availability (Skinner et al., 2005). Parental warmth has been shown to predict increases in empathic responding and social functioning (Zhou et al., 2002); fewer externalizing problems (McCarty, Zimmerman, Digiuseppe, & Christakis, 2005), and less emotional distress among children (Operario, Tschann, Flores, & Bridges, 2006). Parental structure comprises provision of clear

expectations, and maintaining limits that support positive socialization outcomes for children (Skinner et al., 2005). Providing adequate structure is associated with healthier eating habits (Black & Aboud, 2011), increased engagement in academic pursuits (Farkas & Grolnick, 2010; Griffith & Grolnick, 2014), and higher levels of agency and self-regulation among children (Griffith & Grolnick, 2014). Parental autonomy support involves parents supporting children to appropriately communicate their experiences and desires even when they are contrary to authority (Skinner et al., 2005). Autonomy support is associated with greater ability to cope with stress (Seiffge-Krenke & Pakalniskiene, 2011), increased satisfaction with life and school (Ferguson, Kasser, & Jahng, 2011), and enhanced ability to share, and respond to others' emotional difficulties (Roth & Assor, 2012).

Similarly, research findings support that rejection, chaos, and coercion are associated with less desirable child outcomes (Campos, Besser, & Blatt, 2013; Cui, Morris, Criss, Houtlberg, & Silk, 2014; Deater-Deckard et al., 2009). Parental rejection is defined as being unavailable, unresponsive to, and burdened by children's needs (Skinner et al., 2005). Rejection has been associated with depression, suicidality, self-criticism (Campos et al., 2013), and decreased happiness among offspring (Kazarian, Moghnie & Martin, 2010). Parental chaos comprises parenting behaviours that are unpredictable and arbitrary (Skinner et al., 2005). Chaos is associated with lower levels of cognitive functioning, increased behavioural problems (Deater-Deckard et al., 2009), and lower levels of social competence among children (Dumas et al., 2005). Parental coercion

involves demanding strict obedience that devalues the desires and experiences of children (Skinner et al., 2005). Increases in coercive parent-child interactions predict difficulty managing anger (Cui et al., 2014), and internalizing and externalizing behavioural problems (Aunola & Nurmi, 2004).

In accord with the existing research, Self-Determination Theory (SDT) highlights three dimensions of parenting style as essential to optimal socialization of children (Deci & Ryan, 2000). Specifically, SDT proposes that environments characterized as warm, structured, and supportive of autonomy provide for the psychological needs of children. Psychological needs include experiences that nurture a sense of belonging, competence, and autonomy. Consequently, children are expected to internalize the values of social contexts that address their psychological needs (Deci & Ryan, 2000).

Using SDT as a guide, Skinner et al. (2005) created the Parent as a Social Context Questionnaire (PSCQ) to assess each of these six dimensions of parenting style among school age children. Confirmatory analysis provided support for each dimension of parenting style. However, examination of the reliability of the six subscales revealed less than satisfactory internal consistency. To address this concern, Skinner et al. (2005) created a revised version of this scale that included eight additional items. Adding items can have a significant impact on the factor structure of a measure. Therefore, the first study in this dissertation examines the factor structure of the Revised-Parents as a Social Context Questionnaire (R-PSCQ) when used to assess parenting style among parents of children two to 18 years of age. This study also explores how individual dimensions combine to

assess more complex, multidimensional parenting style types. Together, revisions to the PSCQ were expected to increase the internal consistency reliability of subscales (McCrae, Kurtz, Yamagata, & Terracciano, 2011), improve the factorability of scale items (Floyd & Widaman, 1995), and broaden the sample with whom the measure could be employed. These findings add to the literature by providing support for the reliability and validity of a concise measure of six dimensions of parenting style that can be used to advance research on parenting style from a multidimensional perspective.

Furthermore, the results of this study serve as a foundation for the assessment of dimensions of parenting style and overall quality of parenting for the second and third paper, respectively. A valid measure that can capture both multiple dimensions of parenting style and overall quality of parenting from the perspective of parents may be of value to parenting researchers. For example, such a measure can enhance our current understanding of how parents' perceptions of children's misbehaviour can influence multiple dimensions of parenting style, and what skills parents bring to interactions with their children that predict higher quality parenting despite the perceived challenged.

Child Misbehaviour and Parenting

Historically, parenting researchers focused on the influence of parenting style on child outcomes, overlooking the effect children's behaviours had on how caregivers parent. Bell (1968) was the first researcher to challenge interpretations of correlational studies that assumed parenting shaped how children behaved by hypothesizing the opposite. Specifically, Bell asserted children's behaviours: 1)

activate parents' repertoires for responding, 2) influence the intensity of response parents employ, and 3) reinforce what type and intensity of response will be chosen by parents in future interactions. The results of several studies have provided support for Bell's hypothesis that children's behaviours influence how caregivers parent (e.g., Kiff, Lengua, & Zalewski, 2011).

Fite, Colder, Lochman, and Wells (2006) conducted a study that followed boys identified as aggressive by their grade four teachers until they reached grade eight. Parents completed yearly evaluations on their children's externalizing behaviours, and their use of parental monitoring, inconsistent discipline, positive parenting, and involvement on a yearly basis. The results of the study indicated that increases in boy's externalizing behaviours predicted decreases in parental monitoring during grades six and seven. However, parental monitoring did not appear to influence externalizing behaviours at any grade. In regards to inconsistent discipline, increases in boys' externalizing behaviours appeared to contribute to increases in inconsistent discipline at each grade level. In contrast, parents' use of inconsistent discipline did not appear to influence boys' externalizing behaviours at any grade level. Last, no reciprocal effects were identified in regards to boys' externalizing behaviours, parental involvement, or positive parenting.

Similarly, Pardini, Fite, and Burke (2007) conducted a study on the bidirectional influence of the misbehaviour of boys six to 16 years of age and parenting practices. The results of their analysis confirmed bidirectional effects. However, researchers found that the influence of children's behaviours on

parenting strategies (e.g., use of positive reinforcement, child monitoring, and physical punishment) was stronger than the influence of parenting strategies on behaviour problems. Similar findings have emerged from longitudinal studies conducted by Albrecht, Galambos, and Jansson (2007), Loukas (2009) and Steeger and Gondoli (2013). Each of these studies concluded that children's problem behaviours were better predictors of harsh parenting behaviours than vice-versa.

The research presented above, highlights that children's behaviours may have a greater influence on how caregivers parent than the reverse. Thus, research conclusions that assume parents are the driving force behind children's behavioural issues may be misleading. Moreover, such beliefs may contribute to a diminished sense of competence among parents who blame themselves for their children's behavioural issues. Based on existing research, it may be more appropriate to postulate that children are likely to elicit harsher responses from their parents, when parents experience their children as more challenging. Such a premise incorporates the perspective of social cognitive theorists who assert that parenting behaviours are not only influenced by children's behaviours, but also by the expectations, and psychological functioning of caregivers in relation to their children (Azar, Reitz, & Goslin, 2008; Dix, 1993). Indeed, the beliefs, values, goals, and psychological functioning of parents influence parents' perceptions of their children's behaviours, whether they intervene, and what strategies they employ (Dix, 1993).

Azar et al. (2008) assert that parents' perceptions of their children are influenced by parental goals and beliefs regarding developmentally appropriate behaviour. Whereas, parents' responses to children's behaviours are influenced by whether they believe they have the knowledge and resources to effectively intervene (Azar et al., 2008). In line with the above supposition, research evidence supports that the underlying cognitive and emotional functioning of parents accounts for variance in perceptions of their children's behaviours and how caregivers respond (e.g., Fox, Platz, & Bentley, 1995; Moilanen, Ramussen, & Padilla-Walker, 2014). For example, researchers have found that perceptions of increased frequency of children's misbehaviour among toddlers are associated with increased frequency of harsh discipline and fewer nurturing behaviours (Fox et al., 1995).

Studies have emerged that examine the relationship between parenting styles and dimensions, and perceived child difficulty. For example, Prady, Kiernan, Fairley, Wilson, and Wright (2014) found that decreases in parental warmth and increases in coercion were associated with parents' perceptions that their infants had more difficult temperaments. Furthermore, a study conducted by Moilanen et al. (2014) concluded that parents' perceptions that their adolescents had greater difficulty regulating their behaviours predicted increases in authoritarian and permissive parenting styles. More research on how parents' perceptions influence parent-child interactions is needed.

My review of the existing literature revealed an absence of research examining whether there are significant differences in multiple dimensions of

parenting style between groups of caregivers who perceive their children misbehave infrequently, moderately, or frequently. The second study in this dissertation attends to this gap in the parenting research literature. This study includes assessment of the six dimensions of parenting style assessed by the R-PSCQ (Skinner et al., 2005), and makes a unique contribution to the literature by attending to what dimensions of parenting style significantly differ at increasing levels of perceived child difficulty. Such findings may highlight what dimensions of parenting style need to be attended to among parents who perceive their children to be challenging.

Social Competencies and Parenting Style

Regardless of how children behave, parents are culturally obligated to provide relational contexts that promote the wellbeing of their children (Baumrind, 2013). While it is important to be aware that parenting strategies may not be the driving force behind children's problematic behaviours, identifying characteristics of parents that are associated with maintaining more positive parenting styles after accounting for perceived child difficulty, may aid in designing interventions. Such interventions would focus on social skills that contribute to parents' abilities to generate and maintain a constructive relationship with their children despite children's behavioural difficulties. Social competence is defined as the foundation for all areas of interpersonal success (Rose-Krasnor, 1997). Surprisingly, few studies examine the relationship between facets of adult social competence and parenting style.

Rose-Krasnor (1997) presents two levels at which social competence can be assessed: 1) the skill level and 2) the index level. The skill level of social competence focuses on aptitudes believed to be foundational to interpersonal success (e.g., empathy, emotional intelligence, negative assertion, and conflict management). When interpersonal difficulties are identified, social skills deficits are believed to be appropriate targets for interpersonal interventions (Rose-Krasnor, 1997). At the index level, assessment of social competence emphasizes the relational context, and attention to the self and other in achieving desired outcomes (Rose-Krasnor, 1997). For example, a parent may interact effectively with one child (i.e., a shy child), and not with another (i.e., an aggressive child). At the index level, social competence is believed to be marked by successfully balancing one's own needs or goals (agency) with those of the other (communion). Therefore, evaluating social competence at the index level can include assessment of balance between communion and agency, quality of support networks, and social status. Such outcome measures are anticipated to evaluate how well parents' skills are matched to the given social context, and may best detect when interventions are needed. Given its complexity, Rose-Krasnor asserts that it is important to assess multiple facets of social skills and indices to achieve a meaningful understanding of one's level of social competence.

As stated earlier, there is a paucity of research on the relationship between adult social competence and parenting style. The existing research has involved assessment of two or fewer facets of social competence, and examined the relationship between parenting and social support, communion and agency, or

empathy (e.g., Baumrind, 1996; Respler-Herman, Mowder, Yasik, & Shamah, 2012). The third study comprising this dissertation expands on existing parenting research by examining the extent to which eight facets of social competence account for variance in parenting style. Such findings add to the literature by identifying which facets of the caregiver's social competence may influence the overall quality of parenting style. Moreover, findings may highlight social skills that can be successfully targeted in parenting interventions. A vast number of social competencies could have been selected for this research. Below is a brief discussion of those chosen.

At the index level, parents were asked to complete self-report measures that evaluated social support, communion, and agency. These facets of social competence were selected based on existing literature that asserted their importance in the parent-child context (e.g., Baumrind, 1996; Respler-Herman et al., 2012). For the purposes of this study, social support is defined as belonging to a network of others who foster a sense of being appreciated and cared for (Zimet, Dahlem, Zimet, & Farley, 1988). Parents' self-reports of social support have been positively associated with being responsive to children's needs, and maintaining children's safety (Respler-Herman et al., 2012), and negatively associated with parenting stress, ineffective parenting, and child difficulties (McConnell, Breitkreuz, & Savage, 2011). Based on the existing literature that indicates that social support contributes to better parent-child interactions, it was expected that social support would be associated with higher quality parenting styles.

Agency is defined as one's tendency to pursue individual needs and goals; whereas, communion is defined as one's inclination to attend to the needs and desires of others (Helgeson & Palladino, 2012). According to Baumrind (1996), communion is associated with qualities such as empathy, trustworthiness, cooperativeness, and perseverance; whereas, agency is associated with confidence, drive, and leadership. High levels of both agency and communion are believed to be characteristics of healthy functioning adults (Baumrind, 1996), and therefore are anticipated to be associated with higher quality parenting styles.

At the skill level of social competence, empathy was chosen as a variable of interest based on previous research that supports the relation between empathy and parenting strategies (de Paul, Perez-Albeniz, Guibert, Asla, and Ormaechea, 2008). Emotional intelligence, negative assertion, and conflict management were selected based on research that suggests these skills predict interpersonal success more broadly (Buhrmester, Furman, Wittenberg, & Reis, 1988). For the purposes of this study, empathy is defined as the tendency to experience a heightened emotional response in relation to the emotional experience of another (Spreng, McKinnon, Mar, & Levine, 2009). Research supports that people higher in empathy demonstrate greater concern for the wellbeing of others (Arbuckle, 2011). In regards to parent-child interactions, lower levels of empathy have been associated with increased risk of physical abuse (de Paul et al. 2008; Perez-Albeniz & de Paul, 2003; Wiehe, 1987). Given the existing research, it was anticipated that higher levels of empathy would be associated with higher quality parenting.

Emotional intelligence is defined as the ability to recognize, communicate, regulate, and constructively utilize one's own and others' emotions (Schutte et al., 1998). Researchers have found that emotional intelligence predicts greater satisfaction, more cooperative responses, and higher levels of affection in interpersonal relationships (Schutte et al., 2001). In the context of parent-child relationships the parent's ability to identify, express, regulate, and utilize emotions is anticipated to support the social-emotional development of the child. Therefore, it was expected that higher levels of emotional intelligence would predict higher quality parenting.

Negative assertion attends to one's comfort level in regards to communicating relationship dissatisfaction (Buhrmester et al., 1988). Increased comfort with communicating relationship dissatisfaction has been significantly correlated with increases in popularity, decreases in depressive and anxious symptoms, higher energy levels, and lower levels of loneliness (Buhrmester et al., 1988). In the context of the parent-child relationship parents are required to provide and enforce appropriate relational boundaries for children. Difficulties with negative assertion may influence parents to avoid, or respond harshly when children violate set boundaries. Therefore, greater comfort with negative assertion was anticipated to be associated with higher quality parenting.

Last, conflict management refers to one's comfort level negotiating through interpersonal discord (Buhrmester et al., 1988). Greater levels of comfort in managing conflict have been demonstrated to predict increased popularity among peers, decreases in depressive and anxious symptoms, and a positive sense

of emotional wellbeing. Conflict is anticipated to be normal in the context of parent-child relationships; especially as the desire for autonomy increases amongst adolescents. Parents who are uncomfortable with conflict may respond less effectively when conflict emerges in the parent-child relationship. Therefore, it was anticipated that greater comfort with conflict management would be associated with higher quality parenting.

Despite minimal evidence demonstrating a meaningful association between adult social competencies and parenting styles, some social skills are already targeted as part of parenting interventions. Specifically, increasing empathy (Harris & Landreth, 1997) and improving conflict management skills (Foster, Prinz, & O'Learly, 1983) have been the focus of parenting interventions. Study three examines the relationship between general parenting style and social competence not specific to the parent-child relationship. If general social competencies are associated with higher quality parenting, it may be that broadly enhancing the social competence of caregivers can improve the interpersonal success of caregivers in a variety of settings. In turn, such improvements may enhance the quality of the parent-child relationship while also increasing the interpersonal resources available to caregivers in times of stress.

Dissertation Aims

The following three studies attend to the research hypotheses that emerged from reviewing the parenting literature. The first study examined the hypothesis that the R-PSCQ can be used as a valid and reliable instrument to assess the six dimensions of parenting outlined by Skinner et al. (2005) when used with parents

of children ages two to 18 years. This study will further examine whether a second order factor analysis will produce the two composite scales hypothesized by Skinner et al. (2005); one measuring high quality parenting, and the other measuring harsh parenting. The second study will test the hypothesis that there will be significant differences in parenting style among parents who perceive their children misbehave infrequently, moderately, or frequently. This study will also examine to what extent dimensions of parenting style (warmth, structure, autonomy support, rejection, chaos, and coercion) account for the differences in parenting style between the three groups of parents. Last, the third study will examine to what extent facets of social competence (first social skills, and second social indices) account for variance in parenting style quality, after accounting for contextual factors including parent and child ages and sexes, and frequency of child misbehaviour.

Each of the studies comprising this dissertation makes unique contributions to the existing research on parenting. Together these three papers take into account parents' perceptions of themselves, their children, and their interactions with their children. Clinically speaking, research that focuses on parents' perspectives may be helpful in generating information and interventions that resonate with parents more broadly. Parenting interventions that validate and incorporate parents' perspective may facilitate engagement, and ultimately contribute to more positive outcomes (Deci & Ryan, 2000).

STUDY1

Exploring the Factor Structure of the Revised-Parent as a Social Context Questionnaire

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Submitted to: Parenting: Research & Practice

Abstract

The Parent as a Social Context Questionnaire (PSCQ) was intended to assess six dimensions of parenting style: warmth, rejection, structure, chaos, autonomy support, and coercion. Despite the results of a confirmatory factor analysis providing initial support for the validity of this measure, further assessment of the subscales revealed less than satisfactory internal consistency. To address this issue, Skinner and colleagues (2005) added eight additional items to their original scale. However, no further analyses were conducted to ensure the desired six factor structure was maintained, and that additional items enhanced the internal consistency of subscales. This article presents: 1) the results of an exploratory factor analysis conducted on the Revised-PSCQ (R-PSCQ) with a sample of 404 parents, 2) assessment of the internal consistency of the revised factors, and 3) evidence of construct validity of the total scale and revised subscales. Results support that the R-PSCQ can be used to assess the six dimensions of parenting style identified above, as well as how well the overall parenting style addresses the psychological needs of the child. Recommendations for further research to support the validity and reliability of this measure are included.

Introduction

A recent review of the literature on measures of parenting revealed an abundance of measures, but a paucity of evidence confirming their validity and reliability (Duppong Hurley, Huscroft-D'Angelo, Trout, Griffith, & Epstein, 2014). For example, the Parent as a Social Context Questionnaire (PSCQ) is a self-report measure that has been used in a variety of parenting studies (e.g., Farkas & Grolnick, 2010; Hardy, White, Zhiyong, & Ruchty, 2011; McLachlan, Zimmer-Gembeck, & McGregor, 2010). While the advantages of this measure include having a theoretical foundation, being concise, and capturing the core dimensions of parenting style (Skinner, Johnson, & Snyder, 2005), further research is needed to improve and ensure the validity and reliability of the PSCQ with various samples of parents. In the only published study exploring the validity and reliability of the subscales of this measure, results of analyses revealed less than satisfactory internal consistency for a number of the subscales (Skinner et al., 2005). To enhance internal consistency, eight additional items were added by Skinner and colleagues (2005) to create a revised version of the PSCQ (R-PSCQ). However, no studies have been published examining the validity and reliability of the R-PSCQ (Skinner et al., 2005). The present study explores the factorability of the revised items, internal consistency of emerging subscales, and preliminary evidence of construct validity of the R-PSCQ. A working definition of parenting style, and a brief description of the theory used to select the dimensions of parenting style assessed by the R-PSCQ are provided.

According to Darling and Steinberg (1993), parenting style refers to parental attitudes and behaviours that contribute to the overall parent-child context. Researchers interested in variations in parenting style have focused on different dimensions in their attempts to understand the influence of parenting style on child outcomes (for an extensive summary see Skinner et al. 2005). For example, Baumrind (1991) focused on two dimensions of parenting style: demandingness and responsiveness. Using these dimensions, Baumrind categorized parents as either: authoritative, authoritarian, or permissive and concluded that parenting styles characterized by high levels of both demandingness and responsiveness resulted in the best outcomes for children. Baumrind's conceptualization of parenting style has greatly contributed to the advancement of parenting science, as well as mainstream parenting practices (Baumrind, 2013). However, researchers have further observed that there are countless ways parents can respond to their children, and responses may vary in relation to a variety of intra- and interpersonal factors (Baumrind, 2013). Given the vast number of dimensions of parenting style that can be examined, Skinner et al. (2005) employed a foundational theory to: 1) guide their decisions regarding what dimensions of parenting style to assess, and 2) provide an explanation of how different dimensions of parenting style influence the socialization of children (Skinner et al., 2005).

Specifically, Skinner and colleagues (2005) adopted Self-Determination Theory (SDT) as a foundation for the PSCQ. Self-Determination Theory is a motivational model that assumes children are naturally inclined to integrate the

values and practices of their social environments, and develop a more complex and unified sense of self over time (Deci & Ryan, 1985; Ryan, 1995). According to this theory, effective socialization results from integrating culturally accepted values and practices as one's own (Grolnick & Farkas, 2002). Environments that provide for psychological needs of children are believed to facilitate the socialization process by providing the elements essential to continued growth, integrity, and wellbeing (Deci & Ryan, 2000; Grolnick, Deci, & Ryan, 1997; Roth, Assor, Niemiec, Ryan, & Deci, 2009). These elements include psychological experiences that contribute to the perception that one belongs, is capable, and is self-directed. Specifically, parenting styles characterized by warmth, structure, and autonomy support are expected to contribute to children's motivation to self-regulate their behaviours in accord with internalized social values (Deci & Ryan, 1985; Grolnick & Farkas, 2002). In contrast, parenting styles characterized by rejection, chaos, and coercion interfere with the psychological needs of children, and are predicted to result in greater parent-child conflict and child emotional and behavioural problems (Deci & Ryan, 1985).

Aligned with SDT, Skinner et al. (2005) created the PSCQ; a concise self-report instrument that can be used to measure how well a parent's parenting style provides for the three psychological needs of his/her child. The PSCQ measures six core dimensions of parenting style: warmth, rejection, structure, chaos, autonomy support, and coercion (Skinner et al., 2005). Warmth, in this context, refers to acceptance, emotional support, and genuine caring. MacDonald (1992) distinguishes between parent-child warmth and attachment by highlighting that

attachment responses are triggered by threatening situations and the desire for safety. In contrast, people seek warmth from others because they find the associated intimacy and affection inherently rewarding (MacDonald, 1992). Despite being separate constructs, warmth and attachment are closely intertwined (MacDonald, 1992). For example, parents who are warm in their interaction with their children provide the foundation for secure attachment (Ainsworth, Blehar, Waters, & Wall, 1978). Indeed, parental warmth can provide for the child's psychological need for relatedness (Skinner et al., 2005). Moreover, parental warmth correlates with increased academic performance (Pettit, Bates, & Dodge, 1997), decreased externalizing behaviours (Pettit et al., 1997; Suchman, Rounsaville, DeCoste, & Luthar, 2007), and less emotional distress (Operario, Tschann, Flores, & Bridges, 2006; Suchman et al., 2007). In contrast, rejection refers to parents being unavailable or unresponsive to the needs of their children (Skinner et al., 2005). Experiences of rejection may contribute to diminished trust in others, and feelings of hopelessness (Erikson, 1986), and has been found to predict increases in children's disruptive behaviours (Besnard et al., 2013).

Self-determination theorists conceptualize structure as a multidimensional construct consisting of clear and consistent rules, guidelines, and expectations; predictability; provision of feedback in relation to children meeting expectations; provision of opportunities and resources to meet expectations; communication of rationales for expectations; and caretakers taking a leadership role within the home (Farkas & Grolnick, 2010). Providing structure allows children to make connections between their behaviours and outcomes (Farkas & Grolnick, 2010).

In such social contexts, children can identify and choose pathways that lead to their desired ends, thereby allowing their needs for competency to be met (Skinner et al., 2005). The R-PSCQ measures structure in relation to clear and consistent rules, guidelines, and expectations (Skinner et al., 2005). These aspects of structure are associated with academic performance, perceived control, and cognitive competence (Farkas & Grolnick, 2010). Conversely, chaos describes a dimension of parenting style where children cannot predict how their parents will respond (Skinner et al., 2005). Inconsistent and unpredictable parenting may result in diminished self-regulation and learned helplessness (Evans, Gonnella, Marcynyszyn, Gentile, & Salpekar, 2005).

Autonomy support involves parents attending to the emotions, opinions, and preferences of their children when making family decisions (Grolnick & Farkas, 2002). Validating children's perspectives and allowing them to be active agents in decision making processes are anticipated to address their psychological needs for autonomy (Roth et al., 2009). Autonomy support in parent-child interactions predicts internalization of parental values, better emotional regulation, and greater academic engagement (Roth et al., 2009). Alternatively, when parents resort to coercive measures to achieve compliance, children's psychological needs are obstructed (Grolnick & Farkas, 2002). Coercive interactions are characterized by physical or psychological aggression such as guilt inducing, shaming, threatening, and/or corporal punishment (Barber, 1996). Such interactions diminish the quality of the parent-child social context, and predict increased emotional and behavioural problems (Barber, 1996).

Historically, it has been common practice for researchers to assess dimensions of parenting style as bipolar dimensions such as warmth versus hostility (Schaefer, 1959). However, Skinner and colleagues (2005) and Baumrind (2013) agree that parenting is better evaluated when dimensions of parenting style are evaluated as separate constructs (i.e., autonomy support and coercion) rather than bipolar dimensions (i.e., autonomy support versus coercion). The results of a confirmatory factor analysis of the PSCQ further established that qualities of parenting style should be measured on six individual subscales rather than three bipolar subscales (Skinner et al., 2005). Regrettably, with the exception of coercion, further analysis of the PSCQ demonstrated that five of the six subscales had less than satisfactory internal consistency reliability (α = 0.61-0.67) when used with samples of mothers and/or fathers of children between the ages of eight to 11 years. To address issues of internal consistency reliability, the authors recommended the inclusion of eight additional items: one to measure warmth (I let my child know I love him/her), three to measure structure (I expect my child to follow the family rules; If my child has a problem, I help him or her figure out what to do about it; When I tell my child I'll do something, I do it), one to measure chaos (I can get mad at my child without warning), and three to measure autonomy support (I trust my child; I encourage my child to be true to him or herself; I encourage my child to say what he or she really thinks). Skinner et al. (2005) also hypothesized that the subscales measuring warmth, structure, and autonomy support and the subscales measuring rejection, chaos, and coercion

could be combined to form two composite scales evaluating authoritative and harsh parenting styles, respectively.

For the present study, additional changes were made to the R-PSCQ. Specifically, if parent participants had more than one child, they were instructed to respond based on their interactions with the child that they found most challenging to parent. This change was made so that the researchers using the newly revised instrument would more likely tap into difficulties parents were experiencing. To increase variability among participants' scores and improve the factorability of scale items, the number of response options was changed from four to seven (Floyd & Widaman, 1995). Finally, a broader range of parents was sampled that included parents of children ages two to 18 years, versus Skinner et al.'s (2005) sample that included parents of children ages eight to 11 years. Modifying the items (Skinner et al., 2005), increasing the number of response options, and expanding the breadth of parents sampled can have a significant impact on the resulting factor structure. Consequently, an exploratory rather than confirmatory analysis approach was more justifiable (Bandalos & Finney, 2010). Moreover, the use of exploratory factor analysis rather than confirmatory factor analysis in this study allowed for further refinement of the R-PSCQ.

Research Purpose

As indicated earlier, the purpose of this study was to refine the R-PSCQ by exploring the factor structure and internal consistency reliabilities (Skinner et al., 2005) with the additional modifications noted above. All 33 proposed items (Skinner et al. 2005) were included in an Exploratory Factor Analysis (EFA) to

observe what factor structure/s emerged, and how items loaded. Further, a second order factor analysis was conducted to investigate whether a hierarchical model of six subscales, and one or more composite scales would emerge. Internal consistency reliabilities of resulting subscales were examined, and correlations between subscales are presented. Moreover, correlation analyses were conducted to examine predictive validity. First, it was hypothesized that positive dimensions of parenting style (warmth, structure, autonomy support) would be positively correlated with one another, and negatively correlated with harsh dimensions (rejection, chaos, coercion). Second, it was hypothesized that subscales measuring positive dimensions of parenting style would be negatively correlated with frequency of child's misbehaviour and parent's use of psychological aggression. Third, it was hypothesized that measures of harsh dimensions of parenting style would be positively correlated with increases in the reported frequency of child's misbehaviour, and parent's use of psychological aggression. Last, because total scores on the R-PSCQ may assess how well parents' overall parenting styles attend to the psychological needs of the child, it was hypothesized that total scores on the R-PSCQ would be negatively correlated with psychological aggression and frequency of child misbehaviour.

Methods

Procedures

This study was approved by the university's research ethics review board, and the data were collected from June to August 2013. Convenience and snowball sampling were used and data were collected via an online research

survey. Parents were recruited through online social media websites, online classified advertisements, email, and word-of-mouth. Those who chose to participate clicked on an online link that took them directly to the study's consent form. This form explained the purpose, recruitment criteria, and potential risks and benefits of participating in the study; the following pages contained survey items. Participants were informed that by completing the survey they were consenting to participate, and that choosing not to complete the survey would be interpreted as withdrawing from the study. To discourage false or repeat participation, no gratuity was offered. Parents were eligible to take part if they were 18 years or over, and had a child in their care between the ages of two and 18 years. In total, 749 surveys were started, and 404 of those surveys were completed by parents who met the recruitment criteria.

Measures

Participant Demographics (Appendix A). For the purpose of describing the sample, participants were asked to provide basic demographic information including their: age, gender, ethnicity, household income, marital status, and employment status.

Revised - Parents as a Social Context Questionnaire (R-PSCQ; Skinner et al., 2005; Appendix B). The PSCQ and the R-PSCQ measure six dimensions of parenting style: warmth, structure, autonomy support, rejection, chaos, and coercion (Skinner et al., 2005). Skinner et al. (2005) further hypothesized that authoritative parenting could be evaluated by summing participants' scores on the warmth, structure, and autonomy support subscales.

Likewise, harsh parenting could be evaluated by summing scores on rejection, chaos, and coercion. When examining reliability of the R-PSCQ subscales for use with mothers, the subscales measuring rejection, chaos, and coercion demonstrated satisfactory internal consistency ($\alpha > 0.70$), whereas subscales measuring warmth, structure, and autonomy support had unsatisfactory internal consistency ($\alpha = 0.61$-0.66). Among fathers, subscales measuring paternal warmth and coercion demonstrated satisfactory internal consistency ($\alpha > 0.70$), and subscales measuring chaos, rejection, autonomy support, and structure had less than satisfactory internal consistency ($\alpha = 0.61$-0.67). To address the low internal consistency reliabilities of subscales, Skinner et al. (2005) added eight additional items for a revised version of the PSCQ. The R-PSCQ was employed in the present study but with a revised 7-point Likert scale (1 = completely disagree, …7 = completely agree) instead of a 4-point Likert scale (1 = completely disagree, …4 = completely agree).

Frequency of Child's Misbehaviour. To assess frequency of child misbehaviour, parents were asked to respond to a single item; "How often does your child misbehave?" Parents responded on a seven point Likert-type scale (1 = never, …7 = always). The mean frequency of child's misbehaviour reported in this study was 3.76 (*SD* = 1.12). Skewness (-0.18), and Kurtosis (0.23) values indicated participants' responses to this item were normally distributed (Osborne & Overbay, 2004).

The Parent-Child Conflict Tactics Scales (PCCTS; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998; Appendix C). To assess parental use of

psychological aggression (PA), the PA subscale of the PCCTS (Straus et al., 1998) was administered. The PA subscale includes five items that describe verbal criticisms or physical threats that are not followed through (i.e., "When your child has misbehaved, how frequently have you shouted, yelled, or screamed at him/her?"). Parents were asked to report the frequency that they used each of the discipline strategies when their child misbehaved on a seven point Likert-type scale (1 = never, …, 7 = always). Difficulties achieving good internal reliabilities have been a challenge in the development of measures of discipline strategies. Previous assessment of the internal reliability of this measure indicated low consistency (α =.60; Straus et al., 1998). Among participants in the present study, the results of Cronbach's alpha indicated satisfactory internal consistency (α = 0.75). The mean frequency of psychological aggression for this sample was M =10.66 (SD = 4.30). Skewness (1.12) and Kurtosis (1.63) values indicated participants' scores on this measure were sufficiently normally distributed (Osborne & Overbay, 2004).

Analysis Procedures

Preliminary Analyses. Descriptive statistics for each item included in the R-PSCQ were examined to identify items with little or no variability. Such items are not suitable for factor analysis. Multivariate outliers were identified by calculating Mahalanobis D^2 with a set criterion of a $p \leq .001$ (Osborne & Overbay, 2004) to avoid spurious variability.

Exploratory Factor Analyses. Using the Statistical Package for the Social Sciences Version 21, EFA was conducted to examine the factor structure

of the R-PSCQ. First, a principal components analysis was conducted. Guttman's rule (1954) that the number of common factors is equal to the number of eigenvalues greater than or equal to one and the Scree test (Cattell, 1966) were then applied to determine the number of common factors. Second, following Costello and Osborne's (2005) recommendations for conducting EFA, principal axis factoring with oblique transformation was employed. Using an iterative process, "problem items" were identified and removed one at a time. The factor matrix with the greatest simple structure, and that was clearly interpretable was retained. The item scores for the items that loaded on each factor were summed to obtain subscale scores, and a second order factor analysis (Gorsuch, 1983) was conducted to explore whether the subscales resulted in the two higher order factors proposed by Skinner et al. (2005; i.e., authoritative and harsh parenting).

Internal Consistency. Cronbach's coefficient alpha evaluates how consistently participants respond to items believed to measure the same construct (McCrae, Kurtz, Yamagata, & Terracciano, 2011), and was calculated for each of the subscales of the R-PSCQ. Before calculating coefficient alphas for the subscales, the polarity of the items that loaded on each factor was examined and changed so that the polarity was consistent across items. Cronbach's stratified alpha was calculated to determine the internal consistency of the full scale. Coefficient alphas greater or equal to 0.70 were considered satisfactory and those greater than or equal to 0.80 were deemed good (McCrae et al., 2011). Last, to explore for possible problem items, changes in coefficient alphas if single items were deleted were also examined.

Spearman's Rho Correlations. Spearman's rho correlations can be used to test the relationships between rank or interval data (Gravetter & Wallnau, 2000). Results of Spearman's rho correlations are less sensitive to violations of assumptions of linearity and normality, and can be used to measure the consistency of relations independent of their distribution form (Gravetter & Wallnau, 2000). For example, researchers anticipated the amount of autonomy support provided would have a negative relationship with frequency of child misbehaviour; however, the relationship between these variables may not be entirely linear. In total, 29 correlation analyses were conducted. To reduce the likelihood of Type I errors, Bonferroni's correction was used (.05/29).

Results

Participant Demographics

The 404 participants in this study included 291 mothers, and 113 fathers between the ages of 20 to 66 years (M = 38.47; SD = 8.54), who had children between the ages of two to 18 years (M = 8.72; SD = 5.05). Of the 404 participants, 75% were married or in common-law relationships and the remaining were single, divorced, or widowed. The number of children per household ranged from one to seven, with the majority (81%) reporting one or two children. With respect to race, 85% of parents self-identified as Caucasian, 4.0% as Asian, three percent as Black, 1.5% as First Nations, and 7.5% as other. Fifty-three percent of the parents were employed full-time, 24% were employed part-time or causally, and 23% were not employed. Household income reported included 25% below $37000, 43% between $37000 and $99999, and 32% above

$100000. With respect to education level, 3.5% of the parents had less than grade 12, 14% had grade 12, 32% had some college or trade school, 30% had bachelor's degrees, and 21% had graduate or medical degrees. Last, 212 parents responded based on their relationships with their sons, and 192 parents responded based on their relationships with their daughters.

Preliminary Analysis

The results of analysis using Mahalanobis D^2; with a set criterion of a $p \leq .001$ (Osborne & Overbay, 2004) revealed 41 outliers. Given the unusually large portion of outliers identified (10% of the total sample) further exploration was conducted to examine whether outliers constituted a unique subset of parents. Student's *t*-tests for two independent groups with unequal variances indicated that this subset of parents tended to respond higher on the seven point scale for every item assessing positive characteristics of parenting style, and lower on every item assessing negative characteristics than the remaining group of parents (see Table 1.1). Based on these findings, it was hypothesized that either a response bias had occurred in relation to motivation to be perceived positively, or that contextual factors were contributing to the more positive parenting characteristics reported by this subset of parents (Osborne & Overbay, 2004).

Using *t*-tests, group means were compared to see if the subset of "outlier" parents significantly differed from the larger group of parents based on child age, parent age, household income, education level, frequency of child misbehaviour, or social support. The results revealed significant mean differences between the identified subset and the larger sample of parents with respect to: children's ages,

M = 6.44, *SD* = 3.89; *M* = 8.98; 5.10; *t*(402) = 3.09, *p* = .002; frequency of children's misbehaviour, *M* = 3.27, *SD* = 0.95; *M* = 3.82, *SD* = 1.12; *t*(402) = 3.03, *p* = .003; and social support, *M* = 66.73, *SD* = 10.70; *M* = 56.52, *SD* = 13.73, *t*(402)= -4.60, *p* = .001, respectively. The subset of outlier parents tended to report their children were younger, misbehaved less frequently, and had greater social support. Given these results, the significantly more positive parenting characteristics reported by the identified subset of parents could be explained by more favourable parenting conditions. Consequently, this subset of parents was retained as legitimate cases for the remaining analyses.

Exploratory Factor Analysis

The results of the Kaiser-Mayer-Oklin measure of sampling adequacy (0.90), and Bartlett's test of sphericity, approximate $X^2(171,404) = 978.72$, $p <$ .001, confirmed that EFA was appropriate for this study's sample, and scale items. Guttman's rule indicated the number of common factors was seven, and the Scree test indicated there were four. Given these results, the pattern matrices for four, five, six, and seven factors were considered. The four factor pattern matrix revealed that the first factor combined items intended to assess coercion and rejection, the second factor combined items intended to assess structure and chaos, the third factor included items intended to assess autonomy support, and the fourth factor included items intended to assess warmth. All items loaded on at least one factor, and four items cross loaded on two or more factors. The five factor solution was uninterpretable. The six factor solution produced a slightly modified version of Skinner et al.'s (2005) original measure capturing the

intended six dimensions of parenting style. Two items did not load on any factor, and three items loaded on more than one factor. The results of the seven factor solution resulted in items intended to measure warmth being divided onto two separate subscales; the structure and autonomy support subscales emerged as proposed by Skinner et al.; four items measuring chaos appeared as a factor; two items measuring rejection loaded as a single factor; and the remaining items intended to assess coercion, rejection, and chaos loaded as the seventh factor. Two items did not load, and two items loaded on two or more factors.

Based on SDT (Deci & Ryan, 1985), Skinner et al. (2005) created the PSCQ to evaluate how well one's parenting styles attended to the psychological needs of his/her child. In accord with Skinner et al.'s (2005) aim, a six factor solution for the R-PSCQ was chosen for further exploration and revision. This exploration resulted in three items being removed from the R-PSCQ. The first item removed was, "I let my child know I love him/her." In examining the descriptive statistics for this item it was evident that the distribution of participants' responses were highly skewed (-3.98), and leptokurtic (17.36). In fact, 83% of participants indicated they "completely agreed" with this item suggesting this item contributed little to the variability in participants' scores. The second item removed was, "Sometimes my child is hard to like." This item was originally intended to assess rejection (Skinner et al., 2005). However, the pattern coefficient (-.55) indicated that this item most highly loaded on the Coercion subscale. Given that coercion infers some level of parent-child struggle (Skinner et al., 2005); it is not surprising that this item accounted for variance in

coercion scores. Nevertheless, this item was deleted because it appeared to diminish the distinction between items intended to measure coercion and rejection. For example, when this item was removed, another rejection item, "At times, the demands my child makes seem like a burden," shifted from a higher loading on the coercion factor to the rejection factor. The third item removed was, "I set aside time to talk to my child about what is important to him/her." Pattern loadings indicated this item accounted for more unique variance in chaos (.35) rather than the intended factor warmth (.24). This finding challenged the face validity of the item, and therefore the item was removed. Last, two additional items had pattern coefficients higher than 0.30 on two subscales "I trust my child" loaded on autonomy support (.45) and coercion (.31). "I feel good about the relationship I have with my child," loaded on warmth (.45) and coercion (.33). Following the recommendation of Bandalos and Finney (2010), the choice was made to retain these items to achieve a result that was most consistent with SDT, and Skinner et al.'s (2005) originally proposed subscales.

To investigate the dimensionality of the R-PSCQ, the remaining 30 items (see Table 1.2) were entered into an EFA using principal axis factoring with oblique rotation (Costello & Osborne, 2005). Seven items had communalities below .40, suggesting items may have difficulty loading on the pattern matrix. However, all items loaded in a coherent manner (see Table 1.2). Examining the dimensionality of the R-PSCQ, the application of the Eigen values greater than 1, indicated a six factor solution. The first factor accounted for 26.3%, the second factor accounted for 8.2%, the third factor accounted for 6.5%, the fourth factor

accounted for 4.1%, the fifth factor accounted for 2.5%, and the sixth factor accounted for 2.1% of the variance. This pattern parallels Skinner et al.'s (2005) projected six subscales measuring: chaos, structure, autonomy support, warmth, rejection, and coercion. However, some items reasonably loaded on different factors than originally proposed. For example, the item "I don't understand my child very well" loaded negatively on the warmth factor and not on the rejection factor. Similarly, the item "I can always find time for my child" loaded negatively on the rejection factor and not on the warmth factor. In summary, the results of this analysis support that the R-PSCQ can be used to assess six characteristics of parenting style.

A second order EFA (Gorsuch, 1983) was conducted to determine if the six subscales would merge into two higher order factors as proposed by Skinner et al. (2005). Application of Guttman's rule and the Scree test revealed that there was only one higher order factor. Therefore, Skinner et al.'s (2005) hypothesis that characteristics of positive (warmth, structure, autonomy support) and negative (rejection, chaos, coercion) parenting styles would combine to measure authoritative and harsh parenting styles was not supported. Instead, results indicated that evaluation of both positive and harsh dimensions of parenting style merge in the assessment of how well the overall parenting style addresses the psychological needs of the child.

Internal Consistency Reliability of Subscales.

Results of analyses indicated that all six subscales had satisfactory to good internal consistency reliabilities as measured by coefficient alpha, ranging from

0.72 to 0.84 (see Table 1.3). Changes to the internal consistency of subscales if any one item was removed were also examined. However, no meaningful improvements were identified as a result of these analyses. The internal consistency reliability for the total score, calculated using Cronbach's stratified alpha, was also good; 0.80.

Construct Validity

With the exception of the relationship between structure and frequency of child misbehaviour, the correlations among the six subscales support the hypothesized relationships among the subscales (see Table 1.4). Measures of positive dimensions (warmth, structure, autonomy support) were all significantly and positively correlated with one another, and significantly and negatively correlated with harsh dimensions (rejection, chaos, and coercion) of parenting style. The effect sizes for the relationship among positive dimensions were moderate; whereas the effect sizes for relationships among positive and harsh dimensions of parenting style ranged from small to large (Cohen, 1992). Similarly, harsh qualities were all positively associated with one another and indicated medium to large effect sizes (r_s = 0.42 to 0.52).

Frequency of child misbehaviour was significantly and positively correlated with all negative characteristics of parenting style. The relationship between child misbehaviour and chaos indicated a small effect size. The correlations between child misbehaviour, and coercion and rejection showed moderate effect sizes. In contrast, frequency of child misbehaviour was negatively correlated with warmth, and autonomy support, and the effect sizes for

both correlations were small. Likewise, parents' greater use of psychological aggression in disciplining their children was significantly associated with increased rejection, chaos, and coercion with all correlations indicating a medium effect size. Whereas, psychological aggression was associated with decreases in structure, autonomy support, and warmth; with small to medium effect sizes, respectively. Last, greater total R-PSCQ scores predicted less psychological aggression (r_s = -.51, p = .001; a large effect size), and less frequent child misbehaviour (r_s = -.39, p = .001; a medium effect size). These results lend support to the construct validity of the six subscales, and R-PSCQ total scale.

Discussion

The purpose of this study was to: 1) explore the factor structure of the R-PSCQ, 2) test for second order factors, 3) report on the internal consistency of resulting subscales, and 4) examine construct validity. The results of EFA support that the R-PSCQ, as modified in this study, can be used with parents of children between the ages of two to 18 years to evaluate dimensions of parenting style including warmth, rejection, autonomy support, coercion, structure, and chaos. Each of these subscales has satisfactory internal consistency reliability indicating they can be reliably used to assess their intended constructs with this study's sample.

Results of correlational analyses with independent but related constructs further provided evidence of construct validity. Specifically, results supported all but one of the proposed hypotheses that warmth, structure, and autonomy support would be negatively correlated with psychological aggression and frequency of

child misbehaviour; and that rejection, coercion, and chaos would be positively associated with these same two variables. Unexpectedly, structure was not significantly associated with frequency of child misbehaviour. Structure on the R-PSCQ is evaluated by asking parents the extent to which they communicate behavioural expectations and consequences. However, there are additional characteristics of structure that are not evaluated by the R-PSCQ such as providing feedback, and ensuring expectations match children's abilities (Farkas & Grolnick, 2010). The lack of association between structure and frequency of child misbehaviour may point to the importance of these additional characteristics in determining the relationships between structure and the socialization of children. Moreover, pairing structure with consistency may be necessary to help children learn appropriate social behaviours (Farkas & Grolnick, 2010). Consequently, despite the non-significant association with structure, the results of the analysis indicated the relationship between increased frequency of child misbehaviour and greater chaos was significant. Chaos on the R-PSCQ evaluates lack of consistency in establishing behavioural expectations, and following through with consequences (Skinner et al., 2005).

In contrast to Skinner et al.'s (2005) proposed two higher order factors, a single higher order factor comprised of the six subscales emerged as the result of a second order factor analysis. This second order factor (R-PSCQ Total) demonstrated good internal consistency, and construct validity. As anticipated, increases in R-PSCQ total scores were associated with less parental psychological aggression (Barber, 1996), and less frequent child misbehaviour (Grolnick, &

Farkas, 2002). Consistent with SDT, results indicate that parenting styles characterized by greater warmth, autonomy support, and structure, and less rejection, coercion and chaos are associated with less negative parenting strategies and better socialized children (Grolnick et al., 1997). These results provide preliminary support for the validity of R-PSCQ Total in the measurement of how well overall parenting style addresses the psychological needs of children (Deci & Ryan, 1985).

It is important to highlight that some minor revisions were made to the R-PSCQ as a result of the exploratory analysis with the present sample. These modifications included eliminating three items, and assigning three items to different subscales. When conducting EFA, Bandalos and Finney (2010) recommend being conservative in the removal of items because items are intentionally chosen to evaluate a specific theoretical construct and removal of items may alter the definition of the construct being evaluated. The three items removed as part of this EFA were deleted due to lack of variability in participants' responses to the item, loadings that were inconsistent with theoretically proposed dimensions, and a pattern matrix coefficient that challenged the face validity of the item.

In contrast to Costella and Osborne's (2005) recommendation to remove items that cross load on more than one factor, the choice was made to retain items as long as their highest loading was consistent with the underlying theory (Bandalos & Finney, 2010). Given the nature of the subscales, overlap among items and factors may not be surprising. For example, it seems reasonable that

the item, "I trust my child," would load positively on the autonomy support scale and negatively on the coercion scale. Nevertheless, small to moderate correlations between the subscales support both the relationship and distinction between constructs being evaluated by the R-PSCQ. Additionally, retaining these items allows for further exploration and comparison of the R-PSCQ with other samples (Bandalos & Finney, 2010). When further evaluating this measure, researchers may want to examine whether items with cross loadings consistently load most highly on the anticipated subscale, or whether shifts occur depending on the characteristics of the participant sample.

Limitations

Due to the exploratory nature of the analyses, no conclusions can be drawn regarding the generalizability of the proposed factor structure to other samples of parents (Bandalos & Finney, 2010). Study participants included a convenience sample of parents of children two to 18 years of age, recruited through online classified advertisements and social media websites, and the response options were increased from four to seven. Using a broader sample of parents and greater response options, results revealed a set of six subscales that were highly similar to those proposed by Skinner et al. (2005). However, these results may not be generalizable to the other populations. Though a portion of participants reported low incomes and education levels, participants were primarily Caucasian, middle to upper middle class, and educated. Additional studies are required that cross-validate the present findings with results from research conducted with representative samples of parents with children ages two

to 18 years (Bandalos & Finney, 2010). Research is also needed to explore whether a similar factor structure will emerge when the R-PSCQ is used with parents with children of specific ages, different ethnic origins, less education, different family structures, or less financial resources. It is important to note that a number of items on the R-PSCQ had communalities below .40; this suggests that large samples of participants may be necessary to produce stable factor solutions (Floyd & Widman, 1995). Results support that this study's sample of 404 participants was adequate for the analyses conducted. Last, additional evidence supporting the validity and reliability of the R-PSCQ is needed. This could include examining whether parents respond in a similar manner to both the R-PSCQ and other validated measures of parenting style, the relationship between the R-PSCQ and the wellbeing and socialization of children, and test-retest reliability.

Conclusions

The EFA conducted with this study's sample produced a factor structure that was consistent with SDT (Grolnick et al., 1997), and the six dimensions of parenting style proposed by Skinner et al. (2005). Moreover, results of second order analysis indicated that a total score could be summed to assess the extent to which the overall parenting style attends to the psychological needs of the child. Satisfactory to good internal consistency was demonstrated for each of the subscales, and the internal consistency for the total scale was good. Last, correlations among the six subscales, total scale, psychological aggression, and frequency of child misbehaviour provided support for construct validity of the R-

PSCQ. In summary, results of this analysis support that the R-PSCQ, as modified in this study, can be employed as a valid and reliable measure of six dimensions of parenting style, as well as the overall quality of the parenting style for use with this study's sample.

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Table 1.1.

Item Descriptive Statistics for the Total Sample; and Comparisons of Means between the Sample with Outliers Removed, and the Outliers.

	Full Sample (n = 404)				Sample with Outliers removed				Outliers (n = 41)		M difference	
Items	M	SD	Skew	K	**M**	SD	Skew	K	**M**	SD	**t**	p
I know a lot about what goes on for my child.	6.09	1.11	-1.64	2.80	**6.01**	1.14	-1.56	2.37	**6.73**	0.45	**-7.78**	.001
I really know how my child feels about things.	5.74	1.11	-1.32	2.43	**5.65**	1.12	-1.28	2.27	**6.46**	0.64	**-7.02**	.001
I do special things with my child.	6.20	1.00	-1.56	3.43	**6.15**	1.03	-1.49	3.14	**6.66**	0.58	**-4.89**	.001
I set time aside to talk to my child about what matters to him/her.	6.01	1.10	-1.37	2.24	**5.95**	1.12	-1.30	2.01	**6.61**	0.63	**-5.79**	.001
I can always find time for my child.	5.96	1.14	-1.30	2.04	**5.90**	1.16	-1.23	1.83	**6.56**	0.67	**-5.48**	.001
I feel good about the relationship I have with my child.	5.88	1.28	-1.53	2.42	**5.79**	1.31	-1.42	2.03	**6.68**	0.47	**-8.90**	.001
I let my child know I love him/her.	6.70	0.89	-3.98	17.36	**6.67**	0.93	-3.77	15.41	**6.95**	0.22	**-4.74**	.001
I don't understand my child very well.	2.65	1.66	0.96	-0.21	**2.80**	1.68	0.85	-0.46	**1.34**	0.53	**12.05**	.001
Sometimes my child is hard to like.	3.18	1.99	0.37	-1.28	**3.34**	1.99	0.26	-1.33	**1.78**	1.33	**6.69**	.001
At times, the demands my child makes seems like a burden.	3.57	1.87	.04	-1.25	**3.74**	1.84	-0.08	-1.19	**2.07**	1.35	**7.18**	.001
My child needs more than I have to give him/her.	3.11	1.80	0.40	-1.09	**3.28**	1.79	0.29	-1.14	**1.59**	1.00	**9.31**	.001
Sometimes I feel I can't be there for my child when s/he needs me.	3.40	1.84	0.07	-1.39	**3.58**	1.82	-0.06	-1.35	**1.78**	1.17	**8.78**	.001
I make it clear what will happen if my child does not follow the rules.	5.98	1.06	-1.23	1.70	**5.93**	1.09	-1.16	1.42	**6.44**	0.59	**-4.68**	.001
I make it clear to my child what I expect from him/her.	6.08	0.94	-1.25	2.45	**6.03**	0.97	-1.19	2.16	**6.54**	0.51	**-5.37**	.001
When I punish my child, I always explain why.	6.28	0.96	-1.78	4.15	**6.24**	0.99	-1.69	3.68	**6.68**	0.47	**-4.92**	.001
When I tell my child I will do something, I do it.	5.98	1.04	-1.47	2.71	**5.92**	1.07	-1.41	2.43	**6.49**	0.60	**-5.20**	.001
If my child has a problem, I help him/her figure out what to do about it.	6.20	0.93	-1.66	4.67	**6.15**	0.95	-1.59	4.32	**6.68**	0.47	**-6.05**	.001
I expect my child to follow the family rules.	6.48	0.84	-2.37	7.92	**6.45**	0.87	-2.30	7.30	**6.73**	0.45	**-3.31**	.001
I let my child get away with things I shouldn't	3.23	1.65	0.25	-1.22	**3.36**	1.65	-0.14	1.10	**2.05**	1.09	**6.86**	.001

allow.												
When my child gets in trouble my reaction is not very predictable.	2.40	1.40	1.20	1.02	**2.49**	1.43	1.10	0.71	**1.59**	0.63	**7.28**	.001
My child doesn't seem to know what I expect of him/her.	2.09	1.28	1.66	2.87	**2.17**	1.32	1.56	2.39	**1.39**	0.49	**7.50**	.001
I change the rules a lot at home.	1.83	1.16	1.92	4.30	**1.90**	1.19	1.81	3.73	**1.22**	0.42	**7.50**	.001
I get mad at my child without warning.	2.11	1.38	1.35	1.11	**2.19**	1.42	1.25	0.80	**1.46**	0.71	**5.42**	.001
I encourage my child to express his/her feelings even when they're hard to hear.	6.11	1.18	-2.22	6.42	**6.05**	1.22	-2.12	5.81	**6.68**	0.52	**-6.12**	.001
I encourage my child to express his/her opinions even when I don't agree with them.	6.15	1.16	-1.88	4.44	**6.08**	1.20	-1.78	3.93	**6.76**	0.49	**-6.84**	.001
I trust my child.	5.76	1.36	-1.40	1.68	**5.66**	1.38	-1.32	1.37	**6.68**	0.57	**-8.95**	.001
I encourage my child to be true to him/herself.	6.44	0.93	-2.51	9.03	**6.40**	0.96	-2.40	8.21	**6.80**	0.40	**-5.07**	.001
I encourage my child to say what s/he really thinks.	6.34	1.01	-2.34	7.25	**6.30**	1.05	-2.23	6.52	**6.76**	0.44	**-5.34**	.001
My child fights me at every turn.	3.18	1.74	0.48	-0.88	**3.34**	1.75	0.35	-0.99	**1.78**	0.76	**10.39**	.001
To get my child to do something I have to yell at him/her.	2.89	1.77	0.59	-0.86	**3.02**	1.78	0.48	-0.98	**1.66**	0.96	**7.70**	.001
I can't afford to let my child decide too many things on his/her own.	2.74	1.66	0.86	-0.19	**2.87**	1.69	0.75	-0.41	**1.59**	0.67	**9.34**	.001
I sometimes feel I have to push my child to do things.	4.41	1.74	-0.54	-0.82	**4.57**	1.70	-0.68	-0.55	**3.00**	1.47	**9.34**	.001
I find myself getting into power struggles with my child.	4.00	1.87	-0.21	-1.20	**4.19**	1.84	-0.36	-1.04	**2.32**	1.27	**8.48**	.001

Table 1.2.

Pattern Matrix: Exploratory Factors Analysis of the R-PSCQ

30 Items (n=404)	Cha	Str	Aut	War	Rej	Coer
I change the rules a lot at home.	-.66					
When my child gets in trouble my reaction is not very predictable.	-.56					
My child doesn't seem to know what I expect of him/her.	-.49					
I get mad at my child without warning.	-.41					
I let my child get away with things I should not allow.	-.35					
I make it clear what will happen if my child doesn't follow the rules.		.87				
I make it clear to my child what I expect from him/her.		.75				
I expect my child to follow the family rules.		.57				
When I punish my child, I always explain why.		.57				
When I tell my child I'll do something, I do it.		.35				
I encourage my child to express his/her opinions even when I don't agree with them.			.79			
I encourage my child to say what s/he really thinks.			.78			
I encourage my child to be true to him/herself.			.75			
I encourage my child to express his/her feelings even when they are hard to hear.			.72			
I trust my child.			.45			
I really know how my child feels about things.				.85		
I know a lot about what goes on for my child.				.79		
I do special things with my child.				.47		
I feel good about the relationship I have with my child.				.45		
*I don't understand my child very well.				-.35		
If my child has a problem I help him/her figure out what to do about it.				.30		

My child needs more than I have to give him/her	-.76	
I sometimes feel I can't be there for my child when s/he needs me.	-.68	
*I can always find time for my child.	.42	
At times, the demands my child makes seems like a burden.	-.31	
My child fights me at every turn.		-.84
I find myself getting into power struggles with my child.		-.66
To get my child to do something, I have to yell at him/her.		-.58
I sometimes feel I have to push my child to do things.		-.44
I can't afford to let my child decide too many things on his/her own.		-.38

This table shows a summary of the pattern coefficients for subscales of the Revised Parents as a Social Context Questionnaire including: chaos (cha), structure (str.), autonomy support (aut.), warmth (war.), rejection (rej), and coercion (coer.). * indicate items to be reversed scored when summing subscales.

Table 1.3.

Total Scale and Subscale Descriptive Statistics (n = 404)

Subscale	Items	Range	M	SD	Skew	Kurtosis	Alpha
Warmth	6	14-42	35.45	5.03	-.94	.86	.79
Rejection	4	4-27	12.12	4.98	.14	-.59	.72
Structure	5	5-35	30.81	3.66	-1.62	6.19	.81
Chaos	5	5-35	11.66	4.87	1.03	1.60	.75
Autonomy Support	5	5-35	30.80	4.45	-2.07	7.07	.84
Coercion	5	5-35	17.21	6.54	.13	-.51	.80
R-PSCQ Total	30	94-210	168.07	21.07	-.50	.23	.80*

* calculated using Cronbach's Stratified Alpha

Table 1.4.

Summary of Spearman's Rho Correlations (n = 404)

Subscale	1	2	3	4	5	6
1. Warmth	1.00					
2. Rejection	-.53*	1.00				
3. Structure	.40*	-.27*	1.00			
4. Chaos	-.46*	.42*	-.57*	1.00		
5. Autonomy Support	.49*	-.41*	.30*	-.35*	1.00	
6. Coercion	-.48*	.52*	-.20*	.48*	-.37*	1.00
7. Psychological Aggression	-.40*	.34*	-.19*	.45*	-.27*	.48*
8. Frequency of Child Misbehaviour	-.24*	.35*	-.02	.20*	-.27*	.47*

*p <.001 (1-tailed)

STUDY 2

Parents' Perceptions of Frequency of Child Misbehaviour and Variation in Parenting Style

Abstract

Despite research indicating that children who are difficult elicit more harsh discipline from their parents, there is limited research examining how perceived child difficulty predicts parenting style. Such research is needed to provide a better understanding of variations in parenting style that can be anticipated based on how challenging parents experience their children to be. This research examined significant differences in parenting style between groups of parents who perceive their children misbehave infrequently (n = 68), moderately (n =228), or frequently (n = 99). Parents of children two to 18 years of age completed online surveys. MANOVA was used, followed by discriminant analysis, to determine which dimensions of parenting style differed among parents who perceived their children as more or less challenging. Results indicate that significant differences in parenting style exist based on how frequently children are perceived to misbehave, and that variations in parenting style were mostly explained by coercion and rejection. More research is needed to identify buffers between increased child difficulty and harsh characteristics of parenting style.

Introduction

The challenge parents experience in establishing and responding constructively to their children's violations of behavioural expectations have been hypothesized to contribute to negative parent-child interactional cycles (Patterson, 1995). In regards to discipline practices, it is well documented that how children behave influences how parents respond (e.g., Verhoeven, Junger, van Aken, Dekovic, & van Aken, 2010). However, further research is needed that examines the relationship between perceived child misbehaviour and variations in multiple dimensions of parenting style. Previous research has examined the links between parenting typologies and child outcomes (e.g., Baumrind, 1991; Steinberg & Blatt-Eisengart, 2006). This research has led parenting experts to the conclusion that a parenting approach that is high in both responsiveness and demandingness contributes to optimal child outcomes (Larzelere, Sheffield Morris & Harrist, 2013). However, these conclusions may be limited in that they only attend to two dimensions of parenting style, and assume that parenting style is the driving force behind children's behaviours (Larzelere et al., 2013).

More recently, researchers have begun to examine parenting characteristics as reactions to children's behaviours (Kerr & Stattin, 2003; Moilanen, Ramussen, & Padilla-Walker, 2014). The present research contributes to the literature by examining whether parents' perceptions that their children misbehave either infrequently, moderately, or frequently account for significant differences in parenting style across six dimensions. The six dimensions of parenting style evaluated include: warmth, autonomy support, structure, rejection,

chaos, and coercion (Skinner, Johnson, & Snyder, 2005). Moreover, this research explores what characteristics of parenting style best account for variation in parenting across the three groups. These findings contribute to a multifaceted understanding of how parents' perceptions of the frequency of their children's misbehaviour may account for variations in parenting style.

Dix (1993) details three factors that contribute to how parents experience their children's behaviours: 1) rational processing factors, 2) parents' emotions and characteristics, and 3) pre-existing beliefs. The first factor, rational processing, captures that parents attribute characteristics to their children based on observations of their children's actual behaviours (Dix, 1993). The ability of parents to accurately report on their children's behaviours is supported by research that demonstrates moderate levels of agreement between parents and teachers on reports of externalizing symptoms (e.g., Salbach-Andrae, Lenz, & Lehmkuhl, 2009). Alternatively, a moderate level of agreement also suggests that, beyond individual characteristics of the child, other factors contribute to how parents experience their children. The second factor influencing how parents perceive their children is the psychological characteristics of the parent (Dix, 1993). For example, Mash and Johnston (1983) found that low self-esteem and maternal stress predicted increased perception of child problems. Similarly, Webster-Stratton and Hammond (1988) found that despite similar behaviours, depressed mothers versus nondepressed mothers evaluated their children's behaviours more harshly. Indeed, research evidence supports that the emotional wellbeing of parents can impact their perceptions of their children. Finally, pre-

existing, culturally-based beliefs regarding the inherent nature of children, developmental norms, and social standards provide a framework from which parents assess the acceptableness of their children's behaviours (Dix, 1993). Parents from different ethnic, familial, economic, and educational backgrounds are anticipated to have different attitudes and expectations that account for variations in adult caregivers' evaluations of children's behaviours (Azar, Reitz, & Goslin, 2008; Dix, 1993).

Despite numerous factors influencing perceptions, the importance of understanding how parents experience their children should not be underestimated. It is commonly accepted that parents' perceptions of their children's behaviours influences their parenting practices (e.g., Azar et al., 2008; Dix, 1993) and may, more broadly, have an impact on their parenting styles. For example, in a sample of mothers of children ages one to four years, Fox, Blat, and Bentley (1995) found that parents' reports of greater child misbehaviour predicted more frequent use of harsh discipline strategies including corporal punishment and yelling. Moreover, increases in perceived frequency of child misbehaviour also predicted decreases in nurturing parent-child interactions (Fox et al., 1995). Similar results were presented by Javo, Ronning, Heyerdahl, and Rudmin (2004) who reported that increases in children's externalizing behaviours, as reported by mothers of preschool children, were associated with decreases in cuddling and rises in physical punishment. Among 10 to 12 year old boys, parents' perceptions of increased externalizing behaviours were linked to poor parental monitoring and inconsistent discipline practices (Fite, Colder, Lochman, & Wells, 2006).

As detailed above, existing literature supports that parents' perceptions of their children are linked to parenting practices (Fite et al., 2006; Fox et al., 1995; Javo et al., 2004). However, the relationship between parents' perceptions of the frequency of children's misbehaviour and characteristics of parenting style is less clear. According to Darling and Steinberg (1993), parenting practices encompass behaviours that emerge in specific context and are intended to achieve particular goals (e.g., a time-out in response to a rule violation to discourage repeat behaviour). In contrast, parenting style is defined as, "…a characteristic of the parent that alters the efficacy of the parent's socialization efforts by moderating the effectiveness of particular practices and by changing the child's openness to socialization" (Darling & Steinberg, 1993, p. 488). Similarly, self-determination theorists are interested in whether the atmosphere generated for children motivates the internalization of parental values and expectations (Deci & Ryan, 1985; Skinner et al., 2005). When investigating parenting style, researchers have examined both dimensions of style (e.g., warmth, autonomy support, coercion) and typologies (e.g., authoritarian, authoritative, permissive). Results of such research have contributed to valuable insight regarding the relationship between the emotional climate of the parent-child relationship and child outcomes (Barber, 2001; Larzelere et al., 2013). However, further insight is needed into how parents' perceptions of their children's behaviours in turn account for complex variations in multiple dimensions of parenting style. Such information can add depth to the present understanding of how parents' experiences of their children

predict discrepancies in the overall quality of parent-child relationships, and is relevant to parenting interventions.

Skinner et al. (2005) conducted a comprehensive review of the parenting literature and identified three key constructs central to assessment of parenting style in relation to child outcomes: warmth, structure, and autonomy support. Self-determination theorists believe these dimensions of parenting style are critical in determining whether children will internalize the values of their parents (Deci & Ryan, 1985; Farkas & Grolnick, 2010). Moreover, each of these constructs has been identified as influential in regards to child outcomes (e.g., Flamm & Grolnick, 2013; Fulton & Turner, 2008; Pasalich, Dadds, Hawes, & Brennan, 2011; Skinner et al., 2005). However, how these constructs have been defined and assessed varies from study to study, and careful attention to such details is required when drawing conclusions and making decisions based on research results (Soenens, Vansteenkiste, & Sierens, 2009).

Parental warmth can include: acceptance, expression of affection, love, appreciations, kindness, positive regard, emotional availability and responsiveness, support, and genuine caring (Skinner et al., 2005). Parental structure may comprise characteristics such as consistent rules and expectations, clear communication and consistent delivery of consequences, feedback regarding meeting expectations, provision of opportunities to meet expectations, provision of the rationale for rules and expectations, and caretakers taking leadership roles in the home (Farkas & Grolnick, 2010). Finally, parental autonomy support can include factors such as promotion of autonomous thought, support for

autonomous decision making, or creating opportunities for physical separation (Manzi, Regalia, Pelucchi, & Fincham, 2012).

Skinner et al. (2005) created the Parent as Social Context questionnaire that captures one dimension of the three core constructs of parenting style (warmth, structure, and autonomy support), and three hypothesized antithetical constructs (rejection, chaos, and coercion). When employing this measure warmth is assessed as attunement and positive engagement with the child. Structure is defined as providing clear behavioural expectations to the child. Autonomy support evaluates the support provided for the individual expression of the child. Rejection is marked by being unavailable, and experiencing the child's need as a burden. Chao captures unpredictable in interactions with the child. Last, coercion is assessed as engaging in power struggles with the child (Skinner et al., 2005). According to Self-Determination Theory (SDT), these dimensions of parenting style determine how well the parent-child context addresses the psychological needs of the child, and influence the socialization process (Deci & Ryan, 1985).

Successful socialization of children has been identified as one of the primary goals of parenting (Finkenauer, Engels, & Baumeister, 2005; Grusec & Davidov, 2008; Pagano, Hirsch, Deutsch, & McAdams, 2003). According to Baumrind (2013), "socialization is an adult-initiated process by which children and youth, through education, training, and imitation, acquire their culture and the values, skills, and habits necessary to function effectively in that culture" (p. 21). Most parents want their children to become well-adjusted adults who act in accord

with societal standards (Finkenauer et al., 2005). However, the specific socialization goals parents have for their children can vary based on socioeconomic status, ethnicity (Raj & Raval, 2012), gender (Dix, 1993; Finkenauer et al., 2005), and developmental stage (Azar et al., 2008; Dix, 1993). Furthermore, the success parents experience in shaping their children's behaviours is believed to be contingent upon several factors including: setting expectations and structuring environments to match the child's current abilities (Azar et al., 2008), successfully communicating socialization values (Knafo & Schwartz, 2012), and maintaining positive parent-child interactions that motivate the internalization of shared values (Aunola & Nurmi, 2004; Darling & Steinberg, 1993; Ryan & Deci, 2000; Webster-Stratton, 2010). Customarily, parents are expected to generate parent-child contexts that help children meet their physical and psychological needs (Dowling, Smith Slep, & O'Leary, 2009). However, acknowledging that children have a significant impact on the parent-child context is essential in empathizing with parents' struggles, and supporting them to engage more constructively with their children (Kerr & Stattin, 2003).

Research Purpose

The purpose of this research was to test the hypothesis that significant differences in parenting style would be found among parents who perceived that their children misbehaved infrequently, moderately, or frequently. Parenting style was evaluated by assessing the six key dimensions identified by Skinner et al. (2005): warmth, structure, autonomy support, rejection, chaos, and coercion. Moreover, discriminant analysis was conducted to determine the extent to which

each characteristic accounted for differences in parenting style across the three groups. Parents of children two years of age and older were included in this study because it is believed that increases in coercive parent-child interactions begin to occur during toddlerhood with the emergence of autonomy (Dowling et al., 2009; Verhoeven et al., 2010). To capture parents' perceptions of their children's misbehaviour relative to their own expectations, parents were asked to report on how frequently their child misbehaved. Using this single item allowed parents to provide their perspective on how difficult they experience their child to be relative to their own cultural or developmental expectations.

Methods

Procedures

This study is part of a larger study on SDT and parenting, and was approved by the University of Alberta's Ethics Review Board. Participants were recruited via online classified advertisements, social media websites, parent support services, and by word-of-mouth; and data were collected from June to August 2013. Online advertisements of the study described the primary purpose of the study and recruitment criteria, and included a direct link to the research survey. Recruitment criteria included that parents must be over the age of 18 years, and have at least one child under their care between the ages of two to 18 years. To discourage false or repeat participation, no rewards were offered for participation in this study. The first page of the survey included an informed consent form, and the following pages included survey questions. Participants were informed that not fully completing the survey would be interpreted as

withdrawing from the study; 749 surveys were started, and 404 were completed. Four of the 404 completed surveys were removed from analysis because parents did not provide their age, or indicated their child was less than two years old.

Measures

Frequency of Child's Misbehaviour. Parents reported on the frequency of their child's misbehaviour on a seven point Likert-type scale (How frequently does your child misbehave? 1 = never, seven = always). Parents' responses to this item were normally distributed (*Sk* = -0.18, *K* = -0.23), with a Mean of 3.77 (*SD* = 1.12).

Revised-Parent as Social Context Questionnaire (R-PSCQ; Paper 1). For the purposes of this study, characteristics of parenting style were evaluated using the six subscales on the R-PSCQ: warmth, rejection, structure, chaos, autonomy support, and coercion (Egeli, Rogers, Rinaldi, & Cui, 2014). The R-PSCQ, was originally developed by Skinner et al. (2005), and is based on SDT (Deci & Ryan, 1985). For each item on the six subscales, participants rated how strongly they agreed with items on a seven point Likert-type scale; one equalling 'completely disagree' and seven equalling 'completely agree'. The warmth subscale comprises six items, and assesses warmth based on parent-child attunement and positive engagement. Sample items include: "I know a lot about what goes on for my child" and "I do special things with my child." This subscale was demonstrated to have satisfactory internal consistency for participants in this study (α = .79). The rejection subscale consists of four items and evaluates rejection based on whether the parent perceives themselves to

burdened by, or unable to attend to, the child's needs. Sample items include: "My child needs more than I have to give him/her," and "At times, the demands my child makes seems like a burden." The structure subscale consists of five items, and evaluates structure based on whether parents provide clear behavioural expectations. A sample item from this subscale is, "I make it clear to my child what I expect from him/her." The chaos subscale contains five items, and measures chaos based on whether parents are consistent in interactions with their children; for example, "When my child gets in trouble my reaction is not very predictable." The autonomy support subscale is comprised of five items, and evaluates autonomy support relative to whether the parent supports the authentic expression of the child; for example, "I encourage my child to express his/her opinions even when I don't agree with them." Last, the coercion subscale contains five items, and assesses coercion based on indicators of struggles for power; for example, "To get my child to do something, I have to yell at him/her." The results of analysis revealed that the internal consistency for each of these subscales was satisfactory to good (α =.72 to .84) for this study's sample.

Analysis Procedures

Generating Groups. Parents' self-reports of the frequencies of their children's misbehaviours were used to classify parents into groups of infrequent, moderate, and frequent child misbehaviour. Responses within one standard deviation of the mean were categorized as "moderate child misbehaviour." Scores more than or less than one standard deviation from the mean were categorized as frequent or infrequent child misbehaviour, respectively.

Preliminary Analysis. Before conducting Multivariate Analysis of Variance (MANOVA), the data were checked to ensure that assumptions of analysis were adequately met including: absence of outliers, normality of dependent variables, linearity among pairs of dependent variables, absence of multicollinearity and singularity, and homogeneity of variance (Tabachnick & Fidell, 2007). Univariate and multivariate outliers were examined using Box plot summaries and assessment of Mahalanobis D^2 scores <.001 (Tabachnick & Fidell, 2007). Normality of dependent variables was determined by Skewness and Kurtosis values less than two (Bandalos & Finney, 2010). Linearity among pairs of dependent variables was supported via examination of correlation matrices, and absence of multicollinearity and singularity were established via examination of correlation matrices, and the set standard of correlations < .90 (Tabachnick & Fidell, 2007). Moreover, a series of univariate analyses were conducted to determine which characteristics of parenting style would be included in the analyses. In accord with recommendations made by Olejnik (2010), parenting style characteristics that failed to demonstrate significant univariate differences were removed from the final analysis. Last, homogeneity of variances was evaluated using Box's test of equality of covariance matrices, using the criteria p < .001 (Tabachnick & Fidell, 2007).

Multivariate Analysis of Variance. Multivariate Analysis of Variance allows for examination of multivariate difference among groups (Tabachnick & Fidell, 2007). For the purposes of this research, one-way MANOVA was used to determine whether significant differences existed on composite scores of six

dimensions of parenting style based on how frequently parents reported their children misbehaved. MANOVA results were followed by discriminant analyses to further examine the characteristics of emerging canonical variables and the contribution of dependent variables in differentiating between groups (Olejnik, 2010).

Results

Participants

Four-hundred parents met recruitment requirements and fully completed the research survey. Five of these participants were identified as outliers and were therefore removed from the analysis. The remaining 395 participants included 283 mothers, and 112 fathers between the ages of 20 and 66 years (M =38.44, SD =8.49). Parents reported on their relationships with children between the ages of two and 18 years (M = 8.70, SD=5.05). As stated earlier, parents were divided into groups based on how frequently they reported their children misbehaved. Classification into groups was determined based on scores being within one (moderate = 2.63 to 4.89), below one (infrequent < 2.63), and above one (frequent > 4.89) standard deviation from the Mean (M= 3.76; SD=1.13). Using this approach resulted in groups being composed of 68 (infrequent), 228 (moderate), and 99 (frequent) parents. The demographic information for each of the three groups is presented in Table 2.1.

Preliminary Analyses

Preliminary analyses were conducted to ensure that use of MANOVA was appropriate. As stated above, results of univariate and multivariate outliers

identified five outliers; four univariate and one multivariate. Outliers can have a negative impact on linearity and normality of data (Tabachnick & Fidell, 2007); and therefore were removed from further analyses. When outliers were removed, examination of the levels of skewness and kurtosis for each of the dependent variables indicated that, for each group, dependent variables were reasonably normally distributed with Skewness and Kurtoses levels less than or equal to 1.56 and -1.15, respectively (Bandalos & Finney, 2010). Means and standard deviations for each group on parenting style characteristics are presented in Table 2.2.

Results of correlational analysis supported that relationships between dependent variables were linear. The strength of these relationships ranged from small to large (*r* ranged from -.18 to .55; see Table 2.3). All correlations were <.90 supporting an absence of multicolinearity and singularity among dependent variables for parent groups (Tabachnick & Fidell, 2007). With the exception of structure, examination of univariate differences on the remaining five dimensions parenting style dimensions revealed adequate homogeneity of variance between groups, and significant differences on the remaining five characteristics of parenting style assessed (see Table 2.4). Given failure to meet the assumption of homogeneity of variance (Tabachnick & Fidell, 2007) and ANOVA results indicating no meaningful difference in structure among the three parenting groups (Olejnik, 2010), structure was removed from the final analysis. With the five remaining characteristics of parenting style included, results of Box's test of equality of covariance matrices indicated that differences between groups were

not a concern for the present analysis, Box's $M = 52.87$, $F = 1.26$, $df(30,147102.69)$, $p = .008$. In summary, results of preliminary analyses confirmed that the data met the assumptions of MANOVA, when one dimension of parenting style (structure) was removed from the analysis (Tabachnick & Fidell, 2007).

MANOVA

A One-way MANOVA was conducted to test that null hypothesis that no significant differences in parenting style characteristics would be reported by parents regardless of how frequently they perceived their children to misbehave. The dependent variables included five dimensions of parenting style: warmth, rejection, chaos, autonomy support, and coercion; and the grouping variable comprised parents' perceptions that their children misbehaved either infrequently, moderately, or frequently. The results of the one-way MANOVA revealed a significant multivariate main effect for parenting style characteristics based on how frequently parents perceived their children misbehaved, *Roy's Largest Root* =.32, $F = 24.50$, $p < .001$, partial eta squared = .24; power to determine the effect was 1.00. Thus, the null hypothesis was rejected supporting this study's hypothesis. Given significant findings, MANOVA was followed by discriminant analyses to determine the number and characteristics of meaningful canonical variables contributing to the differentiation between the three levels of perceived child misbehaviour (Olejnik, 2010).

The possibility of two meaningful canonical variables discriminating between frequencies of perceived children's misbehaviour and reported parenting

style characteristics were examined (see Table 2.5). The first canonical variable accounted for 24% of the variance in the parenting style characteristics relative to frequency of perceived child misbehaviour; and this finding was significant ($p <$ .001). The second canonical variable accounted for less than one percent of variance in scores between groups; and was not significant (see Table 2.5). Examination of the structure matrix for the first canonical variable (see Table 2.6) indicated that the canonical variable was accounted for by higher scores on coercion, rejection, and chaos; and lower scores on autonomy support and warmth. Further exploration of standardized discriminant function coefficients and correlations between the five dimensions of parenting style assessed and the canonical variable (see Table 2.6) indicate that coercion was the most important in discriminating groups.

Discussion

The purpose of this research was to test the hypothesis that there are significant differences in parenting style amongst parents who perceive their children misbehave infrequently, moderately, or frequently. Results of analyses supported this hypothesis. In fact, each characteristic of parenting style measured made a meaningful contribution to discriminating between groups, with the exception of structure. However, further analysis revealed that levels of coercion could explain the majority of variance in parent style across the three groups. Parents who perceived their children misbehaved more frequently endorsed greater coercive parenting characteristics. This finding is consistent with existing research. For example, Snyder and Patterson (1995) found that children's

transgressions elicit coercive responses from parents that temporarily stop the undesired behaviour. Furthermore, coercive discipline strategies are also expected to contribute to increased behavioural problems among children (Synder & Patterson, 1995). For example, Baumrind (2013) characterizes authoritarian parents' responses to children's transgressions as coercive; and this parenting style has been linked to increased relational aggression among school aged children (Sandstrom, 2007).

Results of the present study also indicated that rejection accounted for a moderate proportion of the variance in parenting style based on whether parents perceived their children misbehaved infrequently, moderately, or frequently. Specifically, parents who perceived their child misbehaved more frequently felt more burdened by, and less able to meet the needs of their children. The results of the present study align with SDT (Ryan & Deci, 2000), and research on parental monitoring and engagement (Kerr & Stattin, 2003; Patterson, Bank, & Stoolmiller, 1990). Through the lens of SDT (Ryan & Deci, 2000), parents who perceive their children misbehave more frequently may have a diminished sense of competence that stifles their motivation to take an active role in parenting. Likewise, Patterson and Fisher (2002) posit that parents who find their children difficult to manage will engage in more rejecting and avoidant responses in situations where they anticipate their children will misbehave. In line with this hypothesis, researchers found that more child behavioural problems predicted less future child monitoring (Kerr & Stattin, 2003; Patterson et al., 1990). Such actions would be contrary to parenting recommendations that encourage the

monitoring of children who have difficulty meeting behavioural expectations (Azar & Weinzierl, 2005).

It is interesting to note that parental warmth, autonomy support, and chaos made relatively small contributions to the predictions of variance in parenting style across parent groups who perceived their children misbehaved infrequently, moderately, or frequently. One possible explanation for small group differences may be that these dimensions of parenting style may be better explained by greater parental resources that enhance parents' abilities to emotionally regulate themselves, and respond to children in a more empathic and consistent manner rather than by perceptions of how frequently children misbehave. For example, Pereira et al. (2012) have found that parents who report more stressors also report less sensitivity to their children's needs. Alternatively, self-reported levels of warmth, autonomy support, and chaos may be better predicted by parents' internalized values than by how difficult parents experience their children to be. In North American, parents are expected to be warm, promote autonomy, and provide structure (Larzelere et al., 2013). Internalization of such values may contribute to a response bias in parents' self-evaluations on these dimensions of parenting style. With this in mind, objective evaluation of these characteristics of parenting-style may be required to gain a precise understanding of how these characteristics vary in relation to how difficult parents experience their children to be.

Unexpectedly, regardless of how frequently parents perceived that their children misbehaved, levels of structure were reported to be similar across groups.

In this study, structure was defined as clear communication of behavioural expectations. Previously, this dimension of structure has been positively associated with children's perceived academic competence (Skinner et al., 2005) and adolescents' perceived control, and negatively associated with adolescent depression and behavioural problems (Flamm & Grolnick, 2013). Lack of significant differences suggests that, regardless of how frequently children misbehaved, parents believed their children had a clear understanding of behavioural expectations. Successful communication of behavioural expectations has been identified as one of the socialization challenges of parents (Azar et al., 2008; Knafo & Schwartz, 2012). It may be that parents who experience their children as more challenging overestimate how successfully they have communicated behavioural expectations to their children, or have developmentally inappropriate expectations (Azar & Weinzierl, 2005). Moreover, before concluding that the perceived frequency of children's misbehaviour is not associated with structure, other dimensions of structure need to be explored (Farkas & Grolnick, 2010). For example, it seems plausible that parents who perceive their children misbehave infrequently relative to those who perceive their children misbehave frequently may more consistently follow through with pre-set consequences, or believe they have more successfully taken on a leadership role in the home. Further research is needed to determine how multiple dimensions of structure in the parent-child context relate to perceived child difficulty.

Limitations

Given the cross-sectional nature of this study, researchers cannot conclude that a causal relationship between perceived frequency of child misbehaviour and how people parent exists. Instead, this research taps into how parents experience their children and how this further relates to their perceptions of their parenting styles. Understanding parents' perceptions is essential in effectively empathizing with their experienced challenges and assisting them to achieve their desired socialization goals with their children (Dix, 1993; Raj & Raval, 2012). Intentionally, parents' reports in this study were subjective and their accuracy may vary based on their psychological functioning, and diverse cultural and developmental expectations of their children (Dix, 1993). Therefore, research that includes observations of parents' interactions with their children may provide different insights on the relationships among perceived child difficulties and various dimensions of parenting style. Moreover, this study is limited in that the sample was primarily Caucasian, middleclass, and included significantly more mothers than fathers. Future studies can aim to gather data from more diverse ethnic, socioeconomic, and cultural groups, and increase the number of father participants. Such research will allow for the exploration of possible ethnic, cultural, and sex differences in the variation in parenting styles in response to how frequently children are perceived to misbehave. Last, this study attended to only one dimension of each of the parenting characteristics being evaluated (Skinner et al., 2005). However, each characteristics of parenting style is believed to be multidimensional (Farkas & Grolnick, 2010; Manzi et al., 2012). Future research

can aim to conduct a more thorough assessment of each characteristic of parenting style to contribute to a more complex understanding of perceived child difficulty and parenting styles.

Conclusions

Relative to parents who perceived their children misbehaved infrequently, those who indicated their children misbehaved moderately reported similar levels of warmth, structure, and chaos. In contrast, those who perceived their children misbehaved moderately reported significantly greater levels of rejection and coercion, and significantly less autonomy support than those who perceived their children misbehaved infrequently. Relative to parents who perceived their children's frequency of misbehaviour to be moderate, those who perceived their children's misbehaviour to be frequent reported similar levels of structure, significantly less warmth and autonomy support, and significantly more rejection, chaos, and coercion. This suggests, when children are experienced as more challenging, the first characteristics of parenting style to be affected may be coercion, rejection and, to a small degree, autonomy support. As the perceived frequency of child misbehaviour further increases, the levels of rejection and coercion may be intensified, autonomy support may continue to be diminished, and levels of warmth and chaos may also be adversely impacted. It is important to note, despite being significant, the differences between groups of parents in self-reported warmth, autonomy support, and chaos were small. Therefore, the results of this study appear to be most consistent with Patterson's (1995) coercion model of parenting that suggests that more difficult children elicit greater coercive

and rejecting responses from their parents. Given these findings, future research may aim to find factors (i.e., social support, parenting skills, or social competencies) that obviate responses marked by coercion and rejection from parents who experience their children as difficult. Such findings may further lead to interventions that help parents respond more constructively to children's undesired behaviours.

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Table 2.1.

Descriptive Statistics

		Groups Based on Frequency of Misbehaviour		
		Infrequent	Moderate	Frequent
Participants		68	228	99
	Mothers	64.7%	69.3%	81.8%
	Fathers	35.3%	30.7%	18.2%
Child's Sex				
	Male	45.6%	53.1%	54.5%
	Female	54.4%	46.9%	45.5%
Relation status				
	Married/Common law	67.7%	79.0%	73.8%
	Single/Separated	42.3%	21.0%	26.2%
Household Income				
	36999 & Below	41.2%	23.2%	27.2%
	37000-99999	26.5%	43.1%	44.4%
	100000 & Above	32.3%	33.7%	28.4%
Education Levels				
	Grade 12 or less	16.2%	15.8%	22.2%
	Diploma or Trade	36.8%	30.7%	33.3%
	Bachelor Degree	33.8%	29.4%	27.3%
	Graduate or After Degree	13.2%	24.1%	17.1%
Employment Status				
	Not employed	20.6%	19.7%	30.3%
	Casual/Part-time	22.1%	21.5%	31.3%
	Full-time	57.4%	58.8%	38.4%
Race				
	Caucasian	89.7%	82.9%	87.9%
	Other	10.3%	17.1%	12.1%

Table 2.2.

Descriptive Statistics for Each Group on Parenting Style Characteristics

	Infrequent $n = 68$		Moderate $n = 228$		Frequent $n = 99$	
Parenting Characteristic	*M*	*SD*	*M*	*SD*	*M*	*SD*
Warmth	36.87	5.59	35.66	4.52	33.96	5.05
Rejection	9.51	4.77	11.69	4.50	14.89	4.95
Structure	30.78	4.77	30.84	3.29	30.90	3.19
Chaos	10.62	4.89	11.31	4.56	13.38	5.24
Autonomy Support	32.31	3.29	31.25	3.61	29.63	4.06
Coercion	12.99	6.16	16.50	5.68	21.98	6.00

Table 2.3.

Pooled within Group Correlation Matrices

	1	2	3	4	5
1. Warmth					
2. Rejection	-.52				
3. Structure	.43	-.24			
4. Chaos	-.45	.43	-.51		
5. Autonomy Support	.45	-.38	.34	-.30	
6. Coercion	-.46	.55	-.17	.50	-.33

Table 2.4.

Univariate Comparisons Between Groups on Dimensions of Parenting Style Characteristics

Parenting Style Characteristic	*df*	*F*	*Eta2*	*p*
Warmth	2	7.78	0.04	.001
Rejection	2	29.02	0.13	.001
Structure	2	0.03	0.00	.975
Chaos	2	8.59	0.04	.001
Autonomy Support	2	11.47	0.06	.001
Coercion	2	52.41	0.21	.001

Table 2.5.

Discriminant Analysis Results

	Discriminant function	Percent variance	Canonical Correlation	Significance of discriminant	
				x^2	*p*
3 Groups	1	99.21	.49	776.00	.000
	2	0.76	.05	389.00	.918

Table 2.6.

Discriminant Weights & Correlations between the Six Variables & the Canonical Variable

	Discriminant		
Variable	Unstandardized	Standardized	Correlations
Warmth	0.05	0.25	-.35
Rejection	0.09	0.41	.69
Chaos	-0.03	-0.15	.37
Autonomy Support	-0.04	-0.18	-.44
Coercion	0.15	0.86	.92

Note: 24% of the variance between groups is accounted for by the dimensions of parenting characteristics evaluated.

STUDY 3

Facets of Adult Social Competence as Predictors of Parenting Style

Abstract

A wealth of research suggests that parenting style influences the social development of children. Similarly, it seems reasonable that the environments parents create for their children will be predicted by their social competencies. There is limited research examining what facets of adult social competence predict parenting style. The present study contributes to the literature by examining the relationship between multiple facets of adult social competence and overall quality of parenting style as assessed by parents. Four-hundred parents completed self-report measures evaluating their parenting style and seven facets of their social competence including: emotional intelligence, negative assertion, conflict management, empathy, agency, communion, and social support. Stepwise regression was used to examine the additional contribution made to the prediction of parenting style quality after first accounting for parent and child sexes and ages, and frequency of child misbehaviour. Results suggest that the aforementioned facets of social competence can account for approximately 25% of the variance beyond control factors. Further research is needed to examine whether enhancing facets of adult social competence can improve how parents engage with their children.

Introduction

Parenting style is defined as the attitudes and behaviours that parents employ in interactions with their children that influence the socialization process (Darling & Steinberg, 1993). Self-determination theory posits that parenting styles characterized by warmth, provision of clear and consistent structure, and autonomy support will sufficiently address the psychological needs of children (Grolnick, Deci, & Ryan, 1997). Moreover, parent-child relationships that meet the psychological needs of children are believed to facilitate the internalization of the social values and behavioural expectations of their parents (Grolnick et al., 1997). For example, Steinberg, Mounts, Lamborn, and Dornbusch (1991) reported that a parenting style characterized as accepting, firm, and democratic predicted greater social competence among adolescents, regardless of ethnicity, socioeconomic status, or family structure.

The question then becomes; what characteristics do parents possess that allows them to better attend to the psychological needs of their children. Similar to how social competencies predict the quality of interpersonal interactions among adults (e.g., Del Barrio, Aluja, & Garcia, 2004; Schutte et al., 2001); it seems plausible that social competencies will predict how parents interact with their children. For instance, parents who can comfortably communicate violations of social expectations, and manage conflict may be better able to maintain a parent-child context characterized by warmth, structure, and autonomy support (Grolnick et al., 1997; Skinner, Johnson, & Snyder, 2005). Consequently, greater social competence is anticipated to predict parenting styles that better meet the

psychological needs of children. The purpose of this research was to examine the relationship between self-reported facets of adult social competence and the quality of overall parenting style. For the purposes of this study, a higher quality parenting style was determined via parents' self-reports of greater warmth, structure, and autonomy support and less rejection, coercion, and chaos (Egeli, Rogers, Rinaldi, & Cui, 2015; Skinner et al., 2005). Identifying social competencies associated with higher quality parenting contributes to research on factors that predict parenting practices, and may be helpful in the development of more effective parenting interventions.

Theoretical Framework

Based on an extensive review of the literature on social competence, Rose-Krasnor (1997) created the Social Competence Prism to facilitate research on this topic. The Social Competence Prism has three levels: 1) theoretical, 2) index, and 3) skill. At the top of the prism is the theoretical level where social competence is defined as effectiveness in interactions. Next is the index level that captures relational sequences within interpersonal interactions, and includes constructs such as social support, agency, and communion. Finally, at the foundation of the model are skills and individual characteristics that serve as the building blocks for constructive interpersonal interactions. These building blocks include constructs such as empathy, emotional intelligence, conflict management, and assertiveness. According to Rose-Krasnor, when evaluating social competence, it is important to assess a variety of skills and indices because conclusions based on individual competencies may under or overestimate one's abilities.

To-date, existing research has generally examined the relationship between only one or two facets of social competence in relation to parent-child relationships. For example, at the indices level, researchers have found evidence that social support (Armstrong, Birnie-Lefcovitch, & Ungar, 2005; Turner & Avison, 1985), agency, and communion (Cannon, Schoppe-Sullivan, Mangelsdorf, Brown, & Szewczyk Sokolowski, 2008) can be influential to the quality of parent-child interactions. Social support is defined as the experience of belonging to a network of others who nurture a sense of being loved, valued, and esteemed (Cobb, 1976). Research findings suggest that the parents who have greater social support also tend to report more effective parenting despite multiple stressors (Armstrong et al., 2005; Turner & Avison, 1985), display more frequent nurturing interactions, and express more positive attitudes regarding parenting (Andersen & Telleen, 1992).

Agentic and communal traits are also anticipated to contribute to the quality of the parent-child relationship (Baumrind, 1991). Agentic traits comprise those associated with goal-directed behaviour (Helgeson, 1994) such as assertiveness, persistence, and competence (Shaver et al., 1996). Communal traits emphasize concern for the needs of others (Helgeson, 1994), and include such characteristics as warmth, devotion, and awareness of other's feelings (Shaver et al., 1996). Higher levels of communal traits are associated with greater intimacy and trust (Collins & Read, 1990), and predict greater parenting engagement (Cannon et al., 2008). In comparison, higher levels of agentic traits are associated

with less fear of abandonment or being unloved, and are believed to contribute to attachment security (Collins & Read, 1990).

At the skills level, social competencies including emotional intelligence, negative assertion, conflict management, and empathy are anticipated to facilitate interpersonal relationships (Rose-Krasnor, 1997). Emotional intelligence refers to the ability to identify, regulate, and adaptively use emotions in relation to the self and others (Salovey & Mayer, 1989; Schutte et al., 1998). Greater emotional intelligence is positively associated with empathy, self-monitoring, social skills, cooperation, and close and affectionate relationships (Schutte et al., 2001). In contrast, negative assertion is the ability to directly communicate personal rights and displeasure with others (Buhrmester, Furman, Wittenberg, & Reis, 1988), and has commonly been studied as a facet of assertive behaviour (Galassi & Galassi, 1979). Buhrmester and colleagues (1988) found that negative assertion was positively associated with popularity, emotional expressivity, emotional sensitivity, agentic traits, self-esteem, initiation, and a willingness to take control of social situations.

Conflict management refers to responding to disagreements that emerge in the context of interpersonal relationships (Buhrmester et al., 1988). In prior research, greater comfort with managing conflict was positively associated with popularity, lower levels of anxiety and depression, less social manipulation, communal and agentic traits, greater emotional sensitivity, self-esteem, social desirability, better emotional support, and less social dominance (Buhrmester et al., 1988). Last, empathy is defined as the capacity and consequence of

accurately perceiving the feeling state of another (Spreng, McKinnon, Mar, & Levine, 2009). Empathy is associated with lower levels of aggression, constructive responses to conflict (Richardson, Hammock, Smith, Gardner, & Signo, 1994), friendliness, conscientiousness, openness (Del Barrio et al., 2004), and the willingness to forgive (Paleari, Regalia, & Fincham, 2005).

Evidence clearly supports positive associations between better social skills, and more effective interpersonal interactions (e.g., Del Barrio et al., 2004; Buhrmester et al., 1988). However, there is limited research on the relationship between adult social skills and parenting style. The one exception is an abundance of evidence supporting the relationship between less parental empathy and poor parent-child interactions (de Paul, Perez-Albeniz, Guibert, Asla, & Ormaechea, 2008; Perez-Albeniz & de Paul, 2003; Wiehe, 1987). Parental empathy requires parents to identify their children are in need, and to value their welfare (de Paul et al., 2008). According to Mehrabian and Epstein (1972), those who have vicarious emotional responses in relation to the distress of their children are more likely to engage in supportive behaviours. Similarly, research evidence supports that parents who physically abuse their children tend to be less empathetic than those who do not (de Paul et al. 2008; Perez-Albeniz & de Paul, 2003; Wiehe, 1987).

Despite limited empirical evidence supporting the relationship between the social skills of parents and parenting style, parenting interventions have been designed to address such gaps (Foster, Prinz, & O'Learly, 1983; Harris & Landreth, 1997). For example, Foster and colleagues (1983) devised a clinical

intervention teaching parents and teens the skills to more effectively resolve conflict. Results indicated that both parents and teens could effectively learn conflict management skills; however, the motivation to implement these skills appeared to wax and wane (Foster et al., 1983). Therefore, competencies at both the skills and indices levels may be required for positive interactions to occur. For example, both social skills, such as conflict management, and indices, such as valuing the wellbeing of others (communion), may be required to facilitate effective interactions over the course of long-term relationships where discord is inevitable. Not surprisingly, research findings indicate that constructs at the skills and indices level tend to be associated with one another (Rose-Krasnor, 1997).

It is broadly accepted that characteristics of both the parent and child will influence the parent-child relationship (Baumrind, 2013). For example, passive versus aggressive children are likely to elicit different parenting behaviours (Baumrind, 2013). Moreover, cultural expectations of parenting roles for men versus women, acceptable behaviours for male and female children, and younger versus older children can also contribute to how parents interact with their children (Lytton & Romney, 1991). Thus, sex and age are relevant contextual factors worthy of consideration when conducting parenting research. However, regardless of the contextual factors, parenting researchers place the onus on parents to engage with their children in a manner that promotes optimal social development (Baumrind, 2013). Given the complexity of social behaviours, a better understanding of the relationship between parenting style, contextual factors (parent and child ages, parent and child sexes, frequency of child

misbehaviour), and adult social competencies at both the skill (negative assertion, conflict management, empathy, and emotional intelligence) and index (communion, agency, and social support) levels may enhance our current understanding of factors influencing parenting style.

Research Purpose

The current study is the first to examine the relationship between overall parenting style (Skinner et al., 2005) and adult social competencies at both the skill and index levels (Rose-Krasnor, 1997). It was hypothesized that facets of self-reported, adult social competence would contribute to the prediction of the quality of parenting style beyond variance accounted for by sex and age of parents and children, and frequency of children's misbehaviour. Such findings may point to possible parenting interventions that focus broadly on improving facets of adult social competence to augment parenting style. Because it is hoped that attention to adult social competencies can have benefits for parents beyond improving the parent-child context, this research also explored relationships between social competencies, and educational attainment and household income of parent participants.

Methods

Participants

Participants in this research included 287 mothers and 113 fathers, ages 20 to 66 years (M = 38.51; SD = 8.57), with children between the ages of two to 18 years (M = 8.77; SD = 5.06). Two-hundred-eight parents reported on their relationships with their sons and 192 with daughters. Seventy-eight percent

reported being employed either full or part-time; 18% reported having grade 12 or less education, 62% had completed one to four years of university or college, and the remaining had graduate level education. In terms of household income, 24% of participants reported an income less than $37000, 44% an income between $37000-100000, and 32% an income greater than $100000. Eighty-five percent of parents identified as Caucasian, 4% Asian, 3% Black, 1% First Nations, 1% East Indian, and the remaining mixed or other. Seventy-five percent of parents were married or in common-law relationships.

Procedures

This study was approved by the University's ethical review board. Parents were recruited through non-profit agencies, social networking sites, online classified advertisements, and word-of-mouth. To maintain anonymity and confidentiality, and to discourage social desirability responding, no identifying information was requested, and data were collected via an online survey. The first page of the survey included the information and consent form outlining the research purpose and possible benefits and risks of participation. Parents were also provided with the principal investigator's contact information and were invited to ask questions before beginning the survey, and request study results. Parents were informed that they could withdraw from the study by not fully completing the survey. Fifty-four percent of the 749 surveys started were completed. To best capture difficulties parents were experiencing, participants were asked to respond based on their relationship with the child they found most difficult to parent. Parents reported how frequently their children misbehaved on

a scale from one (never) to seven (always). The mean for frequency of child misbehaviour reported by this sample was 3.77 (*SD* = 1.10).

Measures

Revised-Parent as Social Context Questionnaire (R-PSCQ: Egeli et al., 2014; See Table 1.). For the purposes of this study, the quality of parenting style was evaluated using total scores on the R-PSCQ (Paper 1). The original version of the R-PSCQ was developed by Skinner et al. (2005), and is based on Self-Determination Theory (SDT; Deci & Ryan, 1985). The R-PSCQ has 30 items, and evaluates parenting style based on parent self-reports of six characteristics: warmth, rejection, structure, chaos, autonomy support, and coercion (Egeli et al., 2014; Skinner et al., 2005). Based on SDT (Deci & Ryan, 1985), higher reports of warmth, structure, and autonomy support; and lower reports of rejection, chaos, and coercion are believed to be an indicator of a parenting style that better meets the psychological needs of children (Egeli et al., 2014). Participants were asked to respond on a seven point Likert-type scale based on how true each statement is for them in relationship with the child they find most challenging to parent; one equaling 'completely disagree' and seven equaling 'completely agree.' When calculating total scores, items assessing harsh characteristics of parenting style were reversed scored so that a higher score would reflect a more positive overall parenting style. An example of an item assessing a positive characteristic of parenting style is, "I can always find time for my child." In contrast, an item assessing a harsh characteristic of parenting style

is, "I get mad at my child without warning." The R-PSCQ demonstrated excellent internal consistency (α = .90) for use with the present sample.

The Toronto Empathy Questionnaire (TEQ; Spreng et al., 2009; Appendix D). Consistent with Mehrabain and Epstein's (1972) Measure of Empathic Tendency, the TEQ is intended to be a one-dimensional measure of empathy defined as heightened response to the emotional experiences of others (Spreng et al., 2009). When completed by undergraduate students, researchers have demonstrated the TEQ has good internal consistency (α = .87), and test-retest reliability (r = .81, p < .001). This measure is also highly correlated with other measures of empathy. Sample items include: "When someone is feeling excited, I tend to get excited too," and "I find that I am in tune with other people's moods" (Spreng et al., 2009). Parents were asked to report, on seven point Likert-type scales, how strongly they agreed with each item as it pertained to them; one equaling completely disagree, and seven equaling completely agree. This measure demonstrated good internal consistency for use with this study's sample (α =.85).

Trait Measure of Emotional Intelligence (TMEI; Schutte et al., 1998; Appendix E). The TMEI measures emotional intelligence. It is based on the work of Salovey and Mayer (1989) who defines social emotional intelligence as the ability to: 1) identify and express, 2) regulate, and 3) utilize emotions. The TMEI consists of 33 items comprising a single scale with 13 items addressing appraisal and expression of emotions (e.g., "I easily recognize my emotions as I experience them."); 10 items measuring emotional regulation (e.g., "I have

control over my emotions"); and 10 items measuring emotional utilization (e.g., "I motivate myself by imaging a positive outcome to tasks I take on"). This measure is believed to be a valid measure of one's perceived emotional intelligence and has demonstrated convergent validity, and good internal consistency when used with adults recruited from diverse settings (α = .87 and .90; Schutte et al., 1998). Participants in this study were asked to report how strongly they agreed that each of the items described them on a seven point Likert-type scale; one equaling completely disagree, and seven equaling completely agree. Excellent internal consistency was found with the present sample (α =.93).

Interpersonal Competence Questionnaire (ICQ; Buhrmester et al., 1988; Appendix F). The Negative Assertion and Conflict Management subscales of the Interpersonal Competence Questionnaire (ICQ) were used in this study (Buhrmester et al., 1988). The Negative Assertion scale has eight items that assess comfort level with directly communicating relationship dissatisfaction. This scale has demonstrated good internal consistency (α = .85), and correlates with related measures including initiation and disclosure. The Conflict Management scale has eight items that assess one's comfort with engaging constructively with others when disagreements arise. This scale has demonstrated satisfactory internal consistency (α = .77), and predicts scores on related measures including disclosure and support (Buhrmester et al., 1988). For each scale, participants were asked to rate how comfortable they were engaging in the described behaviour on a five point Likert-type scale; one equaling extremely uncomfortable, and five equaling completely comfortable. The internal

consistency of the negative assertion scale was excellent (α =.93) and conflict management scale was good (α = .86) in relation the present sample.

Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988: Appendix G). The MSPSS includes 12 items, and measures social support from three sources: family, friends, and significant others. A variety of studies have demonstrated that the MSPSS is a valid measure of social support among adults (Dahlem, Zimet, & Walker, 1991; Zimet et al., 1988). The total scale has demonstrated good internal consistency (α = .91), and, as predicted, is related to lower levels of anxiety and depression (Zimet et al., 1988). Sample items include, "My family really tries to help me", and "I can count on my friend when things go wrong". Parents were asked to rate, on a seven point Likert-type scale, how frequently each of the statements is true for them; one equaling never, and seven equaling always. The internal consistency of this measure among parents in this study was excellent (α = .92).

Measure of Agentic & Communal Traits (MACT; Helgeson & Palladino, 2012; Appendix H). Communion and agency reflect the characteristics associated with femininity and masculinity, respectively (Helgeson & Palladino, 2012). The ability to balance the need for agency and communion is believed to be associated with greater relationship quality and well being. Conversely, extreme discrepancies in feminine and masculine traits are referred to as either unmitigated communion or unmitigated agency, and are associated relationship difficulties and health problems. Helgeson and Palladino (2012) recently devised concise measures of communion, and agency, and demonstrated

that these scales had good (α = .83), and modest (α = .66) internal consistency, respectively, when assessing these characteristics in adolescents (Helgeson & Palladino, 2012). For the present study, participants were asked to rate, on a seven point Likert-type scale, how strongly they agreed that each item described them; one equaling completely disagree, and seven equaling completely agree. In the present study, the internal consistency of the communion scale was good (α = .86), and the agency scale was satisfactory (α = .76).

Analysis Procedures

Data preparation and screening. Data were directly downloaded from an online data collection site to Statistical Product and Service Solutions database (SPSS version 21). Cases were screened for participants who did not meet criteria for participation in this study, and missing data. Recruitment criteria required that parents be 18 years or older, and that the child they were reporting on be between the ages of two to 18 years of age. Four cases were removed because they either indicated their children were less than two years of age, or did not report their children's ages; and three cases were removed because they did not state their ages; resulting in a sample size of 400 parent participants. Last, for the purpose of hierarchical multiple regression analysis, parent and child sexes were coded so that male was represented by one and female by two.

Hierarchical multiple regression analysis. Hierarchical multiple regression analysis was chosen to evaluate the contribution of adding social skills and then social indices (Rose-Krasnor, 1997) to the prediction of total R-PSCQ scores after accounting for five contextual factors. Prior to conducting the

analysis, relevant assumptions were tested including: (1) reliable measurement of variables, (2) multivariate normal distribution of variables, (3) linearity and homoscedasticity and (4) absences of multicollinearity (Osborne & Waters, 2002). Reliability of each measure was tested using Cronbach's alpha and results indicated that all measures used in this study had satisfactory or better reliability. Mahalanobis distance scores were used to examine data for multivariate outliers; five outliers were identified and removed. When outliers were removed, resulting in a sample size of 395, examination of standardized residual plots including histogram and normal probability plots suggested that assumptions of linearity and normality were better met. Finally, results of collinearity statistics revealed tolerances greater than .20, and variance inflation factors below five indicating an absence of multicollinearity. In summary, assumptions for hierarchical regression were met.

To gain a better understanding of the contribution of social competencies to the prediction of parenting style, independent variables were entered in at different stages. At stage one, variables entered into the hierarchical multiple regression analysis included: parent's sex, parent's age, child's sex, child's age, and frequency of child's misbehaviour. These factors were perceived to be possible confounding factors impacting parenting style. For step two, social competencies at the skills level of Rose-Krasnor's (1997) Social Competency Prism were added and comprised: empathy, emotional intelligence, negative assertion, and conflict management. Social skills have been identified as foundational to social competence, and are potentially the best targets for possible

intervention. In the final step, facets of social competence from the index level of the Social Competence Prism were entered and comprised: social support, communion, and agency. Index factors are believed to be by-products of individuals' social skills in relation to their social contexts, and are anticipated to act as markers of broader social functioning (Rose-Krasnor, 1997).

Post hoc analyses. Ideally, improving the social skills of parents can enhance parent-child interactions and adult functioning in broader areas of life. Two-tailed, Spearman's rho correlations were used to explore the association between social competencies, educational attainment, and income. Spearman's rho correlations were chosen because data regarding educational and financial success better met the criteria to be classified as rank data (Gravetter & Wallnau, 2000). Due to the increased risk of a type-I error in relation to the number of analyses being conducted, only results with $p < .004$ (.05/14 = 0.004) were deemed to have occurred at a rate greater than chance.

Results

Preliminary analyses. As recommended by Kelley and Maxwell (2010), correlations between all variables of interest were calculated (see Table 3.1). Results indicated direct and significant relationships between the R-PSCQ and all variables of interest, with the exception of parent sex and age. Moreover, as expected there were significant relationships among facets of adult social competence (Rose-Krasnor, 1997). Results indicated a small effect size in regards to correlations between increased parenting quality, as assessed by the R-PSCQ, and the child being female, reporting on children of a younger age, and

increased agency (Cohen, 1992). Whereas, correlations indicated a medium effect size between increased parenting quality and decreased frequency of children's misbehaviour, greater empathy, more comfort with negative assertion, more comfort with conflict management, higher emotional intelligence, increased communion, and better social support (Cohen, 1992).

Hierarchical multiple regression analysis. The purpose of this research was to examine the extent to which facets of adult social competence (first at the skill level, and second at the index level) accounted for variance in parenting style, after controlling for variance in relation to parents' and children's sexes and ages, and frequency of children's misbehaviours. Results of the analysis indicated that variables of interest predicted a significant portion of variance in R-PSCQ scores at each step. In the first step, the five control variables accounted for 25.6% of the variance in R-PSCQ scores; $F(5, 390) = 26.86$, $p < .001$. Three of the five control variables including parents' ages, children's ages, and frequency of children's misbehaviours made significant, unique contributions to the prediction of the dependent variable. In the second step, constructs from the social skills level of the Social Competencies Prism (Rose-Krasnor, 1997) explained an additional 22.9% of variance in the predictor variable, and this change was significant $F(4, 386) = 42.88$, $p < .001$). After accounting for the five control variables, each of the four social skills assessed predicted unique and significant change in R-PSCQ scores. In the final step, items from the index level of the Prism were added and accounted for an additional 2.5% of the variance in R-PSCQ scores; $F(3, 383)$, $p < .001$. After accounting for both control variables

and social skills, two of the three indices (social support and communion) contributed to the prediction of additional variance in R-PSCQ scores. In total, the facets of social competence examined accounted for 25.4% of the variance in R-PSCQ after controlling for parent and child age, and sex, and frequency of child misbehaviour. For a full summary, see Table 3.2.

Post hoc analyses. As stated earlier, because adult social competencies were anticipated to predict parenting style, as well as other areas of personal achievement, we further explored the relationship between facets of social competence, and educational and financial success. Fourteen Spearman's rho correlations were conducted. Results of these analyses are presented in Table 3.3. Due to the increased risk in Type I error, any correlation with $p > .004$ must be interpreted with caution. Using a probability level of $p < .004$ no significant relationships emerged between education level and the facets of social competence assessed. However, results of these analyses indicated that increased financial success was associated with decreased communion, and increased agency and social support; the effect sizes for these relationships were small (Cohen, 1992).

Discussion

The purpose of this study was to broaden the existing understanding of the relationship between facets of adult social competence and parenting style. It is important to note that social competencies were assessed generally, rather than specifically in the context of parent-child interactions, and the ages and sexes of children and parents, as well as the frequency of child misbehaviour, were

controlled for before determining the contribution facets of social competence made in accounting for variance in the quality of parenting style. Therefore, findings may provide information on social competencies that may contribute to improved parenting styles among mothers and fathers, regardless of the gender based and developmental needs of their children.

When examining the variance accounted for by parents' and children's sexes and ages, and frequency of children's misbehaviours, results indicated that three of these factors made significant and unique contribution to the prediction of the quality of parenting style. Specifically, being an older parent, having younger children, and having children who misbehaved less frequently was associated with a higher quality parenting style. The association between increased parents' ages and higher quality parenting is consistent with previous research indicating that younger mothers tend to be less nurturing than older mothers (Fox, Platz, & Bentley, 1995). However, it is important to note the fathers were included in our analysis suggesting increased age of fathers may also contribute to higher quality parenting.

In contrast, increases in children's ages predicted decreases in the quality in parenting style. Decreases in the structure and warmth provided by parents as children age has been reported by Rosen, Cheever, and Carrier (2008). Changes in parenting style as children age may be a normal characteristic of the individuation process, and may not be problematic (Smetana, Crean, & Campione-Barr, 2005). Conversely, decreases in the quality of parenting style may partially explain increases in parent-child conflict observed during

adolescence (Shanahan, McHale, Crouter, & Osgood, 2007), and thus may be worthy of further exploration. Last, results indicate that higher quality parenting styles were associated with less frequent child misbehaviour. This finding is consistent with SDT that posits that parenting styles that address the psychological needs of children contribute to more effective socialization (Grolnick et al., 1997). However, based on the present data it is impossible to determine whether parenting style resulted in decreased frequency of child misbehaviour, or vice versa. The most likely conclusion is that a reciprocal relationship exists. Providing children with warmth, structure, and autonomy support can mitigate parent-child conflict (Baumrind, 1991; Grolnick et al., 1997), and children who misbehave less frequently are likely to elicit less negative responses from their parents (Belsky, 1990; Fox et al., 1995).

After accounting for control variables, constructs from the skills level of the Social Competence Prism were added to the model to see if they contributed additional unique variance to the prediction of the quality of parenting. According to Rose-Krasnor (1997), the skills level includes individually-based skills, motivations, and characteristics that are most useful in the design of interventions. Rose-Krasnor further asserts that, given the complexity of interpersonal relationships, targeting only one skill would inadequately address the skills needed for interpersonal success (Rose-Krasnor, 1997). Therefore, for the purpose of this research, four skills level constructs were included in the analyses comprising: empathy, negative assertion, conflict management, and emotional intelligence. Results of this study indicated that each of these variables

predicted unique and significant variance to the prediction of the quality of parenting style.

Indeed, results of this study lend further support to previous findings suggesting empathy is positively associated with better quality parenting (de Paul et al., 2008; Perez-Albeniz & de Paul, 2003; Wiehe, 1987). Surprisingly, there is a scarcity of research examining the relationships between the parent-child relationship and negative assertion skills, conflict management skills, and emotional intelligence of parents. This research contributes to the literature by demonstrating that the aforementioned skills can account for up to 23% of the variance in parenting style reported. However, research is needed that explores whether enhancing parents' empathy, negative assertion, conflict management, and emotional intelligence can augment parenting style.

Last, constructs from the index level of the Social Competence Prism, were entered into the model to examine if they further contributed to the prediction of variance in parenting style. Rose-Krasnor (1997) asserts that the indices level may be most beneficial for the identification of people in need, and assessment of intervention outcomes. Preliminary analysis conducted as part of this research relationship between social skills and indices support past observations suggesting social skills and indices are good predictors of one another (Rose-Krasnor, 1997). Indices examined in this research included: agency, communion, and social support. Despite overlapping relationships between skill and index level constructs, results of our analysis revealed that communion and social support still contributed to the prediction of variance in

parenting style. The change was small (approximately two percent) but significant. These findings support claims that higher quality parenting is associated with greater communal traits (Cannon et al., 2008); as well as the extensive literature suggesting social support is associated with better-quality parent-child relationships (e.g., Andersen & Telleen, 1992; Armstrong et al., 2005).

Last, to explore whether the same social competencies may be relevant to broader accomplishments, post hoc analyses were conducted to explore if facets of adult social competence predicted income and educational attainment. Results of analyses did not support the hypotheses that increases in adult social skills (i.e., negative assertion, conflict management, or empathy) were associated with greater educational attainment or income. An increase in emotional intelligence was positively correlated with higher education attainment; however, due to the large number of post hoc correlations, this relationship may have occurred due to chance. At the indices level, small and significant relationships between educational attainment, and agency and social support did emerge; however, these results must also be interpreted with caution. Furthermore, household income was significantly associated with decreased communion, increased agency, and increased social support. It is interesting to note that results of correlational analysis indicated that higher scores on the measure of communion were associated with higher quality parenting styles and lower household income. This finding may reflect career sacrifices parents make to balance family responsibilities (Cahusac & Kanji, 2014). Given these findings, it may be

relevant to further examine whether various levels of communal and agentic traits play a significant role in which facets of life people experience the greatest success.

Limitations

The results of this research provide new insight into the relationship between facets of adult social competence and parenting style. However, because this research is correlational in nature, no conclusions can be drawn regarding the causal effect of social competencies on parenting style. Research is needed to examine whether improving the social competencies of parents will have a positive impact on parenting style. Moreover, data were collected using both convenience and snowball sampling, and the sample in this study was primarily Caucasian, middle class, and educated. Whether similar results would emerge with samples that better represent people with less education, low socioeconomic status, or from minority populations, has yet to be determined. Finally, this research relied strictly upon self-report measures. Whether more objective behavioural assessments of parenting style and facets of social competence will result in similar conclusions is worthy of further examination. Observational research may be helpful in determining which social competencies commonly contribute to interpersonal success across relational contexts for parents. Such information would provide clear behavioural targets for parenting interventions.

Conclusions

Results of this study indicate that parents' perceptions of their social competencies account for significant variance in the quality of parenting style

reported; even after controlling for parent and child ages and sexes, and frequency of child misbehaviour. All social competencies assessed were positively associated with higher quality parenting styles as reported by parents. It is important to note that parents reported on their general perceived social competencies; rather than in direct relation with their children. Therefore, results suggest that empathy, comfort with negative assertion, comfort with conflict management, emotional intelligence, interest in the wellbeing of others (communion), and perceived social support in general are moderately related to parenting style. It further seems plausible that these same social competencies will be broadly associated with success in other interpersonal contexts. Given these findings, whether enhancing adults' social competencies can have a positive impact on parenting style and broader interpersonal relationships, is worthy of further investigation.

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Table 3.1.

Pearson's Correlations (1-tailed) among variables of interest ($N = 395$).

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. R-PSCQ total												
2. Parent's sex	.02											
3. Child's sex	.08*	.03										
4. Parent's age	-.04	-.21***	.06									
5. Child's age	-.19***	-.12**	.04	.63***								
6. Frequency of misbehaviour	-.41***	.12**	-.07	-.15**	-.21***							
7. Empathy	.33***	.41***	-.04	-.11*	-.10*	.01						
8. Negative assertion	.33***	-.16***	.02	-.01	-.04	-.08	.02					
9. Conflict management	.41***	-.04	-.11*	.01	-.05	-.15**	.24***	.31***				
10. Emotional intelligence	.45***	.23***	-.10*	-.07	-.12**	-.04	.54***	.35***	.42***			
11. Social support	.38***	.09*	-.02	-.07	-.15**	-.03	.30***	.26***	.31***	.46***		
12. Communion	.38***	.25***	-.10*	-.08	-.08	-.03	.62***	.04	.33***	.61***	.33***	
13. Agency	.18***	-.11*	.01	-.05	-.06	-.02	.04	.30***	.11*	.39***	.19***	.12**

*$p < .05$, **$p < .01$, ***$p < .001$

Table 3.2.

Summary of Hierarchical Regression Analysis for Variables Predicting PSCQ Total Scores ($N = 395$)

	Model 1			Model 2			Model 3		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Constant	193.89	7.34		102.25	9.38		98.31	9.72	
Parent's sex	2.73	2.03	.06	-1.37	1.91	-.03	-1.01	1.90	-.02
Child's sex	2.22	1.80	.06	4.11	1.52	.10**	4.14	1.50	.10**
Parent's age	0.31	0.14	.13*	0.25	0.12	.10*	0.25	0.11	.10*
Child's age	-1.46	0.23	-.36***	-1.17	0.20	-.29***	-1.12	0.19	-.28***
Frequency of misbehaviour	-8.65	0.84	-.47***	-7.34	0.71	-.39***	-7.27	0.70	-.39***
Empathy				0.33	0.08	.19***	0.21	0.09	.12*
Negative assertion				0.46	0.12	.16***	0.48	0.12	.17***
Conflict management				0.67	0.15	.18***	0.56	0.15	.15***
Emotional intelligence				0.16	0.04	.18***	0.06	0.05	.06
Social support							0.19	0.06	.13**
Communion							0.52	0.18	.15**
Agency							0.05	0.14	.02
R^2			0.26			0.49			0.51
F for change in R^2			26.86***			42.88***			6.49***

*$p < .05$, **$p < .01$, ***$p < .001$

Table 3.3.

Post Hoc Spearman's Rho Correlations with Social Competencies (N = 395).

	Emp.	Neg. Assert.	Confl. Man.	E.Q.	Comm.	Agen.	Social Supp.
Education Level	.02	-.02	.08	.12*	-.08	.13**	.11*
Household Income	-.10	.04	.06	.04	-.14***	.19***	.17***

*$p < .05$, **$p < .01$; ***$p < .004$ (2-tailed)

DISCUSSION

The aim of this dissertation was to expand upon the existing literature on the multidimensional measurement and predictors of parenting style through the lens of Self-Determination Theory (Deci & Ryan, 1985). Specifically, study one explored the factor structure of the Revised Parent as a Social Context Questionnaire (R-PSCQ; Skinner, Johnson, & Snyder, 2005). Study two employed the six parenting style subscales that emerged from study one, and examined how dimensions of parenting style varied among groups of parents who perceived their children misbehaved infrequently, moderately, or frequently. Finally, study three examined the variance in overall quality of parenting style accounted for by self-reported facets of adult social competence. The results of these studies indicate: 1) the R-PSCQ can be used to assess six dimensions of parenting style; 2) items on the R-PSCQ can be totalled to assess the overall quality of parenting style; 3) there are significant differences in parenting style reported by groups of parents who perceive their children misbehave infrequently, moderately, or frequently; and 4) perceived social competence accounts for significant variance in overall quality of parenting style after accounting for parent and child ages and sexes, and perceived frequencies of child misbehaviour.

Interest in evaluating and determining the correlates of parenting style continues to flourish in the parenting research literature (e.g., Cui, Morris, Criss, Houltberg, & Silk, 2014; Griffith & Grolnick, 2014; Laukkanen, Ojansuu, Tolvanen, Alatupa, & Aunola, 2014). However, no gold standard for the assessment of parenting style has been established (Duppong Hurley, Huscroft-

D'Angelo, Trout, Griffith, & Epstein, 2014). In fact, researchers use a variety of tools and definitions that are lacking a strong theoretical foundation when assessing parenting style types and dimensions (Skinner et al., 2005), and such inconsistencies may contribute to confusion when interpreting and applying research results to clinical settings. Moreover, the existing parenting style self-report measures have limited support for the validity and reliability among samples of parents of children of different age ranges (e.g., Robinson, Mandleco, Olsen, & Hart, 1995). It is of significant value to parenting researchers to establish support for a self-report measure that: 1) employs a clear theoretical framework, 2) can be used to concisely capture multiple dimensions of parenting style, and 3) can assess overall parenting quality. Such a measure would allow researchers to quickly assess how parents experience their interactions with their children, and compare these findings with other variables of interests. The R-PSCQ is an example of such a measure (Skinner et al., 2005).

The R-PSCQ was developed using SDT (Deci & Ryan, 1985; Grolnick, Deci, & Ryan, 1997). This theory posits that to facilitate internalization of parental values and expectations, parents must provide for the psychological needs of their children. To address children's psychological needs, parents must create environments that nurture a sense of belonging, competence, and autonomy (Grolnick et al., 1997). According to Skinner and colleagues (1995), children experience belonging in social contexts that are warm and accepting. Whereas, environments that reject or neglect children's needs impede belonging. To promote competence, parents are expected to provide children with guidelines and

rules they can follow to achieve desired outcomes. In contrast, chaotic environments where children cannot predict their parents' responses are expected to diminish competence. Last, parents who support and validate their children's unique experiences and desires are believed to satisfy autonomy needs. In contrast, parents frustrate their children's needs for autonomy by coercing them into adopting their beliefs or desired behaviours (Skinner et al., 2005).

According to the results of the first study, the R-PSCQ measure, premised on SDT, can be used to capture three dimensions of parenting style anticipated to nurture (warmth, structure, autonomy support), and three expected to hinder (rejection, chaos, coercion) the psychological needs of children (Skinner et al., 2005). Moreover, research results indicated that scores on these six subscales can be totalled to assess overall parenting style quality among parents of children two to 18 years of age. However, as a consequence of being concise, it is also important to note that the R-PSCQ may not capture all characteristics of parenting style that can support the psychological needs of children. For example, some researchers argue that warmth, autonomy support, and structure are each multidimensional constructs within themselves (Farkas & Grolnick, 2010; Manzi, Regalia, Pelucchi, & Fincham, 2012). Therefore, more research is needed to assess how well the subscales of the R-PSCQ represent the six dimensions of parenting style and overall parenting quality through the lens of SDT.

The R-PSCQ served as the measure of parenting dimensions in study two, and overall parenting style in study three. Together these two studies aimed to attend to parents' perceptions of their children, themselves, and their parent-child

interactions. In clinical practice, attending to the perceptions of parents is believed to be foundational to stimulating engagement in the change process (Cunningham & Henggeler, 1999). Similarly, acknowledging and validating parents' experiences and struggles are essential elements to growth promoting therapeutic environments (Overholser, 2007). In line with these assumptions, the second study examined how dimensions of self-reported parenting style varied among parents who perceived their children misbehaved either infrequently, moderately, or frequently.

Results of the analysis revealed significant group differences on all dimensions of parenting style, with the exception of structure. Furthermore, the majority of variance in parenting style between the three groups was accounted for by coercion and rejection. In other words, parents who experience their children as more challenging are also more likely to report their parenting styles as marked by greater coercion and rejection. Such findings are in line with SDT (Grolnick et al., 1997) in that greater coercion and rejection in the parent-child context are expected to predict greater disparity between parents' expectations and children's behaviours. Also congruent with SDT, results of correlational analyses indicated that warmth and autonomy support were negatively, and chaos was positively associated with frequency of parents' perceived frequency of children's misbehaviour.

The only exception to what was hypothesized based on SDT was that structure was not significantly associated with parents' perceptions of frequency of children's misbehaviours. Failure to find significant differences in structure

between groups of parents' who perceived their children misbehaved infrequently, moderately, or frequently may be explained by the limited characteristics of structure captured by the R-PSCQ, the use of parent self-report, or structure having an indirect rather than a direct relationship with parent-child discord. Further research examining the relationship between various dimensions of study and parenting style are needed.

The data collected for this study does not allow for conclusions regarding a causal relationship between child misbehaviour and parenting style. However, a variety of research studies suggest that children's behaviours are a better predictor of parenting styles than the reverse (Kiff, Lengua, & Zalewski, 2011). Evidence suggesting perceptions of children's behaviours elicit parents' behaviours may not be surprising, given that parents are culturally obligated to manage their children's behaviours (Baumrind, 2013). With this in mind, children who misbehave more frequently are likely to elicit harsher characteristics of parenting style (Bell, 1968; Belsky, 1984). However, it is also important to note that parents' perceptions of children's behaviours can vary based on a variety of factors including children's objective behaviours over time, developmental expectations, cultural norms, and the social and psychological resources of the parent (Dix, 1993). Therefore, a variety of factors beyond children's actual behaviours may be driving parenting style characteristics (Dix, 1993). More research is needed on factors that influence how parents evaluate and respond to their children's behaviours.

Regardless of how children behave, it is the parents' obligation to respond in ways that promote the positive growth and wellbeing of their children (Baumrind, 2013). The final paper in this dissertation attended to whether and which facets of social competence accounted for variance in overall quality of parenting style after accounting for parents' and children's ages and sexes, and frequency of misbehaviour. The results indicated that social competence accounted for significant variance, beyond that predicted by control factors. Hence, greater social competence may help parents respond more constructively to their children. Specifically, empathy, comfort with negative assertion, comfort with conflict management, social support, and communion accounted for unique variance in the prediction of overall parenting style quality. Given these findings, further research may be justified that explores whether interventions that enhance the social competencies of parents can have a positive impact on parenting quality.

Using SDT, these three research studies provide evidence that further insight into the relationships between parents' perceptions of their children, themselves, and their interactions can be gained via both multidimensional assessment of parenting style, and the social competencies parents bring to their interactions with their children. While previous research on parenting has examined the influence of personality and the emotional wellbeing of caregivers, such factors may not be as amenable to intervention. In contrast, social skills can be enhanced through interventions (Rose-Krasnor, 1997). The results of this research suggest that enhancing caregivers' empathy and increasing comfort with

negative assertion and conflict management may have a positive impact on their overall parenting style.

In relation to SDT, parents' self-reports of parenting style and social competence may be a reflection of whether their psychological needs are being met (Ryan & Deci, 2000). Psychological needs including belonging, competence, and autonomy are believed to be constant over the life course. However, how these needs are met, and which need takes precedence may vary across different life stages (Hassan & Bar-Yam, 1994). Indeed, researchers have identified that parenthood can have both positive and negative consequences on the psychological wellbeing of adults (Umberson, Pudrovska, & Reczek, 2010). However, there is currently no research examining how the parenting role may impact the psychological needs of parents. It seems plausible that parenting style may be predicted by how well parents' psychological needs are met within the parent-child relationship.

Parents who report a parenting style characterized by less rejection and more warmth may also experience a greater sense of belonging in their relationships with their children. Higher self-reports of social support, communion, and empathy may also be indicators of a stronger sense of belonging. Parents who report a parenting style characterized by clear structure, and less chaos may also experience greater competence in their interactions with their children. Moreover, self-reports of higher levels of comfort with negative assertion and conflict management, and emotional intelligence may also indicate that parents' competency needs are satisfied. Last, parents who indicate that their

parenting style is characterized by greater autonomy granting and less coercion and that they have greater comfort with negative assertion and conflict management may commensurately have their needs for autonomy satisfied.

In contrast, parents who lack the motivation to learn or employ social skills may feel their needs for belonging, competence, and autonomy thwarted in interactions with their children (Ryan & Deci, 2000). In such cases, interventions directed at addressing the psychological needs of parents may be appropriate. Applying SDT to parenting interventions would involve clinicians generating environments that contribute to experiences of belonging, competence, and autonomy (Ryan & Deci, 2000). For example, as children attempt to enhance their autonomy, parents may experience their sense of belonging with their children diminishing. To facilitate parenting motivation, clinicians may encourage caregivers to participate in parent support groups. Parent support groups may contribute to a sense of belonging and promote constructive parent-child interactions regardless of children's behaviours (Sanders, 1999).

Moreover, eliciting undesired responses from children despite parents' best efforts may threaten their sense of competence. Parents should be aware that they may not always get the desired response from their children, despite consistently employing parenting skills. Instead, parents can anticipate that consistent use of appropriate parenting strategies will improve the overall parent-child relationship. Additionally, despite the appropriate use of parenting strategies, some parents will have to work harder than others to elicit the desired behaviour from their children. It may be helpful for parents to have strategies for

evaluating the effectives of their interactions with their children independent of how children respond (Fletcher & Hayes, 2005). Such evaluations can focus the parent on their own success in responding in desired ways to their children's problem behaviours.

Last, parents who feel that parenting interferes with their autonomy may benefit from evaluating their personal values and committing a designated portion of their time to the pursuit of desired goals (Fletcher & Hayes, 2005). Though parents are obligated to provide for the needs of their children, it is also important that clinicians acknowledge that caregivers are more than parents. Giving parents' permission to pursue their interests may ease the burden of idealistic parenting expectations (Sanders, 1999). In summary, clinicians who nurture a sense of belonging, competence, and autonomy among parents may better facilitate the learning and application of social skills to the parent-child context (Ryan & Deci, 2000). Further research is needed to examine the relationship between parents' experiences of belonging, competence, and autonomy when participating in parenting interventions and how this contributes to the implementation of knowledge and skills being taught.

Limitations

It is important to note that each of the three studies that comprise this dissertation involved the use of cross-sectional data, and, therefore, no conclusions regarding cause and effect relationships can be made based on the present research findings. In regards to the parenting style measure chosen, continued attention to the factor structure of the R-PSCQ is needed to ensure this

measure is valid and reliable when used with parents of different ethnic, age, gender, and socioeconomic groups. Additionally, similar to measures of authoritative parenting (e.g., Robinson et al., 1995), the total score on the R-PSCQ is intended to capture a parenting style that optimally contributes to the socialization of children. Research is needed that examines the relationship between total scores on R-PSCQ and other measures of authoritative parenting. Such research can also examine which parenting style measures better predict parenting strategies and child outcomes.

Results of study two suggest that variations in parenting style emerge as caregivers perceive their children to be more difficult, and these variations are mostly explained by increases in coercion and rejection. Longitudinal studies are needed that examine the long-term consequences of children's behaviour and multiple dimensions of parenting style. Moreover, the results of the second study failed to show significant differences in the structure provided by parents regardless of how frequently they perceived their children misbehaved. The R-PSCQ includes assessment of only one dimension of each characteristic of parenting style. More in-depth assessment of each dimension of parenting style may reveal greater divergence among parents who experience their children to be more or less challenging. Therefore, use of more in-depth measures should be considered for future research. For example, Farkas and Grolnick (2010) present a multidimensional measure that may better capture the relationship between children's behaviours and the structure parents provide for their children.

Last, the results of the third study indicate that conflict management, negative assertion, empathy, and emotional intelligence account for significant variance in parenting style amongst parents of children two to 18 years. Research is needed that looks more specifically at the social skills of parents who struggle in their interactions with their children. If deficits in social skills are identified, researchers can examine whether augmenting the social skills of caregivers can enhance their parenting styles. Moreover, whether enhancing social skills broadly improves the interpersonal success of parents is also of interest. Interventions that have the broadest positive impact on the interpersonal success of parents may optimally enhance their resilience during times of stress.

Conclusions

In summary, this dissertation accomplished its aims by providing support for the R-PSCQ as a measure of six dimensions of parenting style and overall measure of parenting style quality. Using the six dimensions of the R-PSCQ, the results of analysis supported that there are significant difference in the parenting styles reported by parents who perceive their children misbehave, infrequently, moderately, and frequently. Further analysis revealed the majority of variance in parenting style between the three groups of parents was accounted for by increases in coercion, and rejection as parents perceived their children misbehaved more frequently. Finally, using the R-PSCQ total score, the results of the third study determined that social competence accounts for a significant portion of variance in parenting style. Such findings are a valuable addition to

existing research because they provide support for the application of SDT in the assessment of, and factors influencing parenting style.

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APPENDICES

Appendix A: Demographic Information

Your Sex:	□Male	□Female	
Your Age:			
Sex of child that present the most parenting challenges:		□Male	□Female
Age of child that presents the most parenting challenges:			
Household income:	□ 0-12 999 □ 37 000-49 999 □ 100 000-149 999	□ 13 000-24 999 □ 50 000- 64 999 □ 150 000- 199 999	□ 25 000- 36 999 □ 65 000-99 999 □ 200 000+
Highest education level completed:	□ Less than grade 12 □ Bachelor Degree □ Medical Doctor	□ Grade 12 □ Master Degree	□ Diploma/trade □ Doctoral Degree
Race:	□ White □ Aboriginal/First Nations	□ Black □ East Indian	□ Asian □ Mix/Other
Marital Status:	□ Single □ Separated	□ Common law □ Divorced	□ Married □ Widowed
Employment Status:	□ Unemployed	□ Casual/part-time	□ Full-time

How many children do you have currently under your care? _____

Appendix B: Parents as Social Context Questionnaire- Parent Report

Please responds based on how true each statement is for you in relationship with your child/ren… Completely Disagree = [1]; Mostly Disagree = [2]; Somewhat Disagree = [3]; Neutral = [4]; Somewhat Agree = [5]; Mostly Agree = [6]; Completely Agree = [7]

Warmth							
I know a lot about what goes on for my child.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I really know how my child feels about things.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I do special things with my child.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I set aside time to talk to my child about what is important to him/her.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I can always find time for my child.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I feel good about the relationship I have with my child.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I let my child know I love him/her.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Rejection							
I don't understand my child very well.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Sometimes my child is hard to like.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
At times, the demands that my child makes feel like a burden.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
My child needs more than I have time to give him/her.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Sometimes, I feel like I can't be there for my child when he/she needs me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Structure							
I make it clear what will happen if my child does not follow our rules.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I make it clear to my child what I expect from him/her.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When I punish my child, I always explain why.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When I tell my child I'll do something, I do it.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
If my child has a problem, I help him/her figure out what to do about it.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I expect my child to follow our family rules.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Chaos							
I let my child get away with things I really shouldn't allow.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When my child gets in trouble, my reaction is not very predictable.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
My child doesn't seem to know what I expect from him/her.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I change the rules a lot at home.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I can get mad at my child without warning.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Autonomy Support							
I encourage my child to express his/her feelings even when they're hard to hear.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I encourage my child to express his/her opinions even when I don't agree with them.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I trust my child.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I encourage my child to be true to her/himself.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I expect my child to say what he/she really thinks.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Coercion							
My child fights me at every turn.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
To get my child to do something, I have to yell at him/her.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I can't afford to let my child decide too many things on his or her own.	[1]	[2]	[3]	[4]	[5]	[6]	[7]

I sometimes feel that I have to push my child to do things.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I find myself getting into power struggles with my child.	[1]	[2]	[3]	[4]	[5]	[6]	[7]

Appendix C: The Parent-Child Conflict Tactics Scales

When your child or children misbehave, how frequently do you use each of the following discipline strategies? Never = [1]; Almost Never = [2]; Rarely = [3]; Sometimes = [4]; Often = [5]; Almost Always = [6]; Always = [7]

Non-violent Discipline							
Explained why something was wrong.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Put him/her in "time-out" (or sent to his/her room).	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Took away privileges or grounded him/her.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Gave him/her something else to do instead of what he/she was doing wrong.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Psychological Aggression							
Threatened to spank him/her but did not actually do it.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Shouted, yelled, or screamed at him/her.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Swore or cursed at him/her.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Called him/her dumb or lazy or some other name like that.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Said you would send him/her away or kick him/her out of the house.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Minor Assault (Corporal Punishment)							
Spanked him/her on the bottom with your bare hand.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Hit him/her on the bottom with something like a belt, hairbrush, a stick or some other hard object.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Slapped him/her on the hand, arm, or leg.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Pinched him/her.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Shook him/her.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
How often does your child misbehave?	[1]	[2]	[3]	[4]	[5]	[6]	[7]

Appendix D: Questionnaire Measure of Empathic Tendency

Please rate on the scale how frequently each statement is true for you.
Never = [1]; Almost Never = [2]; Rarely= [3]; Sometimes = [4]; Often = [5];
Almost Always = [6]; Always = [7]

When someone else is feeling excited, I tend to get excited too.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Other people's misfortunes do not disturb me a great deal.*	[1]	[2]	[3]	[4]	[5]	[6]	[7]
It upsets me to see someone being treated disrespectfully.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I remain unaffected when someone close to me is happy*	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I enjoy making other people feel better.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I have tender, concerned feelings for people less fortunate than me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When a friend starts to talk about his/her problems, I try to steer the conversation towards something else.*	[1]	[2]	[3]	[4]	[5]	**[6]**	**[7]**
I can tell when others are sad even when they do not say anything.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I find that I am "in tune" with other people's moods.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I do not feel sympathy for people who cause their own serious illness.*	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I become irritated when someone cries.*	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I am not really interested in how other people feel*	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I get a strong urge to help when I see someone who is upset.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When I see someone being treated unfairly, I do not feel very much pity for them.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I find it silly for people to cry out of happiness.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When I see someone being taken advantage of, I feel protective toward him/her.	[1]	[2]	[3]	[4]	[5]	[6]	[7]

*= reversed scored items.

Appendix E: The Trait Measure of Emotional Intelligence

Please rate on the scale how strongly you agree with each of the following statements.
Completely Disagree = [1]; Mostly Disagree = [2]; Somewhat Disagree = [3]; Neutral = [4]; Somewhat Agree = [5]; Mostly Agree = [6]; Completely Agree = [7]

I know when to speak to others about my personal problems.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When I am faced by obstacles, I remember times I faced similar obstacles and overcame them.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I expect I will do well on things I try.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Other people find it easy to confide in me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I find it hard to understand the nonverbal messages of other people*	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Major events in my life lead me to re-evaluate what is important and not important.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When my mood changes, I see new possibilities.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Emotions are one of the things that make my life worth living.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I am aware of my emotions as I experience them.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I expect good things to happen.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I like to share my emotions with others.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When I experience a positive emotion, I know how to make it last.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I arrange events others enjoy.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I seek out activities that make me happy.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I am aware of the nonverbal messages I send to others.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I present myself in ways that make a good impression on others.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When I am in a positive mood, solving problems is easy for me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
By looking at their facial expressions, I recognize the emotions people are experiencing.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I know why my emotions change.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When I am in a positive mood, I am able to come up with new ideas.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I have control over my emotions.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I easily recognize my emotions as I	[1]	[2]	[3]	[4]	[5]	[6]	[7]

experience them.							
I motivate myself by imagining a good outcome to tasks I take on.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I compliment others when they have done something well.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I am aware of the nonverbal messages other people send.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When another person tells me about an important event in his/her life, I almost feel as if I had experienced this event myself.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When I feel a change in emotion, I tend to come up with new ideas.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When I am faced by a challenge, I give up because I believe I will fail*	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I know what other people are feeling just by looking at them.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I help other people feel better when they are down.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I use good moods to help me keep trying in the face of obstacles.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I can tell how people are feeling by listening to the tone of their voice.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
It is difficult for me to understand why people feel the way they do.*	[1]	[2]	[3]	[4]	[5]	[6]	[7]

Appendix F: Interpersonal Competence Questionnaire

Please rate how comfortable you would feel doing each of the following… Extremely Uncomfortable (I don't think I could do this) = [1]; Very Uncomfortable = [2]; Somewhat Uncomfortable = [3]; Mostly Comfortable = [4]; Completely Comfortable= [5]

Negative Assertion					
Telling a companion you don't like a certain way he or she has been treating you.	[1]	[2]	[3]	[4]	[5]
Saying "no" when an acquaintance asks you to do something you don't want to do.	[1]	[2]	[3]	[4]	[5]
Turning down a request by a companion that is unreasonable.	[1]	[2]	[3]	[4]	[5]
Standing up for your rights when a companion is neglecting you or being inconsiderate.	[1]	[2]	[3]	[4]	[5]
Telling an acquaintance that he or she is doing something that embarrasses you.	[1]	[2]	[3]	[4]	[5]
Confronting your close companion when he or she has broken a promise.	[1]	[2]	[3]	[4]	[5]
Telling a companion that he or she has done something to hurt your feelings.	[1]	[2]	[3]	[4]	[5]
Telling an acquaintance that he or she has done something that made you angry.	[1]	[2]	[3]	[4]	[5]
Conflict Management					
Being able to admit that you might be wrong when a disagreement with a close companion begins to build into a serious fight.	[1]	[2]	[3]	[4]	[5]
Being able to put begrudging (resentful) feelings aside when having a fight with a close companion.	[1]	[2]	[3]	[4]	[5]
When having a conflict with a close companion, really listening to his or her complaints and not trying to "read" his/her mind.	[1]	[2]	[3]	[4]	[5]
Being able to take a companion's perspective in a fight and really understand his or her point of view.	[1]	[2]	[3]	[4]	[5]
Refraining from saying things that might cause a disagreement to build into a big fight.	[1]	[2]	[3]	[4]	[5]
Being able to work through a specific problem with a companion without resorting to global accusations ("why do you ALWAYS do that?").	[1]	[2]	[3]	[4]	[5]
When angry with a companion, being able to accept that s/he has a valid point of view even if you don't agree with that view.	[1]	[2]	[3]	[4]	[5]
Not exploding at a close companion (even when it is justified) in order to avoid a damaging point.	[1]	[2]	[3]	[4]	[5]

Appendix G: The Multidimensional Scale of Perceived Social Support

Please respond based on how frequently each statement is true for you…
Never = [1]; Almost Never = [2]; Rarely = [3]; Sometimes = [4]; Often = [5];
Almost Always = [6]; Always = [7]

Family							
My family really tries to help me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I get the emotional help and support I need from my family.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I can talk about my problems with my family.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
My family is willing to help me make decisions.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Friends							
My friends really try to help me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I can count on my friends when things go wrong.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I have friends with whom I can share my joys and sorrows.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I can talk about my problems with my friends.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Significant Other							
There is a special person whom is around when I am in need.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
There is a special person with whom I can share my joys and sorrows.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I have a special person who is a real source of comfort to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
There is a special person in my life that cares about my feelings.	[1]	[2]	[3]	[4]	[5]	[6]	[7]

Appendix H: Measure of Agentic & Communal Traits

Please respond based on how well the statement describes you…
Completely Disagree = [1]; Mostly Disagree = [2]; Somewhat Disagree = [3]; Neutral = [4]; Somewhat Agree = [5]; Mostly Agree = [6]; Completely Agree = [7]

Communion							
I really like to do things for other people.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I am very gentle (tender, soft, mild).	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I am very helpful to other people.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I pay a lot of attention to how other people are feeling.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I am very kind to other people.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I try to understand how other people are feeling.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I am a very warm, friendly person.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Agency							
I would rather do things for myself than ask others for help.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I am very busy and active.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I enjoy trying to win games and contests.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I feel sure I can do most of the things I try.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I am better at doing things than other people.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
When things get tough, I almost always keep going.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
I am often the leader among my friends, family, or coworkers.	[1]	[2]	[3]	[4]	[5]	[6]	[7]