

UNDERSTANDING PARENTAL SELF-EFFICACY IN FATHERS

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Abstract

Parental self-efficacy (PSE) is a cognitive construct that can be defined broadly as an individual's appraisal of his or her competence in the parental role. Researchers interested in child developmental outcomes have highlighted the important role that PSE plays in psychosocial child adjustment. Despite its importance, the PSE construct has been understudied in men. Given the enduring gendered nature of parenting, it seems likely that fathers' PSE may differ from mothers' PSE in important ways. This study was the first to develop and validate a self-report scale that assesses the PSE of fathers with preschool aged children. The research was conducted in a series of three phases. In Phase 1 of the research, fathers were interviewed and invited to discuss their perceptions of their roles and responsibilities within their families. Using thematic content analysis methodology, 11 themes were identified: parenting in context, teaching, financial responsibility, general responsibility, domestic upkeep and maintenance, accessibility, discipline and self control, safety and protection, play, nurturing, and instrumental care and routines. Critical feedback from subject matter experts was sought concerning the parenting domains and parenting tasks identified. A pool of potential PSE scale items was then drafted. In Phase 2 of the research, a convenience sample of 224 Canadian fathers completed the draft items. The psychometric properties of the new Fathering Self-Efficacy Scale (FSES) were investigated. The scale was reduced to 22-items which loaded onto three distinct factors. The factors represented *positive engagement*, *direct care* and *financial responsibility*. In Phase 3 of the research, a new sample of 247 Canadian fathers was recruited to complete the PSE items and the associations between their responses on the new scale and other existing scales were examined. In addition, 66

spousal reports of fathering self-efficacy were also sought. The three-factor structure of the FSES replicated in Phase 3 and was found to be a superior fit to the data when compared to alternate 2-factor and 1-factor models. Statistically significant, positive associations were found between the FSES, other measures of self-efficacy and a measure of father involvement. Statistically significant negative associations were found between the FSES and measures of parenting stress and depressive symptoms. There were no statistically significant differences between spousal reports of fathering self-efficacy and fathers' own self-report. Paternal self-efficacy was predicted by family income, general self-efficacy, domain general PSE, parenting stress and parent responsibility. Overall, the results offer initial evidence of the reliability and the construct validity of the FSES. The emergence of this new scale will be important to fathering research and can provide an important contribution to the ongoing development of therapeutic family interventions.

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Dedication

For Ayla and Alise: You have been and will continue to be two of my best teachers. It is an ever evolving joy to see the wonder of the world through your eyes.

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1.0 INTRODUCTION

Numerous scholars in the field of child psychosocial development have drawn attention to the important role of parenting self-efficacy (PSE; Ardel & Eccles, 2001; Coleman & Karraker, 2003; Crncec, Barnett & Matthey, 2008; de Montigny & Lacharite, 2005; Gross & Tucker, 1994; Jones & Prinz, 2005; Kendall & Bloomfield, 2005, Murdock, 2012). PSE is a cognitive construct that can be broadly defined as an individual's appraisal of his or her competence in the parental role (de Montigny & Lacharite, 2005; Jones & Prinz, 2005). In the burgeoning literature concerned with parenting cognitions, PSE has come to the fore as a key variable when examining the variance observed in parenting skills and satisfaction (Jones & Prinz, 2005; Leerkes & Burney, 2007). PSE also impacts child development both directly and indirectly through its influence on parenting behaviours (Jones & Prinz, 2005).

Despite the importance of PSE, much remains to be learned. In particular, the PSE construct has been understudied in men (de Montigny & Lacharite, 2005; Sevigny & Loutzenhiser, 2010). This is surprising given how much the role of the father has changed over the last 50 years (Lamb, 2000; Pruett, 1998) and the rapidly expanding scholarship concerning fathering (Day & Lamb, 2004; Flouri, 2005; Lamb, 2010). In the following sections, the major components of the PSE construct will be reviewed. Then, the ways PSE has traditionally been measured and conceptualised will be addressed along with a review of correlates of PSE. An exploration of what is known specifically about father's PSE and, given the persistent, gendered nature of parenting, the reasons and ways in which fathers' PSE may differ from mothers' PSE will be examined. A discussion of scale development and establishing construct validity is then presented. The purpose of

this research is to develop and validate a self-report measure of fathers' parenting self-efficacy that is grounded in the everyday experiences of men.

1.1 Self-Efficacy and PSE

The vast majority of research on the PSE construct has been based on Bandura's (1977, 1989, 1997) social-cognitive theory (Coleman & Karraker, 1997, 2003; de Montigny & Lacharite, 2005). Parental self-efficacy is thought to be a specific case of perceived self-efficacy (Bandura, 1977, 1989; Jones & Prinz, 2005). According to Bandura (1997, p. 3), perceived self-efficacy "refers to beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments". Perceived self-efficacy influences the choice of activities we undertake, the strength of our motivation to complete those activities, and the amount of persistence we display in the face of adversity (Bandura, 1997). Self-efficacy is also believed to be specific to domains of functioning though it may generalize to other conceptually similar areas. Thus, someone who feels highly capable and confident in making class presentations may also be fairly confident in his or her ability to speak in front of much larger and more diverse groups. However, beliefs regarding one's public speaking ability would likely have little influence on one's confidence in his or her ability to change a flat tire en route to a speaking engagement. Most importantly, according to Bandura, self-efficacy is not considered to be a fixed personality trait but is rather a dynamic and emerging process that is modified by changing task and situational demands as well as changing individual factors. As such, strengthening efficacy beliefs has been the focus of therapeutic psychosocial interventions especially in the realm of parenting (Bloomfield & Kendall,

2007, 2012; Hudson, Campbell-Grossman, Jones & Prinz, 2005; Salonen et al., 2011; Sanders & Woolley, 2005).

Bandura (1997) has identified four sources of information individuals use to construct self-efficacy beliefs. First, enactive mastery experiences (i.e., previous successes in a given pursuit) are believed to be the most potent and influential source of information by which one can judge his or her capabilities. Successful experiences reinforce efficacy beliefs while failures will undermine them, especially if the beliefs are not yet established. Second, self-efficacy can be developed through vicarious experiences such as observation and modelling. Since many activity domains such as parenting do not have absolute measures of success, individuals will often gauge their own abilities in comparison to others. Third, verbal and social persuasion can strengthen an individual's efficacy beliefs. Bandura (1997) notes that in the face of adversity, authentic verbal encouragement from significant others can aid in the sustaining of self-efficacy. Fourth, the activation of certain physiological and affective states in stressful situations can be interpreted as signs of vulnerability or inadequacy.

Extending Bandura's work to parenting, de Montigny and Lacharite (2005) articulate four key attributes of PSE found in the extant literature. The first attribute is parents' beliefs and judgements, which refers to the beliefs and judgements regarding abilities to parent a child and the strength of those beliefs and judgements. The second attribute is capabilities, which refers to what the parent can do with the skills they have under a variety of conditions. The third attribute is the ability to organize and execute actions to produce desired results. This characteristic refers to the ability to integrate existing knowledge of parenting and parenting skills into a plan of action under a variety

of circumstances. Finally, the fourth attribute of efficacy beliefs is that they are situation specific. Thus, in the domain of parenting, the focus is on situation-specific tasks related to parenting a child. Instrumental tasks like feeding or bathing, and affective tasks such as comforting are examples of such tasks. Taken together, PSE within a Bandurian framework can be defined as “beliefs or judgements a parent holds of their capabilities to organize and execute a set of tasks related to parenting a child” (de Montigny & Lacharite, 2005, p. 390).

1.2 Importance of PSE

As more is learned about parents’ cognitions, PSE has been identified as a key variable to study when considering the substantial variance observed in parenting skills and satisfaction (Coleman & Karraker, 1997; Jones & Prinz, 2005). PSE is a major determinant of competent parenting behaviours (Jones & Prinz, 2005), and is closely linked to healthy child adjustment and development (Ardelt & Eccles, 2001; Coleman & Karraker, 2003; Gross & Tucker, 1994). PSE also impacts child development both directly and indirectly through its influence on parenting behaviours and the interaction between children and parents. In the PSE literature, direct effects have been assessed through the use of bivariate correlations while indirect effects have been assessed through mediational models (Jones & Prinz, 2005).

PSE and Child Behaviours. Several studies have found that parents who report lower PSE also report their children as having higher rates of behaviour problems (Day, Factor, & Szkiba-Day, 1994; Hill & Bush 2001; Meunier & Roskam, 2009; Murdock 2012). Rezendes and Scarpa (2011) found a similar association between PSE and behaviour problems; however, the relationship was mediated by levels of parenting

stress. Other researchers have documented positive behavioural outcomes for children associated with higher levels of PSE. For example, Guimond, Wilcox, and Lamorey (2008) found that higher levels of PSE were directly related to higher levels of child social competence. Similarly, Junttila, Vauras and Laakkonen (2007) found a positive association between PSE and a child's peer evaluated social competence. Bohlin and Hagekull (1987) found that maternal PSE was associated with independent observers' ratings of infants' interactive behaviours. Another study of mothers and toddlers found high maternal PSE predicted high child enthusiasm and compliance, and low child negativity (Coleman & Karraker, 2003). Bogenschneider, Small, and Tsay (1997) also found that adolescents of parents who rated themselves as more competent displayed greater academic and psychosocial competence.

PSE and Parent Behaviours. Several scholars have documented the associations between PSE and parenting behaviours. For example, Teti and Gelfand (1991) found that maternal PSE was associated with competent maternal behaviours. In a more recent study demonstrating the indirect effects of PSE, Hess, Teti, and Hussey-Gardener (2004) found that knowledge of infant development moderated the association between PSE and parental behavioural competence in mothers. When parental knowledge of behaviour was high, there was a positive association between PSE and parental competence whereas when knowledge was low, PSE and parenting competence were inversely related. A study with parents of young children found that maternal PSE was predicted by lower levels of hostile, coercive parenting behaviours. Conversely, paternal PSE was predicted by higher levels of supportive, engaged parenting behaviours (Murdock, 2012). Izzo, Weiss, Shanahan and Rodriguez-Brown (2000) report that while PSE predicted positive

child socio-emotional adjustment on its own, adding parental warmth and control accounted for a larger proportion of the variance in adjustment. Hill and Bush (2001) provide evidence that PSE may indirectly protect children from developing anxiety through parenting practices. They report that higher levels of PSE were positively associated with the parenting practice of communication and negatively with inconsistent discipline and the use of love withdrawal. Brody, Flor and Gibson (1999) found that maternal self-efficacy influenced parenting behaviours which in turn impacted child self-regulation as reported by both parents and teachers. Sanders and Woolley (2005) found lower PSE predicted mothers' use of lax discipline and over-reactive discipline styles. Discipline that is overly harsh and coercive or that is permissive and inconsistent has been linked to child emotional and behaviour problems (Frick, 2001; Miller & Prinz, 1990). Bogenschneider et al. (1997) discovered that when parents reported higher parenting competence (i.e., efficacy and satisfaction), adolescents reported more parental monitoring and responsiveness, and less parental psychological control which in turn was associated with better academic achievement and psychosocial competence in the youth. Shumov and Lomax (2002) also found that PSE was related to parental monitoring of adolescent behaviour, and monitoring in turn predicted adolescent emotional adjustment.

In sum, researchers have demonstrated that PSE is related to both child behaviours and competent parenting behaviours. In addition to influences on child development, correlates have also been explored to better understand how PSE is related to other important parenting variables. In so doing, differing avenues for intervention may be explored (Bloomfield & Kendall, 2012; Jones & Prinz, 2005; Salonen et al., 2011; Sanders & Woolley, 2005). For example, in terms of personal factors, studies have

demonstrated an inverse relationship between PSE, depressive symptoms and stress (Cutrona & Troutman 1986; Leahy-Warren, McCarthy & Corcoran, 2011; Rezendes & Scarpa, 2011; Salonen et al, 2009). As will be explored later, there are many instances where the correlates differ between mothers and fathers. Before discussing the implications of differing correlates, issues regarding the measurement of PSE need to be addressed first.

1.3 Measuring PSE

Coleman and Karraker (2003) identify three main approaches to measurement of PSE in the literature rooted in the Bandurian tradition of social cognitive theory: domain general, task-specific, and domain-specific. The domain-general approach views parental self-efficacy as being distinct from other domains of self-efficacy. Assessment is based on global expectations about parenting and not linked to any specific parenting task (e.g., “I feel confident in my role as a parent”). In comparison, the task-specific approach focuses on a parent’s perceptions of their abilities to perform specific, discrete tasks related to parenting (e.g., caring for a child with a fever or changing diapers). Finally, the domain-specific approach attempts to articulate a broader understanding of PSE by combining data generated from task-specific items into a multidimensional index representing domain level parental self-efficacy. For example, information relating to such diverse parenting tasks as teaching, disciplining, comforting, playing, and establishing routines is combined to obtain a more complete view of PSE.

In contrast to the dominant theory that self-efficacy beliefs are situation specific, dynamic and emergent (Bandura, 1997), some researchers have proposed a more generalized sense of efficacy that applies to many domains of behaviour (Jerusalem &

Schwarzer, 1992; Shelton, 1990; Sherer et al., 1982). According to this view, general self-efficacy (GSE) is a more broad and stable individual trait, and refers to a sense of personal competence to deal effectively with a variety of stressful situations (Luszczynska, Gutierrez-Dona, & Schwarzer, 2005). A well-researched instrument assessing GSE has been found to have similar psychometric properties across many different cultures leading the study authors to suggest that the GSE construct is a universal one (Schwarzer, Mueller & Greenglass, 1999). From this perspective, self-efficacy in a particular domain (i. e., parenting) may either develop from a general sense of self-efficacy or conversely a general sense of self-efficacy may develop from one's beliefs in specific domains of functioning (Shelton, 1990).

There is a growing consensus that seemingly discrepant formulations of self-efficacy beliefs are in fact complementary, and that the use of both general and specific efficacy conceptualisations may advance research in distinct ways (Sanders & Woolley, 2005; Schwarzer et al., 1999; Woodruff & Cashman, 1993). For example, Luszczynska et al. (2005) agree with Bandura (1997) that self-efficacy beliefs should be construed as being situation-specific in most cases. Luszczynska et al. (2005) also maintain, however, that more global assessments of GSE may explain a broader range of behaviour in less specific contexts. Within the domain of parenting, Coleman and Karraker (1997) similarly suggest that more general assessments of self-efficacy may be better predictors of more broad parenting qualities (e.g., sensitivity and warmth), while situation specific assessments of PSE would provide better predictors of parenting behaviour (e.g., tending to a sick child or correcting inappropriate child behaviour). However, Bandura (1989, 1997) maintains that domain-specific measures of self-efficacy are more precise than

more general assessments in predicting actual behaviour. Parental self-efficacy however, is most commonly assessed through the use of domain-general measures that do not assess specific parenting behaviours (de Montigny, & Lacharite, 2005; Jones & Prinz, 2005). While task-specific approaches have been shown to predict behaviour in the narrow parenting dimensions they assess (Day et al., 1994; Hoover-Dempsey et al., 1992), parenting is composed of multiple, complex behaviours (Jones & Prinz, 2005). As such, to obtain an accurate assessment of self-efficacy in the broad domain of parenting, it would be prudent to adopt a domain-specific approach that incorporates many discrete tasks across several parenting dimensions (Coleman & Karraker, 1997; 2003). A review of research employing each of the three measurement approaches follows.

1.3.1 Domain-General PSE Investigations. The domain-general approach to measuring PSE is most commonly found in the literature (Jones & Prinz, 2005). Johnston and Mash (1989) developed a scale assessing parenting competence (Parenting Sense of Competence scale; PSOC). This scale was based on an earlier study (Gibaud-Wallston & Wandersman, 1978, as cited in Johnston & Mash, 1989) and consists of an efficacy subscale and a satisfaction subscale. The PSOC has been widely used to study both parental competence and parental self-efficacy (e.g., Coleman & Karraker, 2003; Cutrona & Troutman, 1986; Ferketich & Mercer, 1995; Rogers & Matthews, 2004; Sanders & Woolley, 2005). Other authors have created their own domain general instruments to assess PSE. For example, Wells-Parker, Miller, and Topping (1990) developed a scale to examine PSE and coping styles in women. In a study assessing PSE in a sample of Hispanic and White mothers, Dumka, Stoerzinger, Jackson and Roosa (1996) developed the Parenting Self-Agency Measure and found that higher levels of PSE were related to

higher levels of parental acceptance for both racial groups. While domain general measures have been shown to be related to more general assessments of efficacy (Coleman & Karraker, 2003; Murdock, 2012), the generality of such measures renders them not optimal in predicting actual parenting behaviours (de Montigny, & Lacharite, 2005; Jones & Prinz, 2005).

1.3.2 Task-Specific PSE Investigations. Using a task-specific approach, Hoover-Dempsey, Bassler and Brisse (1992) investigated how parent perceptions of their efficacy in supporting their children's school learning affected parent involvement within the school. Higher efficacy was positively associated with the amount of time spent volunteering in the classroom and the amount of time spent engaged in educational activities with their children. Lower self-efficacy was negatively related to the number of telephone calls made to the teacher, suggesting that parents either felt less efficacious in positively influencing the learning of their children or that their children were experiencing greater levels of difficulty. In another study focussing on the discipline style used by parents, Day et al. (1994) found that discipline-related PSE mediated the effect that child behaviour problems had on the parent's use of harsh discipline. Guimond et al. (2008) designed a task specific measure to assess parents' judgements of their capabilities to teach their young children with disabilities in the context of an early intervention program. In sum, though task-specific approaches predict behaviour in the narrow parenting dimensions they assess (Day et al., 1994; Hoover-Dempsey et al., 1992), they fail to offer a comprehensive assessment of parenting beliefs across a range of differing parenting tasks.

1.3.3 Domain-Specific Measurement of PSE. Teti and Gelfand (1991) used the domain-specific measurement approach to study self-efficacy and behavioural competence in mothers during the first year of their child's lives. In their study, behavioural competence was assessed by observing mothers interacting with their infant during feeding and during 10 minutes of free play. Mothers were rated on a five-point scale from *less* to *more* of an observed characteristic in the areas of maternal sensitivity, warmth, flatness of affect, disengagement, and anger. Self-reported maternal self-efficacy emerged as a predictor of observer-rated maternal behavioural competence. This study highlights the utility of using domain-specific assessments to predict parenting behaviour.

Reece (1992) proposes a domain-specific measure of PSE focusing on caretaking tasks of infants. Reece found that PSE was related positively to confidence in parenting and negatively to parenting stress. However, the items in this measure deal exclusively with the day to day tasks required in caretaking. Absent from this measure is reference to interactive behaviours of the parent and infant such as teaching and playing. As both areas are important to parenting (Emde, 1989), this instrument does not provide a comprehensive assessment of PSE across different parenting dimensions. In its current form, the measure has more in common with task-specific as opposed to domain-specific assessment approaches.

Barnes and Adamson-Macedo (2007) developed a domain-specific PSE instrument for use with mothers of hospitalized preterm infants. Their 20-item scale consists of four subscales designed to assess beliefs in the areas of care-taking, evoking infant behaviour, reading infants' signals and other situational beliefs. The authors report an internal reliability of $\alpha = .91$ and test-retest reliability of $\alpha = .96$. Validity was assessed

via exploratory factor analysis with four factors emerging that corresponded to the four subscales hypothesized by the researchers *a priori*. Validity was further assessed by showing that mothers who had given birth previously reported higher PSE than first-time mothers. However, the subscale they refer to as *situational beliefs* has more in common with the domain general approach as the items require more global assessments (e.g., “I believe my baby and I have a good interaction with each other”). Also, for one item, it appears these authors are confusing locus of control assessments with self-efficacy (e.g., “I believe I have control over my baby”).

Crncec, Barnett and Matthey (2008) developed another domain-specific instrument for use with parents of infants. This 15-item scale was tested on mothers attending a clinical parenting service in Australia. A strength of this study is that it was the first study to provide an estimate of a clinical cut-off score designed for screening for parenting difficulties, targeting interventions and evaluating outcomes. However, at least one item is domain general (i.e., “I feel I am doing a good job as a mother/father”), another item reflects competence as opposed to efficacy (i.e., “other people think I am doing a good job as a mother/father”), and a third item appears to address social support (i.e., “I feel sure that people will be there for me when I need support”).

Coleman and Karraker (2003) developed an instrument assessing domain-specific PSE in mothers of toddlers. Coleman and Karraker found that higher domain-specific PSE was directly related to higher child enthusiasm and compliance and lower child negativity. Their instrument assesses parents’ perceived efficacy across seven dimensions of parenting young children identified in the work of Emde (1989): emotional availability, nurturance, protection, discipline, play, teaching, and instrumental care.

These dimensions represent a broad array of parenting tasks including specific daily activities associated with child care as well as interactive parent-child behaviours. The authors provide some evidence for the convergent validity of their measure by demonstrating that it correlated positively with other self-efficacy instruments. However, their attempts to demonstrate predictive validity yielded statistically non-significant results. Also, this study was limited by its small sample size ($N = 68$).

Kendall and Bloomfield (2005) developed an instrument to assess domain-specific PSE in parents of children up to the age of ten. This 82 item instrument possesses nine subscales that overlap with Coleman and Karraker's (2003) dimensions: affection/emotion, play, empathy/understanding, routines/goals, control, boundaries, pressures, acceptance, and learning/knowledge. The authors provide some evidence for the reliability and validity of this measure though the sample they used for this purpose was small ($N = 63$).

Meunier and Roskam (2009) tested a new measure of PSE in a sample of French speaking Belgian parents of children between the ages of 3 and 7 years. The two scales developed by Coleman & Karraker (2000, 2003) were used as the basis for item development. In addition to the PSE items, three additional subscales were developed to assess related cognitive constructs. Two of these constructs were adapted from a French language version of the Parental Locus of Control Scale (Campis, Lyman, & Prentice-Dunn, 1986). Mastery motivation refers to one's active striving for competence within a demanding context. The parental responsibility subscale refers to the parent's sense of responsibility for the child's behaviour. The third related construct was control of outcomes beliefs which suggest that specific appropriate child rearing behaviour exists

and is conceptually similar to outcome expectancies articulated earlier. Additional items believed to assess the various domains and constructs were then added to the scale by the authors. Strengths of this study are the inclusion of both mothers and fathers in the study design and the larger sample size (385 mothers and 320 fathers). However, there are some conceptual and methodological concerns with the study. First, the authors report PSE results separately according to the dimensions of parenting: Discipline, Play, Nurturing, Instrumental Care, and Teaching, without creating a multidimensional index representing the more complete parenting domain. As such, the results as reported are better characterized as a series of task-specific PSE measures. In addition, while the authors note that items for their scale were inspired by both the school age and toddler versions of Coleman and Karraker's scales, it is unclear exactly why items from the protection subscale were not included in the scales. Methodologically, while the authors report that 8 factors were found in an exploratory factor analysis, no information is provided regarding the methods used to identify the number of factors present. Following the EFA, the authors then proceeded to conduct a confirmatory factor analysis using data from the same sample. Given the large number of participants, it is also unfortunate that no tests of measurement invariance were conducted between mothers and fathers.

1.4 PSE Measurement Limitations

While the domain-general method remains the most frequently used approach to study PSE, there appears to be a growing awareness that a domain-specific orientation is preferable. Despite this knowledge, there remain a number of issues with some of the recently developed domain-specific scales. These issues include concerns that sample sizes in validation studies are small (Coleman & Karraker, 2003; Kendall & Bloomfield,

2005), that researchers are using the same sample to conduct both exploratory and confirmatory factor analysis (Meunier & Roskom, 2009), that some items are actually domain-general as opposed to domain-specific (Barnes & Adamson-Macedo, 2007), and that some items assess constructs other than PSE (Barnes & Adamson-Macedo, 2007; Crncec et al., 2008). Thus, more research is needed to assess the validity of existing measures.

A recurring issue in the literature is the number of different concepts that have either explicitly or implicitly been conflated with PSE. Since there are distinct differences between concepts, confusion and ambiguity may result when interpreting the results of some studies (de Montigny & Lacharite, 2005). For example, de Montigny and Lacharite (2005) cite parental confidence as being similar to but distinct from PSE. According to Bandura (1997, p. 382) confidence is a “nondescript term that refers to the strength of belief but does not specify what that certainty is about. A self-efficacy assessment includes both affirmation of capability and strength of that belief”. However studies exploring parenting confidence (e. g., Gross, Sambrook, & Fogg, 1999) are found in a recent review of the parenting self-efficacy literature (Jones & Prinz, 2005), suggesting that these concepts continue to be equated.

Parenting competence is another term that has often been used interchangeably with parental self-efficacy (Ferketich & Mercer, 1995; Guimond et al, 2008; Johnston & Mash, 1989; Knauth, 2000). Parenting competency is behaviourally based and refers to the skills and strategies a parent employs to facilitate his or her child’s development (Jones & Prinz, 2005). Parenting self-efficacy, however, is cognitively based and therefore is “concerned not with the number of skills you have, but with what you believe

you can do with what you have under a variety of circumstances” (Bandura, 1997, p. 37). Drawing on the legal definition of competence, de Montigny and Lacharite (2005) further suggest that perceived parental competence refers to the “judgments that others hold about the parent’s abilities to do something” (p. 391) whereas parenting self-efficacy is concerned with the parent’s own beliefs about what they can and cannot accomplish.

Parental self-efficacy must also be differentiated from parental self-esteem (de Montigny & Lacharite, 2005). Self-esteem has a distinctly emotional connotation and refers to a judgement of self-worth (Bandura, 1997; Luszczynska et., 2005). Self-efficacy, however, refers to an individual’s perceptions of his or her capabilities (Bandura, 1997). Bandura also differentiates self-efficacy from outcome expectancies. In his view, self-efficacy is a judgement of one’s ability to organize and execute a series of behaviours while outcome expectancies refer to a belief that a given behaviour will result in the desired outcome. Coleman and Karraker (1997) further suggest that self-efficacy beliefs relate to an individual’s perceived skills while outcome expectations are more environmentally based, consisting of knowledge of the required behaviours and perceptions of the supportiveness of the social system. Using exploratory factor analysis, Guimond and her colleagues (2008) found two distinct factors on a parenting cognitions scale that corresponded to outcome expectations and self-efficacy.

Therefore, while PSE is conceptually similar to confidence, competence, self-esteem, and outcome expectations, important differences are found among the constructs. As such, when creating items for a new scale, researchers need to be aware of these varying constructs and ensure they are investigating what they purport to. In the context of PSE scale development, item construction should be grounded in Bandura’s (1997)

social cognitive theory and closely follow his recommendations regarding assessment of self-efficacy (Bandura, 2006).

At what point in the family life cycle should PSE investigations focus? Cowan and Cowan (2003) assert that naturally occurring transitions within the family provide an excellent opportunity to examine how adaptations to changing family realities can influence both family and child development. One of the most obvious transitions occurs with the birth of a child. This event creates a qualitative shift in the structure of the family through the addition of a new individual. Arguably these changes are most pronounced with the birth of the first child as the couple must now adjust their routines and relationship to accommodate an infant. The importance of this change is reflected in the PSE literature where a disproportionate number of studies explore PSE across the transition to parenthood and during infancy (e.g., Bohlin & Hagekull, 1987; Cutrona & Troutman, 1986; Hess et al., 2004; Knauth, 2000; Leahy-Warren, et al., 2011; Leerkes & Crockenberg, 2002; Porter & Hsu, 2003; Reece, 1992; Reece & Harkless, 1998; Salonen et al., 2009; Teti & Gelfand, 1991).

However, child development is marked by a series of continual changes as children grow from infants into self-sufficient adults. It is reasonable to expect then that since self-efficacy is considered to be a dynamic, emergent process continually shaped by life experiences (Bandura, 1997), PSE may also change and develop across the natural life cycle of the family (Jones & Prinz, 2005). However, little is known about the relative stability or normative changes in PSE across children's ages (Coleman & Karraker, 1997; Jones & Prinz, 2005). Additionally, aside from the extensive exploration of PSE in families of infants, not all ages of children are equally represented in the literature. For

instance, there is a considerable literature studying PSE in families with school-aged children (e.g., Brody, et al., 1999; Coleman & Karraker, 2000; Dumka et al., 1996; Hoover-Dempsey et al., 1992; Sanders & Woolley, 2005) and with adolescents (e.g., Ardel & Eccles, 2001; Bogenschneider et al., 1997; Day et al., 1994; Elder, Eccles, Ardel & Lord, 1995; Shumov & Lomax, 2002). However, there is comparatively less research on the PSE construct in families with toddlers (Coleman and Karraker, 2003; Sevigny & Loutzenhiser, 2010) and preschool children (Meunier & Roskam, 2009, Murdock, 2012). This lack of research is surprising since the toddler/preschool period may be a particularly good time to study PSE. For example, Coleman and Karraker (2003) note that, “the salience of self-efficacy beliefs as a predictor of overt behaviour tends to be enhanced under stressful circumstances” (p. 128). The toddler period has been shown to be especially stressful for parents since previously effective methods of interacting with and redirecting their child may no longer work, and parents are then challenged to increase their repertoire of skills to keep pace with their child’s changing needs and rapidly increasing abilities. Consider also that according to Bandura (1997), self-efficacy beliefs in a given domain are strengthened as experience is gained in that domain. It is likely that levels of PSE may be higher among parents who have older children and are therefore more experienced. Taken together, an investigation of PSE should be undertaken in families with preschool aged children.

1.5 Father’s and Mother’s PSE

To date, the PSE construct has been understudied in men (Jones & Prinz, 2005), with much of the research that has been conducted on PSE focussing on the experiences of mothers. Consequently, much of what is known about parental self-efficacy is in

actuality *maternal* self-efficacy (Sevigny & Loutzenhiser, 2010). This lack of attention to fathers is surprising given that over approximately the last thirty years, research into the roles that fathers play in the lives of their children has increased tremendously (Lamb, 2010). Overall, this research has highlighted the importance of an actively involved, positive father role model to the well-being of children (Pleck, 2010a; Pleck & Masciadrelli, 2004). For example, studies have shown that children of involved fathers have higher levels of academic achievement (Harris, Furstenberg, & Marmar, 1998), better interpersonal relationships (Snarey, 1993), and lower levels of delinquency and substance abuse (Youngblade & Belsky, 1992).

Fathers are slowly beginning to be represented in the PSE literature with studies consistently reporting mothers' PSE to be higher than fathers' (Bogenschneider et al., 1997; de Montigny & Lacharite, 2008; Gross & Tucker, 1994; Knauth, 2000; Sevigny, 2007; Reece & Harkless, 1998; Salonen et al., 2009). To date, only two studies have directly compared mothers and fathers' PSE on a domain-specific instrument. Using Coleman and Karraker's (2003) measure, Sevigny (2007) found that mothers scored higher than fathers on the dimensions labelled *emotional availability*, *nurturance*, *instrumental care* and *teaching*. No differences were found for the dimensions labeled *play*, *protection* and *discipline*. Using their own measure inspired by Coleman and Karraker (2000, 2003), Meunier and Roskam (2009) found that among 317 mother-father couples, fathers reported feeling greater efficacy in the *discipline* dimension while mothers reported higher levels of efficacy in the *nurturance* and *instrumental care* dimensions. No statistically significant differences were found between mothering and fathering on the *teaching* and *play* dimensions.

A number of studies now have shown that while the covariates of fathers' PSE are similar to mothers' PSE, important differences exist as well. For example, Bogenschneider et al. (1997) found that while variables such as marital support and social network support predicted PSE for both mothers and fathers of adolescents, mothers' but not fathers' PSE was also predicted by parental sensitivity and number of hours spent at paid employment. Sevigny and Loutzenhiser (2010) found that the relationship functioning between spouses predicted PSE for both mothers and fathers of toddlers. However, Sevigny and Loutzenhiser also found that general self-efficacy predicted mothers' PSE while parenting stress predicted fathers' PSE on a domain specific measure. In contrast, Murdock (2012) found that both mothers and fathers domain general PSE was predicted by GSE; however, mother's PSE was predicted by hostile parenting practices while fathers' PSE was predicted by supportive parenting practices.

In their study of the transition to parenting, Leerkes and Burney (2007) found that at six-months post-partum, education level was a predictor of both mothers' and fathers' PSE. However, while mothers' PSE was further predicted by their prenatal level of parenting efficacy and two characteristics of infant temperament, fathers' PSE was predicted by social support and their involvement with their infant. In their study of parents of infants, Reece and Harkless (1998) also found differing covariates of PSE between mothers and fathers. For mothers, an inverse relationship was found between stress and PSE, and a positive association was found with their partner relationship, life satisfaction, confidence and social support. For fathers, PSE was associated only with confidence and satisfaction with their life situation. In their study of post-partum support, de Montigny, Lacharite and Amyot (2006) found that for both mothers and fathers, the

parenting alliance and anxiety had a direct effect on PSE. de Montigny et al.(2006) also report that for mothers, age and perceptions of their baby's behaviour also directly affected PSE; for fathers, their health status had a direct effect on PSE.

Thus, while the majority of the extant literature has focussed on maternal self-efficacy, a growing number of studies demonstrate the covariates of PSE differ for mothers and fathers. These studies lend support to the notion that the experiences of fathers and mothers are not interchangeable (Day, 2008). That is, while there is reason to believe that there are differences in mothers' and fathers' parenting, it is not fully understood why discrepant covariates of PSE are found between mothers and fathers. One possible explanation for this is that all of the studies reviewed in the preceding section have assessed fathers' PSE with instruments designed and tested on mothers. Youngblade, Park and Belsky (1993) are critical of studies with fathers that employ measurement tools developed and validated for mothers only. Youngblade et al. suggest that such instruments may not fully represent fathers' realities thus leading to possibly biased or inaccurate results. Lamb and Lewis (2010) echo this concern and note that many avenues of paternal influence in the lives of their children may have been overlooked. As such, researchers may be inadequately measuring fathers' PSE by overlooking aspects of parenting salient to men or not fully representing fathering experiences. A discussion of why and possibly how the PSE construct may differ in mothers and fathers is warranted.

1.6 Conceptual Concerns of Generalizing From Mothers to Fathers

Mothering has become synonymous in both popular culture and academic writing with parenting (Silverstein, 1996). An implication of this is that mothering remains the

parenting ideal against which men's behaviours are judged (Walzer, 2004). As Doucet (2006) indicates, concerns raised about studying men's experiences of fathering through a maternal lens mirror the critiques of feminist theorists regarding the propriety of studying women's lives from male dominant perspectives. For example, Gilligan (1982) noted that most influential models of human development were derived mostly by men based on male dominant theories. Similarly, it has been suggested that attempts to fit women's experiences into male theories is akin to fitting a "round peg into a square hole" (Edwards, 1990, p. 479).

Such concerns also apply when studying the experiences of men in the female dominated arena of parenting. To gain a more accurate view of men's parenting, it is not sufficient to simply measure and evaluate fathers against the criteria established for and by mothers (Hawkins & DolloHITE, 1997). In recent qualitative research, fathers' parenting has been described as overlapping with mothers' parenting while not being fully identical to it (Miller, 2011). Similarly, Doucet (2006) concludes in her ethnography of fathering, "while it is not always clear what the essence of fathering is, what is certain for men is that it is not mothering" (p. 217). Thus, to better understand fathering, it is advisable to tap into men's actual experiences and descriptions of their lives as fathers so that innovative ways of understanding their roles and responsibilities as parents may emerge (Doucet, 2006; Miller, 2011).

In terms of PSE research, by continuing to employ instruments either implicitly or explicitly developed through a maternal lens, researchers may be misrepresenting fathers' beliefs (c.f., Lamb & Lewis, 2010; Youngblade et al., 1993). As Bandura (2006) notes, to properly assess self-efficacy, a thorough conceptual understanding of the relevant domain

is necessary. Thus, to accurately tap fathers' PSE, we must explore the nature of their parenting as related to but different from that of mothers.

1.6.1 The Gendered Nature of Fathering. Implicit in discussions of similarities and differences between mothers and fathers is the consideration of the social construction of gender and acceptable gender roles (Walsh 2003). Traditionally in mainstream western society, manhood has been defined instrumentally in terms of rationality, stoicism, independence and aggression. Conversely, womanhood has been defined expressively in terms of nurturance, emotionality, dependence, selflessness and an orientation towards relationships (Haddock, Zimmerman & Lyness, 2003). On a societal level, these definitions have been reinforced by and are steeped in a patriarchal power structure that has afforded men greater social and economic opportunity (Connell, 2000, 2003; Goode, 1982). On a micro level, it has been suggested that women and men tend to perform different tasks because "such practices reaffirm and reproduce gendered selves, thus producing a gendered interaction order" (Coltrane, 2000, p. 1213). Thus, any exploration of fathers' PSE requires an understanding of the ways in which gender relations are enacted and constructed in modern families (McGraw & Walker, 2004).

Recently, Pleck (2010b) has articulated a conceptual framework called the Fatherhood-Masculinity Model. The purpose of the model was to illuminate and clarify the multiple possible linkages between masculinity and fatherhood, and how these linkages may influence both child and father outcomes. According to Pleck, the term fatherhood has been used in two different ways in the literature. First, it has been taken to refer to parental status as being either a biological or a social father. Second, it has also been taken to refer to the actual parenting behaviours men engage in.

Similarly, the term masculinity has been used in two differing ways. First, male gender status refers to a person being male rather than female. From a biogenetic perspective, this refers to chromosomal differences; in the social constructionist interpretation, it refers to being one of two dichotomous, social constructed categories. Masculinity orientation, however, refers to variations within the male gender category. Connell's (1995, 2000) theory of hegemonic masculinity has been influential in understanding the varying nature and implications of masculinity orientations. Connell describes hegemonic masculinity as the most honoured and desired way of being a man in Western societies. This formulation of masculinity is consistent with the notion that men should be strong, stoic, and in control. It is tied closely to notions of social and political power such that this ontological orientation represents the dominant group in society. Connell notes that while the majority of men will likely not enact it, hegemonic masculinity remains normative and requires "all other men to position themselves in relation to it, and it ideologically legitimizes the global subordination of women to men (Connell & Messerschmidt, 2005, p. 832). Connell also notes that it is understood as the opposite of femininity and that other forms of masculinity have come to be subordinated or marginalized. Notably, Connell identifies hegemony as rooted in a specific socio-historical context. As such, there could be a struggle for hegemony whereby older conceptions of masculinities may be replaced with new ones. Thus, masculinities are subject to change over time such that one day, a less oppressive masculinity may come to be dominant rendering existing gender hierarchies obsolete and leading to greater equality (Connell & Messerschmidt, 2005).

Ways in which men understand and enact masculinity informs how they understand their roles as fathers and hence influences the tasks they undertake (Coltrane, 2000; Doucet, 2006; Pleck, 2010b). A man who ascribes to a more traditional hegemonic masculinity may believe it is his role to enforce order in the house and therefore may take a more active role in disciplining children, while believing that other tasks such as feeding and bathing are the purview of the mother. Further, just as masculinity is subject to change (Connell & Messerschmidt, 2005), current conceptions of the role a father plays within a family are multifaceted, and are “continuously shaped by a panoply of changing economic, ideological, sociological and cultural factors and circumstances” (Day & Lamb 2004, p. 4). Thus, it would be instructive to consider the modern history of fathers’ roles and some of the social forces that have led to present dominant beliefs or understandings of the parenting tasks fathers should participate in. By doing so, it may be possible to discern how previous conceptualizations continue to inform contemporary parenting beliefs.

1.7 The Evolving Role of the Father

Before considering how the role of the father has changed in modern history a few introductory comments are necessary. First, it is noteworthy that much of the discussion is limited to an exploration of the dominant discourse. That is, most of our current historical knowledge is derived from the records and experiences of the upper classes. The reasons for this are largely a matter of convenience since it is often easier to access the personal journals of elite men (E. H. Pleck, 2004). Some scholars have further noted that our history is generally written by the conquerors and as such it makes some sense that our knowledge is constructed from the perspectives offered by white men of

privilege (Doucet, 2006). Thus while there has been more contemporary work exploring the experiences of minority and marginalized fathers (e. g., Ball, 2012; Coltrane, Melzer, Vega, & Parke, 2005; Harris & Ryan, 2004), historical perspectives of their lives have been generally lacking (E. H. Pleck, 2004). Notions of the role a father should play in a family are influenced by cultural factors and norms within which a person lives (Day & Lamb, 2004). Recent scholarship has noted the differing father roles and experiences in Japan, China, and Korea, (Shwalb, Nakazawa, Yamamoto &, Hyun, 2010), Africa (Nsamenang, 2010), Sweden, (Klinth, 2008), and hunter-gatherer cultures (Hewlett & MacFarlan, 2010). While recognizing that differences exist, the current analysis and discussion focuses upon fathers within a North American context.

Lamb (1995) proposes that “we are currently witnessing the fourth in a series of changes in popular conceptualisations of the father’s roles and responsibilities” (p. 19). His review of the research literature and historical documents suggests that four distinct, dominant notions of what constitutes an ideal father are evident in the last 400 years of American history. However, the delineation of four dominant father ideals should not be viewed as a rigid model that prescribed these as the only ways a man demonstrated his caring for his children. Rather, the conceptualizations should be viewed as fluid, with an understanding that the life of any given man at a particular point in history likely encapsulated more than one of these views (Lamb, 2000). In particular, the roles of the father as financial provider, moral educator and disciplinarian have been prominent in modern history. As such, before considering current fathering ideals, it is important to explore historical beliefs about the role of the American father and consider how shifting discourses may continue to underpin the current situation.

Beginning in Puritan times and extending until after the War of Independence, the father's role centred upon being a good moral teacher for his children and providing them with a model of appropriate Christian living (Lamb, 2000). This was also the time when the nuclear family with the father established as the moral guide also became an economic unit (E. H. Pleck, 2004).

Beginning around the mid-nineteenth century and extending into the 1920's, a good father was associated with his ability to be the sole provider or breadwinner for his family (Lamb, 1995). Such beliefs arose with the advent of the industrial revolution. As paid work in the labour force became divorced from unpaid work at home, man's sphere became that of business and commerce while the woman's sphere was that of the home and the family. Thus, a father's role became relegated primarily to that of financial provider and the separate sphere ideology became entrenched in the United States (Haddock, et al., 2003).

In the time following World War II until the mid 1970's the dominant focus became the father's function as a gender role model, especially for boys (Lamb, 2000). The 1960's were a time of social upheaval. The civil rights movement gained momentum, there were many social protests, and questioning of established authority was commonplace. During this turbulent time, fathers were called on again to be advocates of traditional morality to counteract the anti-establishment influences that had gripped their children (E. H. Pleck, 2004). The 1960's also ushered in the first wave of feminism with many women calling for greater gender equity both at home and at work. It was this movement that helped shape the current ideal of fatherhood beginning in the 1970's.

1.7.1 The Nurturing Father. Beginning in the 1970's and continuing to the present day, a fourth shift occurred emphasizing the good father as nurturing and actively involved in all aspects of caring for his children (Lamb 1995). The masculine ideals of the early 20th century were largely replaced by the dominant view that fathers should be androgynous co-parents (Dienhart, 1998). A good father was now expected to carry out his share of the domestic labour because it was the fair and right thing to do. It became more accepted and expected that fathers would be present at the births of their children and actively participate as a labour coach. This change in practice stands in stark contrast to the experiences of men a short ten years previous when they were banned from hospital delivery rooms and relegated to pacing in waiting rooms (Stearns, 1990). It became popular to refer to this more egalitarian definition of fatherhood as being a *new father* (E. H. Pleck, 2004).

Until the mid-1980's, the caring involved father was considered to be a one-dimensional, all or none construct. As a father, one was either involved with their children or not. At that time, Lamb and his colleagues (Lamb, Pleck, Charnov, & Levine, 1985, 1987) suggested that father involvement is composed of three components: engagement, availability, and responsibility. Engagement refers to a father's direct one-on-one contact with his child such as playing with him or her or through various care giving activities such as feeding or bathing. Accessibility refers to the father being psychologically and physically available for interaction with his child (e.g., preparing a meal while the child is playing independently in the same room). Responsibility refers to the role that the father assumes in ensuring the care and welfare of the child (e.g., arranging for babysitters or making necessary medical appointments).

This multidimensional model has become influential and is now widely used to guide research on fathers and child development (McBride, Schoppe, & Rane, 2002); however it is not without its limitations. Much of the literature has focused on only one component of the model (e.g., availability), thus leading to a narrow view of the father involvement construct (Pleck & Masciadrelli, 2004). Additionally, these three factors have been considered to be content free. That is, many investigations record the quantity of father engagement or accessibility without regard for the quality of these behaviours (Cabrera, Tamis-LeMonda, Bradley, Hofferth, & Lamb, 2000). While there is a growing awareness that a thorough understanding of father involvement should consider both quantitative and qualitative dimensions, many studies continue to rely only on quantitative aspects (McBride et al, 2002).

Recently, Pleck (2010a) has articulated a revised conceptualization of the Lamb et al. (1985) tripartite father involvement model to reflect advances in scholarship. This revision explicitly includes qualitative dimensions of fathering and consists of three primary components: positive engagement activities, warmth and responsiveness, and control. Positive engagement is a revision of the original content-free engagement component in which Pleck asserts that the focus is on more intense interaction with a child in ways that are more likely to promote development. Warmth and responsiveness, and control are two qualitative dimensions that underlie an authoritative parenting style (Baumrind, 1967; Maccoby & Martin, 1983). In this context, control refers primarily to monitoring and decision making. The inclusion of the latter two primary components was hoped to better integrate father involvement research with the broader field of parenting research. In addition to the three primary components, Pleck also articulated two other

auxiliary components which expand upon the earlier responsibility component: indirect care and process responsibility. Indirect care refers to activities done for the child that do not entail direct interaction. Indirect care activities include material indirect care (purchasing and arranging for tangible resources) and social indirect care (fostering social connections with peers and institutions). According to Pleck's formulation, indirect care is seen as being distinct from financially providing for the family. Process responsibility refers to ensuring that the child's needs articulated in the first four components are being met; this may be distinct from the extent to which the father meets all those needs himself.

Exploring the historical evolution of our understandings of the role of the father helps to provide a context for both past and future academic study. As has often been repeated, to understand the current situation and social trends, it is fruitful to understand some of the factors that have led us to where we are today (Griswold, 1993). For example, while acknowledging that current conceptualizations of the father role favour an involved caring father, such a view was not always the norm. In particular, the role of the father as financial provider, moral educator and disciplinarian has also been prominent in modern history. Even now, though a nurturing father is considered to be the new cultural ideal, it is becoming more recognized that a father may demonstrate caring by engaging in parenting tasks that do not necessitate direct interaction with his child. These shifting understandings have created the social fabric in which current understandings of fathering are embedded.

1.8 Understanding the Current Roles of Fathers and the Links to PSE

Many authors have observed that fathers have been generally allowed more latitude in defining their parenting role (Cabrera et al., 2000; Goode, 1982; Miller, 2011). Thus, while being a father denotes a specific biological reality, fathering is also socially constructed (Coltrane, 2004; Day & Lamb, 2004, Silverstein, 1996) and may be more sensitive to external, contextual factors than mothering (Doherty, Kouneski, & Erickson, 1998). Our dominant understandings of fathering has shifted away from a biological model towards viewing it as an achieved, nurturing social relationship (Flouri, 2005).

Despite the recent shift in the culture of fathering towards a more nurturing, involved model, some authors disagree on the extent to which actual fathering behaviours have changed. For example, LaRossa (1988) suggests that even though these cultural ideals have shifted, fathers' actual behaviour has not significantly changed over the last one hundred years. Thus, the overall time commitment given to children remains skewed heavily toward mothers (Dermott, 2008) such that the amount of time fathers spend in child-related activities is still much less than that of their partners or spouses (McGraw & Walker, 2004). Consider also that the majority of households are still organized around a manager – helper dynamic whereby mothers largely orchestrate family life and fathers provide assistance through the execution of tasks (Daly, 2002; Deutsch, 2001). Given that Bandura (1997) asserts that self-efficacy beliefs are strengthened when one gains experience and has success in a particular domain, it begins to make sense that studies have found mothers' overall PSE to be higher than fathers' (e.g., de Montigny & Lacharite, 2008; Sevigny, 2007; Reece & Harkless, 1998). If mothers continue to do most

of the childcare work, they have more exposure to their children and more opportunities to be successful in their various parenting endeavours.

In contrast, Pleck (1997; Pleck & Masciadrelli, 2004) reviews a number of studies showing that both the absolute amount of time a father spends with his children and the relative amount of time he spends as compared to the children's mother have increased steadily since the 1960's. Some scholars suggest this reflects shifting gender norms and that many men desire to be full and equal partners in family life (Dermott, 2008; Walsh, 2003). However, the remaining gap in the amount of time mothers and fathers spend with their children has led some to conclude that the goal of equally shared parenting remains aspirational for many (Deutsch, 2001). Conversely, Dermott (2008) offers a cogent critique of employing domestic time use surveys to assess equally shared parenting. Specifically, she argues that the categories found on such surveys do not fully capture what fathers actually do. She also notes that such surveys treat each unit of time equally and do not take into account the differing importance or value fathers place on time spent in different activities.

According to social cognitive theory (Bandura, 1997), if mothers and fathers view various parenting tasks as being differentially important, they will expend more effort in those tasks they deem as being especially pertinent. In turn, they will become more efficacious in those tasks they judge to be the most important and less efficacious in those tasks they judge to be less important. It is possible then that observed differences in PSE between mothers and fathers might be a function of the instruments used to assess the construct. If these instruments assess dimensions or tasks that are thought to be especially

important by mothers and less so by fathers, then it makes sense that mothers' total scores would be comparatively higher.

Related to task importance, Bandura (1997) asserts, "Parents who believe they have a key role to play in their children's development are more likely to act on that belief in ways that cultivate their potential" (p. 191). What though is this perceived key role that a father should fulfil? Given the numerous changes to contemporary families (Walsh, 2003), many fathers today assume multiple roles within the family and there is a great deal of variability in the particular roles an individual father may fulfill (Tamis-LeMonda, 2004). Given the differences in mothering and fathering as well as the diversity of father roles, what implications does this have for conceptualizing PSE in men? If it is recognized that there are differences between fathering and mothering, then it follows that ideas about parenting tasks may differ as well as the very notion of what it means to parent may differ.

Doucet (2006) argues that while categories of tasks completed by mothers and fathers may be the same, how they are enacted may be different. For example, Doucet found that mothers' notion of nurturing was characterized by soothing and comforting behaviours, fathers' ideas of nurturing emphasised more playfulness, the promotion of independence and the encouragement of some risk taking. An examination of existing PSE instruments (e. g., Coleman & Karraker, 2003; Crncec et al., 2008) reveals it is this maternal understanding of nurturing that is being tapped. Similarly, as discussed previously, men have historically been considered to be important contributors to their children's education specifically in the realm of morality (Lamb, 2000). While many contemporary fathers continue to fulfil this function (Tamis-LeMonda, 2004), the

majority of items on PSE scales that purport to assess the teaching role of parents do not address issues of teaching right from wrong. Rather, scale items tend to focus upon teaching in the areas of early literacy and numeracy. Thus, we can begin to understand one plausible reason why in previous research fathers have scored lower than mothers on the PSE dimensions of teaching and nurturing (Sevigny, 2007).

It is also possible that there are other parenting dimensions of relevance to fathers that are not found on maternal focused PSE scales. An example that has both historical and contemporary salience for fathers is that of providing financially for the family (Christianson & Palkovitz, 2001; Lamb, 2000; Silverstein, 1996). Yet, there is no mention of financial providing on any of the PSE instruments that have been reviewed. It is possible that since earning wages does not typically entail direct contact with one's children, it has not been included on previous PSE instruments. However, not all parenting tasks require direct contact with a child. As such, in his revised reconceptualization of the father involvement construct, Pleck (2010a) explicitly includes categories of involvement that do not necessarily include father-child interaction. Consider, for example, the father who fixes a broken safety gate or ensures that a child's bicycle is road-worthy. Neither of these tasks necessarily requires direct interaction with a child but they are undertaken because of a man's caring for his child. In this vein, Palkovitz (1997) generated a list of 15 categories consisting of well over 100 discrete behaviours through which a man could demonstrate his caring for his children through direct and indirect means. Doucet (2000; 2006) also argues for the need to broaden our understanding of father's caring by paying attention to the myriad ways that fathers

demonstrate their love for their children. In particular, fathers can be involved with their children in ways that do not entail direct interaction (Pleck, 2010a).

In sum, given that women and men are steeped in different gender traditions, it is likely that the parenting tasks and parenting dimensions represented on PSE instruments developed for mothers do not adequately reflect the full spectrum of men's fathering beliefs. As a means of exploring these potential differences, it would be fruitful to examine men's views of their parenting roles and consider the importance they ascribe to different parenting tasks. Thus, the perceptions of men could be used as a foundation upon which to build a new PSE scale that better reflects the reality of being a father.

1.9 Scale Development

In order to assess psychological constructs, it is common practice for researchers to develop self-report scales. The goal of sound scale development is to demonstrate that the new measure possesses an acceptable degree of construct validity (Simms & Watson, 2007). Construct validity refers to an evaluation of the extent to which a particular scale actually assesses what it claims to measure (Stauss & Smith, 2009). According to Loevinger (1957), this type of validity subsumes all other types of validity and must be attended to during all phases of scale development and validation. To this end, Loevinger articulated three phases of scale development: an initial, substantive validity phase in which the construct is clearly defined and the initial scale content is developed; a second structural validity phase in which the psychometric properties of the scale are examined and improved upon through the addition or deletion of items; and a third, external validity phase in which the scale's associations with other measures of the same construct, measures of different constructs and other criteria are examined. Each of

Loevinger's (1957) phases has recently been expanded upon (Simms, 2008; Simms & Watson, 2007). The major facets of these three phases and how they relate to the development of a fathering PSE scale is now discussed.

1.9.1 Substantive Validity Phase. The first step in scale development according to Loevinger (1957) is a thorough review of the literature of the construct of interest. The preceding portion of this chapter reviewed and discussed the relevant PSE literature. The second step is to seek a clear definition of the construct of interest. Since de Montigny and Lacharite (2005) have provided the clearest definition of PSE in the extant literature, specifically "beliefs or judgements a parent holds of their capabilities to organize and execute a set of tasks related to parenting a child" (p. 390), this definition should be used to guide PSE scale development.

The majority of PSE scales have employed a rational-theoretical approach to scale construction in which the researcher writes items that appear consistent with his or her understanding of the construct (Simms, 2008; see e.g., Coleman & Karraker, 2003). Though commonly employed, the exclusive use of such methods may yield items that do not fully reflect the experiences of parent research participants. The use of focus groups to inform item construction as used by Crncec et al. (2008), and Kendall and Bloomfield (2005) is a promising approach that partially alleviates this concern. However, neither of these research teams had a single father participate in their focus groups. Thus, these parenting instruments were developed without the input of male parents. The lack of inclusion of men in item development raises the fundamental question of what really is known about PSE in fathers.

Since fathers may engage in parenting tasks in different ways than mothers or may place value on parenting dimensions not assessed by existing measures, it stands to reason that fathers' actual experiences should guide the development of a new PSE scale. While recent qualitative research has explored father's experiences (Dermott, 2008, Doucet, 2006; Miller, 2011), explicit queries into Canadian fathers perceptions of their roles and responsibilities has been understudied. It is through understanding the articulation of these roles that we may begin to identify salient parenting tasks and dimensions, and construct representative items for a PSE scale. Therefore, it is necessary for an investigation into fathers' PSE to begin with a systematic discussion with men of their perceptions of their roles and responsibilities. However, as a check on how representative particular discussions or interviews may be, it would be advantageous to consult with scholars in fathering research to ensure no significant aspects of men's parenting experiences are overlooked. Consultation with experts in the relevant field is common in scale development and is invaluable in establishing face and content validity (T. J. B. Kline, 2005).

It is during the substantive validity phase that an initial pool of items is typically drafted (Simms & Watson, 2007). In so doing, one must keep the guiding definition of the construct in question in mind to ensure that items do not stray into the realm of conceptually similar constructs. In the case of a fathering PSE scale, researchers need to be aware of varying constructs such as confidence, competence, self-esteem, and outcome expectations, and ensure they are investigating what they purport to. In the context of PSE scale development, item construction should be grounded in Bandura's

(1997) social cognitive theory and closely follow his recommendations regarding assessment of self-efficacy (Bandura, 2006).

1.9.2 Structural Validity Phase. Once the substantive validity phase concludes and the initial item pool is drafted, the structural validity phase may commence. At this stage in the research process, the draft scale items are administered to participants and their responses to the potential items are psychometrically evaluated (Loevinger, 1957). This evaluation has traditionally included analyses of the variability of individual items, the overall scale's internal reliability, inter-item correlations and factor structure with the overall goal to improve the reliability of the measure (Simms & Watson, 2007).

During this phase, Clark and Watson (1995) note that it is important to identify and eliminate those items for which nearly all participants respond similarly. Such highly unbalanced items yield little meaningful information, tend to correlate weakly with other items, and tend to produce highly unstable results. While there are no universally agreed upon cut off points for what constitutes highly unbalanced, typically items in which over 80% of participants respond similarly are deemed unbalanced and considered for deletion.

According to Clark and Watson (1995), the average inter-item correlation should be in the range of 0.15 – 0.50 depending upon how broad or narrow the construct of investigation is. However, exploring each individual inter-item correlation would be unwieldy with a large item pool. Therefore, a reasonable proxy would be to use individual item-to-total score correlations when examining reliability. Common recommendations indicate a minimum item-to-total score correlation of $> .10$ is typically considered satisfactory with items correlating less than $.10$ being possible candidates for

deletion (Simms & Watson, 2007). Concurrently, the internal consistency of the full scale (i.e., Cronbach's alpha) should be calculated following the deletion of poorly correlated items. While some have suggested that an alpha of .70 is the minimally acceptable value for a newly developed scale (Hinkin, 1998), others suggest that a value in excess of .80 is preferable during scale construction (Clark & Watson, 1995).

To assess the hypothesized underlying structure of a scale empirically and to further aid in data reduction, exploratory factor analysis is frequently conducted (Floyd & Widaman, 1995). According to Costello and Osbourne (2005), factors should be extracted using either the maximum likelihood procedure if the data are normally distributed or the principle axis factoring procedure if the data are non-normal. There are multiple criteria to consider when deciding on the number of factors to retain. While Kaiser's (1970) eigenvalues over 1 criterion is the default in SPSS, there appears to be general consensus in the literature that this is one of the least accurate methods of estimating the number of factors to maintain (Lance, Butts, & Michels, 2006). Parallel analysis is an alternative method that is considered to be a more accurate alternative (Costello & Osbourne, 2005). This procedure involves extracting and comparing eigenvalues from randomly generated data sets that parallel the actual data in terms of cases and variables (O'Connor, 2000). Factors are retained while the eigenvalues from the actual data set exceed the corresponding eigenvalues from the 95th percentile of the random data. Parallel analysis is not infallible however, and tends to yield more factors than are typically warranted (Buja & Eyuboglu, 1992). Cattell's (1966) scree plot test is another method to judge the number of factors to retain and is considered to be among the best alternatives available for researchers (Costello & Osbourne, 2005). In examining

scree plots, one typically excludes any factors that fall below the *elbow* of the scree plot. In addition, factors with fewer than three items are usually unstable and unlikely to replicate. To be retained as a factor, typically, a minimum of four items is acceptable, while five or more items that load strongly on one factor (i.e., ≥ 0.50) and minimally on any others (i.e., $\leq .20$) is desirable (Costello & Osbourne, 2005; Fabrigar, Wegener, MacCallum, & Strahan, 1999). Once the factor structure is determined, the inter-item correlations of items comprising the factors should be examined. As Streiner (2003) notes, very highly correlated items (i. e., approximately .90) should be avoided because they are essentially redundant.

Recommendations regarding sample sizes to establish the psychometric properties and validate new psychological instruments vary (Kline, 2005). In conducting factor analysis, there are two general categories of sample size recommendations. The first category suggests that the total number of cases is important. Comrey and Lee (1992) thought that 100 = poor, 200 = fair, 300 = good, 500 = very good, 1,000 or more = excellent (in MacCallum, Widaman, Zhang & Hong, 1999, p. 84). Others have suggested that a minimum of 200 respondents is necessary (Tabachnick & Fidell, 2007). The second category of sample size recommendations suggests the subject-to-variable ratio is important. While there is no consensus regarding the ideal ratio, typically a ratio of between 5 – 10 subjects to variables is acceptable (Floyd & Widaman; 1995). In their review of two years of published studies in the PsycInfo database, Costello and Osbourne (2005) found that 63% of studies employed a subject to variable ratio of less than 10:1.

1.9.3 External Validity Phase. Following item refinement is Lovinger's (1957) external validity phase of scale development in which associations between the new scale

and existing scales are examined. The goals of this stage are to provide an examination of the convergent, discriminant and concurrent validity of the new measure. The factorial validity of scales that emerged from the previous phase of the research may also be tested using confirmatory factor analysis (Floyd & Widaman, 1995).

Convergent Validity. Convergent validity is the extent to which a scale correlates with other measures of the same construct (Simms, 2008). In terms of PSE measure development, a new domain-specific PSE scale may be compared to scores on measures of domain general PSE (e.g., Johnston & Mash, 1989) and general self-efficacy (e.g., Jerusalem & Schwarzer, 1992). While such comparisons has been done for a scale of maternal self efficacy (Coleman & Karraker, 2003), similar systematic exploration of convergent validity with fathers is lacking.

Discriminant Validity. Discriminant validity refers to the extent to which a particular measure does not correlate with measures of other constructs that are theoretically distinct (Simms, 2008). For example, while previous studies have found that higher PSE is associated with lower depression and lower parenting stress, the three constructs are believed to be theoretically distinct (Sevigny, 2007; Teti & Gelfand, 1991).

Concurrent Validity. Concurrent validity is one type of criterion-related validity in which a new measure is related to a previously validated measure of a related construct. The new and previously validated measure are assessed at approximately the same time (Simms, 2008). As PSE is considered a strong predictor of actual behaviour (Jones & Prinz, 2005), one would expect that higher levels of domain specific PSE would be associated with a higher degree of father involvement (Pleck & Masciadrelli, 2004). Drawing upon social cognitive theory (Bandura, 1997), it is also plausible that fathers

who also have older children would score higher on a domain-specific PSE measure than first-time fathers. Additional evidence of concurrent validity of a self-report fathers' PSE scale would be a comparison with the independent assessment of fathers' PSE by others who are highly familiar with their parenting.

Factorial Validity. Evidence of factorial validity occurs if the factor structure of a scale is replicated in a different sample than that used for initial exploratory factor analysis. Such an analysis typically employs confirmatory factor analysis (CFA). In assessing model fit, the exclusive reliance on the chi-square goodness of fit test has fallen out of favour with applied researchers and as such other close fit indices are also commonly utilized (Garson, 2012; Gignac, 2009). The standardized root mean square residual (SRMR; Hu and Bentler, 1995), the root-mean-square-error of approximation (RMSEA; Browne & Cudeck, 1993), and the comparative fit index (CFI; Bentler, 1990) are among the most commonly used in the literature. Traditionally, SRMR values of less than .05, RMSEA values below .06, and CFI values exceeding .95 have been taken as indicative of a well-fitted model (Hu & Bentler, 1999). However, it has recently been argued that more liberal cut offs of CFI values greater than .90, SRMR values of less than .08 and RMSEA values below .10 may be more appropriate for judging model fit (Garson, 2012; Harrington, 2009). Others have also warned against the rigid application of cut-off values to assess model fit (Kline, 2011). Alternative factor structures should also be investigated to determine if other models also provide a good fit for the data (Floyd & Widaman, 1995). One method for assessing the best model fit from among alternative structures is the use of Akaike's Information Criterion (Burnham & Anderson, 2004). Differing AIC values can be compared with the model with the lowest AIC

considered the best model. Differences of AIC (i.e., $\Delta_i > 10$) indicate that the alternative model is highly unlikely (Burnham & Anderson, 2004). In other cases, a model may not fit the data well and the researcher may choose to make revisions to the model. In such cases, a nested model may result in which one model contains a subset of the free parameters of the first model. The χ^2 difference test is then used to assess whether the nested model is a statistically significant improved fit to the data compared to the initial, parent model (Harrington, 2009).

1.10 Summary and Aims of the Study

Despite the established links between PSE and child development, many issues remains to be resolved in the literature. For example, there has been considerable variability in the ways PSE has been conceptualized and measured. Confusion arising from differing terminology being used interchangeably with PSE and limitations in measuring PSE renders interpretation of existing results difficult (de Montigny & Lacharite, 2005; Sabatelli & Waldron, 1995). In addition, since self-efficacy is a dynamic, emergent process continually shaped by life experience (Bandura, 1997), it is reasonable to expect that PSE may also change and develop across the natural life cycle of the family (Jones & Prinz, 2005). The toddler/ preschool period may be an especially good time to study PSE in general and fathers' PSE specifically. During this developmental period, fathers typically become more actively engaged with their children (Fox & Bruce, 1999; Loutzenhiser, Sevigny, & Thompson, 2010; Pleck & Masciadrelli, 2004). An increasing amount of engagement with their children provides the opportunity to experience success or failure in various parenting tasks and make fathers especially susceptible to the effects of verbal feedback from their significant other (cw Bandura,

1997). Yet despite the importance of the toddler /preschool period, relatively little is known about parenting beliefs in families with young children.

The parenting self-efficacy construct has been understudied in fathers. The extant literature reviewed reveals that existing PSE instruments have been developed for and validated on samples of mothers. Given the social construction of gender (Haddock et al., 2003) and the evolving roles of fathers, it is likely that parenting beliefs may differ between mothers and fathers. Recent ethnographies of fathers have indeed found that many aspects of fathering are qualitatively different than mothering (Dermott, 2008; Doucet, 2006). These findings are consistent with the thinking of some theorists who suggest that fathers' parenting and parenting beliefs are not interchangeable with those of mothers (Daly, 2004). Thus, to obtain an accurate understanding of PSE in fathers, it will be important for an instrument to assess parenting domains and tasks that truly reflect men's parenting reality. The current study employed a mixed-methods design to create a valid self-report instrument of fathers' PSE that is grounded in the actual lived experiences of men.

The main objective of this study is to develop and provide initial validation information for a self-report instrument assessing PSE in fathers. To that end, the research was conducted in a series of three phases which correspond to Loevinger's phases of scale development. In Phase 1 of the research, fathers were individually interviewed and invited to discuss their perceptions of their roles and responsibilities within their families. Common themes from these interviews were identified and a pool of potential PSE scale items was drafted. In Phase 2 of the research, a convenience sample of Canadian fathers completed the draft items and the psychometric properties

were investigated. In Phase 3 of the research, a new sample of Canadian fathers was recruited to complete the PSE items and the associations between their responses on the new scale and other existing scales were examined. In addition, spousal reports of fathering self-efficacy were also sought in Phase 3.

2.0 RESEARCH QUESTIONS AND HYPOTHESES

2.1 Phase 1 Research Questions.

1. What parenting roles and responsibilities do Canadian fathers of young children identify?
2. Do fathers identify parenting responsibilities that are not adequately represented on existing, maternally generated PSE measures?

2.2. Phase 2 Research Questions.

1. Will the factor structure of the Fathering Self-Efficacy Scale (FSES) mirror the parenting dimensions identified by fathers in study 1?
2. Will the internal reliability of the scale measured exceed .80?

2.3 Phase 3 Research Questions.

1. Will the factor structure found in Phase 2 of the research replicate with a second sample of Canadian fathers?
2. What is the test-retest reliability of the FSES?
3. Will expected associations between the FSES and other measures be found?
 - i. Moderate to strong positive correlations will be found between fathers' scores on the FSES and their scores on measures of domain-general PSE and general self-efficacy.
 - ii. Weak negative correlations will be found between the FSES and depressive symptoms and between the FSES and parenting stress.
 - iii. A positive correlation will be found between fathers' self report scores and their spouses report scores of the FSES.

iv. FSES scores will be correlated positively with a measure of father involvement.

4. What are the statistically significant predictors of the FSES total score and subscale scores?

3.0 PHASE 1

This first phase of the research corresponds to Loevinger's (1957) initial, substantive validity phase in which the construct is clearly defined and the initial scale content is developed. The PSE literature was reviewed in the previous chapter and a guiding definition of PSE was identified (de Montigny & Lacharite, 2005). The goal of Phase 1 was to draft an initial pool of items that would comprise a fathering self-efficacy scale. The first part of this phase entailed the qualitative analysis of interviews with first time fathers in which they were asked to discuss their perceptions of their roles and responsibilities. The purpose of this was to identify dimensions of parenting that Canadian fathers of young children report as being especially salient. The second part entailed sharing the results of the qualitative analysis with subject matter experts and inviting their comment and critique to inform development of scale items.

3.1 Phase 1, Part 1 Methods

3.1.1 Procedure. In completing my Master's thesis (Sevigny, 2007), interviews with fathers of toddlers were conducted in which fathers were asked questions regarding their roles and responsibilities. While previously collected data were utilized for this phase of the research this was the first time the interview data were analysed. Families were recruited for this study by a variety of means. First, a brief introductory letter was mailed to each daycare facility and day home provider in Regina and Moose Jaw (Appendix A). These letters were followed with a telephone call where the purpose of the study was explained and enquiries were made as to whether there may be any parents who would qualify for the study and be interested in obtaining more information. It was then mutually determined how best to recruit potential participants for this study from

their clientele. It was made clear to all potential participants that this was a completely voluntary endeavour and that their decision regarding participation in the study would in no way affect their child care services.

Second, potential participants were sought through a parent-child music program and a mothers' group. In total, 11 of these classes were visited where a brief overview of the study was provided to parents. A sign-up sheet was circulated inviting anyone interested in learning more about the study to provide his or her name and contact information. Additionally, business cards with the researcher's name and contact information were made available. Using the principles of snowball sampling (Mertens, 2005), parents were also encouraged to pass along my contact information to anyone they thought may be interested in participating in the study.

Third, posters advertising the study (Appendix B) were distributed to the local public library and businesses which serve families with toddlers. Fourth, a display and sign-up sheet were set up at a local trade fair which targeted parents with infants, toddlers and preschool aged children. Finally, the researcher personally contacted individuals known to have small children to either invite their participation or to pass along contact information to anyone they knew who may fit the inclusion criteria for the study.

Using the above recruiting strategies, anyone expressing interest in learning more about the study received a follow-up phone call. Once a family agreed to participate, a questionnaire package and consent form (Appendix C) were mailed to the family. At this time, a home visit was scheduled approximately two or three weeks following the mail out when questionnaire packages were picked up and fathers were to be interviewed. The data arising from the questionnaire packages have been reported elsewhere (Sevigny

2007). Each father was then invited to participate in a 30-minute interview and 48 fathers consented to do so. Following some basic questions about their children and family, fathers were asked, “Are there specific roles and responsibilities that are expected of you as a father?” Responses to this question were followed with individual probes as needed to ensure as full elaboration as possible. Responses to this question were then analysed to inform construction of draft fathering self-efficacy scale items.

3.1.2 Participants. Table 1 displays the demographic information regarding the study sample. The average age of participants in this study was 34.1 ($S D = 4.0$). The majority were legally married (89.6%) and Caucasian (91.7%). Overall, participants were well-educated with 87.5% of fathers reporting at least some post-secondary education. Participants also reported moderate to high levels of income with 81.5% reporting a total family income of at least \$60,000. Fathers’ wages in this sample accounted for nearly 2/3 of the family’s total income (63.6%), with 93.8% of fathers employed in paid work averaging 42.9 hours of work per week. The children of participants ranged in age from 18 to 36 months ($M = 27.5$; $S D = 5.1$) and approximately one third (31.3%) of them also had a younger child.

3.1.3 Analysis Plan. All 48 interviews were transcribed verbatim by a volunteer research assistant. A thematic content analysis of the transcripts was conducted to examine how these men viewed their roles and responsibilities as fathers. Thematic analysis is a flexible, commonly used qualitative research technique which involves

Table 1.

Phase 1 Participant Demographic Information

	Fathers
<hr/>	
Marital Status	
Married	43 (89.6%)
Common Law	5 (10.4%)
Age, <i>M (SD)</i>	34.1 (4.0)
Ethnicity	
Caucasian	44 (91.7%)
Aboriginal	1 (2.1%)
African	1 (2.1%)
Asian	1 (2.1%)
Education	
11 years or less	1 (2.1%)
High School	5 (10.4%)
College / Tech	12 (25.0%)
Undergraduate Degree	22 (45.8%)
Graduate Degree	7 (14.6%)
Employed	45 (93.8%)
Parental Leave	1 (2.1%)
Mean hours worked	42.9

Table 1 continued

Phase 1 Participant Demographic Information

	Fathers
<hr/>	
Family Income	
\$20,000 – 40,000	3 (6.3%)
\$40,000 – 60,000	5 (10.4%)
\$60,000 – 80,000	15 (31.5%)
> \$80,000	24 (50.0%)
Mean Contribution to Income	63.6 %
Child Sex	
Male	26 (54.2%)
Female	22 (45.8%)
Child Age in Months, <i>M (SD)</i>	27.5 (5.1)
Number of Children in Family	
1	33 (68.8%)
2	15 (31.3%)

the systematic examination of linguistic data allowing for the recognition of potential themes and common elements in textual material (Boyatis, 1998; Neudorf, 2002).

In conducting a thematic analysis, it is recommended that the choices made by the researcher should be explicitly considered and discussed (Braun & Clark, 2006). First, one must decide what actually constitutes a theme. According to Braun and Clark, a theme represents “something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set” (p. 82). There are no universally agreed upon parameters of how prevalent an idea needs to be in the data before being considered a theme and as such researcher judgement is required. For the purposes of this analysis, it was decided that ideas related to a particular fathering role or responsibility needed to be mentioned by at least two participants to be considered for inclusion as a theme.

Second, themes are typically identified by either inductive or theoretically driven means. Inductive analysis is more data driven and not constrained by a pre-existing framework (Patton, 1990). In the context of coding fathers’ roles and responsibilities, a theoretically driven analysis may attempt, for example, to fit fathers’ responses into only previously identified domains of father involvement (Lamb et al., 1985; Pleck, 2010a), or perhaps the dimensions of child-caregiver relationships identified by Zeanah et al. (1997) that comprise Coleman and Karraker’s (2003) PSE scale. Since one of the key purposes of the current thematic analysis was to identify as many father roles as possible, an inductive analysis was conducted. Clearly this researcher is familiar with the above

mentioned frameworks and could not be completely uninfluenced by them. However, explicit and conscious efforts were made to be open to unanticipated or novel themes.

Third, decisions must be made regarding whether themes will be identified on a semantic or a latent level. According to Braun and Clark (2006), a semantic analysis focuses primarily on what participants have explicitly said while latent analysis goes beyond the semantic to examine underlying ideas or conceptualizations. To better understand this distinction, the authors suggest imagining a data set as a three dimensional mass. In this analogy, semantic analysis seeks to describe the form and meaning of the mass whereas latent analysis would be more concerned with the underlying factors that gave rise to the form and meaning. For the current analysis, some interpretation of statements and latent analysis of responses may be necessary. However, since one of the overarching purposes is to create explicit scale items based upon fathers' experiences, thematic analysis at the semantic level was deemed most appropriate.

With the preceding considerations having been made, the procedures outlined by Braun and Clarke (2006) were used as guidelines in completing the thematic analysis. To begin, all focus group transcriptions were reviewed by the primary researcher to isolate meaning units of text (i.e., the smallest segment of text that conveys a unitary, cohesive idea; Boyatzis, 1998). Another volunteer research assistant then reviewed all transcripts to ensure all individual meaning units were identified.

Following the initial identification of fathers' responses from the transcripts, statements were examined to identify repetitions of words, ideas, examples, and phrases. This examination facilitated the initial, tentative identification of broad themes from the raw data. The initial themes and coded data were then presented for review at a series of

meetings of the Child and Family Research Lab at the University of Regina. The team consisted of this writer, his research supervisor, two Master's students, and two senior undergraduate students. These lively, open discussions allowed for the further refinement of existing themes and the identification of other possible themes. Through this collaborative, inductive process the final themes were defined and labeled.

To further ensure the reliability and trustworthiness of the analysis, another senior undergraduate student in psychology was recruited. This student was oriented to the data and the coding scheme by the primary researcher. Approximately one-third of all statements were randomly selected using a freely available online random number generator. The student was asked to code these selected data. Agreement with this trained coder was found 90.0% of the time. Calculation of Cohen's kappa was also undertaken to control for chance agreement. While universal agreement regarding what constitutes an acceptable level of inter-rater reliability is lacking, kappa levels exceeding .75 - .80 are typically taken to indicate excellent agreement beyond chance (Neudorf, 2002). In this study, the inter-rater reliability was found to be $\kappa = .86$.

3.2 Phase 1, Part 1 Results

3.2.1 Thematic Analysis of Interviews. From the question posed to 48 first time fathers regarding their perceptions of their roles and responsibilities, a total of 156 meaning units were extracted. Using the analytic techniques described in the previous section, a total of 156 statements were analysed that grouped into 11 themes: parenting in context, teaching, financial responsibility, general responsibility, domestic upkeep and maintenance, accessibility, discipline and self control, safety and protection, play, nurturing, and instrumental care and routines. Table 2 details the number of statements

categorized within each theme. Each of these themes will be explored in turn from the most prevalent to the least prevalent.

Parenting in Context. This theme was the most prevalent identified from interviews with fathers, with 29.5% of statements reflecting that parenting occurs within a specific context. A commonly expressed notion was the idea that parenting occurs within the context of the partner relationship, and as such parenting roles and tasks were negotiated within the relationship with their partner. For example, fathers in the study offered these insights:

- “And obviously, my wife and I have become more communicative, and now we work as a team to figure out what we’re doing and making sure that she grows up right.”
- “...no different than from the mother. You share the responsibilities, all of them.”
- “It doesn’t matter how things get done, they need to get done. If you’re really rigid I don’t know how it would work.”
- “You do have to realize that you are raising a child with another person and you have to support that partnership and you have the same needs.”
- “There is no clear line between what is mom stuff and what is dad’s stuff. We just take on whatever we need to and whatever we want to.”

In addition to the context of the partner relationship, some fathers also identified the notion that parenting occurs within a specific socio-historical milieu. Fathering therefore occurs in comparison to a specific exemplar (i.e., how their own father parented) or an imagined ideal.

- “It’s difficult to answer because of the definition of ‘father’, there are cultural determinants of what a father or mother should do.”

Table 2.

Prevalence of Theme in Percentage of Total Statements

Theme	Percentage of statements
Parenting in Context	29.5
Teaching	18.0
Financial Responsibility	11.5
Safety and Protection	9.0
General Responsibility	8.3
Upkeep and Maintenance	6.4
Discipline and Self-Control	5.1
Nurturing	4.5
Accessibility	3.2
Play	2.6
Instrumental Care and Routines	1.9

- “I don’t really go by what society expects me to do.”
- “I do think that for us that a lot has changed compared to my dad’s generation.”
- “...it is a lot less defined compared to my dad’s generation.”

Teaching. A total of 18% of statements pertained to the notion that fathers should teach their child about the world as well as facilitating the learning of concepts, skills and encouraging cognitive development. For example fathers stated:

- “Maybe my own most valued role is as trainer and instructor and teacher I guess”
- “I want to take that role on to teach him and try to show him as much as I can”
- “I started out with signing at 6 months, as soon as she started talking, I started speaking to her.”
- “...the stereotypical traditional dad that teaches him about sports but yeah that’s probably about it.”

However, in addition to the teaching of concepts, many fathers also identified the importance of moral teaching (i.e., teaching children right from wrong and instilling desired values) as well as teaching by example (i.e., role modelling).

- “I see my role as a guide, to guide him into the world, to show him what’s good and avoid things that are bad.”
- “I don’t want him to be a bully or anything and my job is to teach him not to be those things and be open-minded and tolerant and compassionate.”
- “My role is to try and teach him right from wrong.”
- “I’ve had expectations for myself like being a good role model.”

Financial Responsibility. The statements in this category were endorsed by a number of fathers. Included here were comments related to providing financially for the family, ensuring bills are paid and long term financial planning.

- “Probably financial responsibilities to be the bread winner.”
- “A father is supposed to provide for their family at some point”
- “I see myself as the provider for the children. I spend a lot of my time at work. So I guess my role would be a provider than a day-to-day caregiver.”
- “You have to go to work to make the money for your family. I want to provide my family with the best way I know how.”

Safety and Protection. Statements in this category referred to part of the father’s role as being aware of the environment as well as ensuring the physical and emotional safety of the child.

- “...being aware of their surroundings,”
- “...make sure they’re protected at all time.”
- “I want to provide a safe home for my kid, and if anyone tries to bring in danger, I will have to do something about it.”
- “I have to make her feel safe”

General Responsibility. Statements in this category reflect the notion that fathers believe they should be able to identify and fulfil the needs of their children. Responsibility could include planning for appointments, activities and childcare, ensuring in general that the child is well cared for, and anticipating the child’s needs.

- “...making sound decisions in regards to his growth and development, and the activities that he is involved in.”

- “there is all of the responsibility that the kids are happy and healthy,”
- “I just try to see what he needs the most,”
- “I brought this child into this world and that is your responsibility to make sure they’re well looked after and cared for,”
- “I’ve got some friends who love making the babies but they don’t look after them”

Domestic Upkeep and Maintenance. Statements in this category further reflect the idea that fathers’ caring for their children can be undertaken in indirect ways. For example, several participants noted that their roles as fathers included things such as the completion of household chores, fixing things around the house and undertaking renovations.

- “The more traditional house stuff, like renovating the basement, that would be my job.”
- “And also the upkeep to the house and doing chores”
- “I’ve already become the one to fix things”
- “Do the yard work and stuff like that.”

Discipline and Self-Control. Some statements subsumed under this category reflect the once dominant notion of father as disciplinarian. As such, some men in this study made statements related to the establishment and enforcement of rules as well as the implementation of behavioural consequences.

- “I have probably become the more disciplinarian.”
- “...you have to control your kid such as they cannot be running around and you have to discipline your children accordingly.”
- “...also show them discipline. You don’t cross your dad was how I was raised.”

However, for some fathers in my study, notions of self-control and self-discipline were also important. For example, the importance of having patience with their child emerged predominantly during discussions of discipline.

- “And personal discipline is important like being able to listen and control your emotions and focus your attention to the individual.”

Nurturing. Several fathers identified the importance of demonstrating basic love, and affection towards their child.

- “Typically mothers have been the nurturing ones but I think fathers should be as well.”
- “Loving them lots”
- “One thing I found interesting is at first, I think my in-laws were really surprised how close (daughter) and I were. At first they thought she was a daddy’s girl. And now they don’t even question it anymore, it’s just the way it is.”

However, some fathers also described showing their nurturing through more active engagement with their children.

- “I like to be really active with him instead of cuddling on the couch and watching television. (mom’s) better at the cuddling, I do it, but I’d rather do the active stuff.”
- “I think guys tend to be more adventurous when it comes to exploring things, maybe we’ll go hiking and get muddy and we’ll go explore things,”

Accessibility. Statements in this category reflect the importance of a father being both psychologically and physically available for interaction with one’s child. While fathers may not be interacting directly with their children, many men stated the importance of “just being there” and “spending time”.

- “Well I guess I’m responsible to be an active parent and be here. I have to be around to do things and help with everything.”
- “I’d rather spend time with my family as much as possible. I think I spend more time with my kids than most guys do.”
- “spend time with her”

Play. A number of fathers also described the importance of being able to play with their child.

- “playing with them, and be a fun dad”
- “I’m also the one you go to where you want to do something stupid or doesn’t make sense, I’m the one to come to.”

Instrumental Care and Routines. A few fathers identified as part of their role tending to the basic day to day care as well as daily routines such as a morning or bedtime routine

- “I’ll usually put him to bed at night and we have our certain things that we both do
- “Our roles are a little different, like I’ll cook supper and stuff and I’ll get up in the middle of the night.”
- “...structuring their world”

However, this category had the fewest number of explicit references.

Thus, by focusing upon the parenting roles and responsibilities men report fulfilling, eleven specific, salient parenting dimensions were identified. Fathers’ understandings of these dimensions in turn informed the articulation of the relevant tasks and items in the PSE scale. The goal was to create items that reflected both the content and the spirit of the participants’ responses. However, before the item pool was

constructed, a review and critique of the qualitative results was sought by a panel of experts.

3.3 Phase 1, Part 2 Methods

3.3.1 Review by Subject Matter Experts. Academic experts in the field of father involvement were sought to provide comments and critiques of the parenting dimensions identified through the qualitative analysis. Requests for feedback were sent to eight prominent researchers in North America and responses were received from three. To supplement the feedback of these three scholars, the perspectives of two other non-academic reviewers were also sought. One of these reviewers has extensive experience working with fathers in the human services field. The second reviewer was an author and social commentator who has written many articles in the popular press about fathering.

These expert consultants were provided with background about the current study, a description of the parenting dimensions identified from the qualitative analysis, and some preliminary draft items for illustrative purposes. The experts were asked to review the material with the following questions specifically in mind:

1. Are the most salient aspects of fathering young children being addressed?
2. Are there important areas that are not being represented?
3. Is there anything else missing?
4. Are there certain key items that you believe should be included on a fathering self-efficacy scale?

3.4 Phase 1, Part 2 Results

In relation to the first question posed, there was consensus that many of the key aspects of fathering were present in the existing analysis. For example, there was

agreement among three experts that the co-parenting relationship was an integral part of father involvement as was the safety/protection dimension. It was also noted by another expert that the societal context in which men, particularly young fathers, live is an important context for parenting.

Helpful feedback was also received in relation to the second and third questions regarding important aspects of fathering that were not represented. One of the experts provided recent and forthcoming publications that could be cross-referenced with the proposed self-efficacy dimensions. The same expert suggested that what had been termed *general responsibility* was more consistent with an executive function of fatherhood. A second expert reiterated the idea that general responsibility should aptly be relabelled *process responsibility*. He also confirmed that financial responsibility was typically placed in a different dimension. Another suggestion was the inclusion of an *indirect care* category as it was inferred that it was alluded to but not explicitly included in the analysis.

In relation to the fourth question regarding items that should be included in a PSE scale, several experts provided comments and suggestions for wording of items. Ideas were given for specific items relating to parenting in the context of a co-parenting relationship, responsibility for child care, protection, discipline, teaching and indirect care. The experts' critical feedback concerning parenting domains, parenting tasks and item construction was then incorporated into the instrument as scale items were drafted.

3.5 Scale Item Development

After receiving feedback from subject matter experts, actual scale items were drafted in accordance with the following definition of PSE "beliefs or judgements a

parent holds of their capabilities to organize and execute a set of tasks related to parenting a child” (de Montigny and Lacharite, 2005, p. 390). Statements made by fathers were frequently referenced to ensure draft items were consistent with the ideas present within each of the eleven identified themes. A few items were suggested by subject matter experts and these items were also included. To reflect the prevalence of each theme, six items were drafted for the three most prevalent themes, five items were drafted for the next five most prevalent themes, and four items for each of the final three themes. According to Loevinger (1957), it is wise when one is creating the initial pool of scale items to be overinclusive to ensure that all potential items are relevant and representative of the construct being assessed. Thus, while it was anticipated that the final version of a fathering PSE scale would consist of approximately 20-30 items, in the interests of overinclusivity, the initial item pool contained 50-60 items.

Item construction was grounded in Bandura’s (1997) social cognitive theory and followed his recommendations regarding assessment of self-efficacy (Bandura, 2006). As recommended by Bandura, items were constructed using language such as *can do* as opposed to *will do*. While Bandura argues that all items should be positively worded and scored in the same direction, other writers recommend including at least a few negatively worded items (i.e., reverse scored items) to guard against participant response bias (Simms, 2008).

Following other self-efficacy scales, it was decided to have participants rate the strength of their beliefs on a Likert scale from 1 to 9. An example of this type of scale are items created by Bandura (2006) to assess parents’ beliefs regarding their efficacy to influence their children’s school related activities. One such item is:

How much can you do to help your children work hard at their schoolwork?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some influence		Quite a bit		A great deal

Some initial items were drafted for this research using Bandura's 9-point scale and anchors. However, wording of the items was awkward and confusing. Kendall and Bloomfield (2005), used an 11-point Likert scale with anchors of *completely disagree* to *completely agree*. Initial items were much clearer using Kendall and Bloomfield's anchors. Since little is gained in terms of response variability between a nine and eleven-point scale (Tabachnick & Fidell, 2007), it was decided to maintain Bandura's 9-point scale but use Kendall and Bloomfield's anchors.

Items were then drafted to reflect both the content and the spirit of the responses of the father interview participants. The other existing domain-specific PSE scales for use with young children were also consulted to determine the degree of overlap present with the current draft items. While there was some similarity of items with Coleman and Karraker (2003) and Kendall and Bloomfield (2005), the vast majority of items were new. Many of the specific items suggested by experts were also included with minor wording revisions to better reflect the guiding PSE definition. Following expert advice, the category previously labelled *general responsibility* was renamed *process responsibility* to better reflect theoretical advances in the father involvement literature. In addition, items were added to the category previously labelled *domestic upkeep and maintenance* to better reflect the theme of *indirect care*. These additions were deemed to be in keeping with statements and sentiments expressed in the father interviews.

A total of 55 items were drafted to create an initial version of the Fathering Self-Efficacy Scale (FSES; Table 3). The draft version of the FSES was piloted with a small convenience sample of three fathers known to the researcher. This initial test was done to ensure clarity of the items and ease of completion. No substantive changes were made to the scale following this pilot test.

3.6 Comparing Identified Parenting Dimensions with Existing Measures

Prior to the next phase of the research, the second research question was addressed (i. e., “Do fathers identify parenting responsibilities that are not adequately represented on existing, maternally-generated PSE measures?”). This research question needed to be answered first in order to proceed with the structural and external validity phases of the research. The eleven parenting dimensions identified by fathers were compared with the dimensions of the two other existing domain-specific PSE scales designed for use with mothers of toddlers and young children.

The two most commonly used domain-specific maternal self-efficacy scales are those designed by Coleman and Karraker (2003), and Kendall and Bloomfield (2005). Coleman and Karraker’s (2003) scale assesses parents’ perceived efficacy across seven dimensions of parenting young children: emotional availability, nurturance, protection, discipline, play, teaching, and instrumental care. Kendall and Bloomfield’s (2005) 82-item scale assesses domain-specific PSE in parents of children up to the age of ten on nine subscales: affection/emotion, play, empathy/understanding, routines/goals, control,

Table 3.

Father Self-Efficacy Scale Draft Items

Draft items
Teaching
1. I am a positive role model for my child
2. I am able to teach my child right from wrong
3. I know how to encourage my child's interest in the world
4. I am able to instil important values in my child
5. I am not very good at teaching my child how the world works*
6. I am able to teach my child skills such as catching a ball, using tools, and using playground equipment
Parenting in Context
7. I am able to be more "hands on" with my child than my father was with me
8. I work well with my partner or spouse to meet my child's needs
9. I do less childcare than most fathers I know*
10. I'm usually able to my fair share of the childcare responsibilities
11. I am as good a parent as my partner is
12. I know what to do when my partner needs parenting support
Financial Responsibility
13. I am able to meet the immediate financial needs of my family
14. I am able to provide financially for my family in the long term

Table 3 continued.

Father Self-Efficacy Scale Draft Items

15. I am able to contribute my fair share to our family's income

16. I am able to pay most bills on time

17. I usually am able to put money aside for my child's future

18. Even in tough times, I am able to provide financially for my family

Process Responsibility

19. I can usually anticipate what my child will ask for before he or she does

20. I am able to ensure that my child is well taken care of

21. I am able to arrange for appropriate babysitting

22. I am able to book the health appointments my child needs and make sure that he or she attends these appointments.

23. If my partner had to suddenly go away for a week, I would be able to step in and be completely in charge

Indirect Care

24. I always ensure that my home is clean and tidy

25. I am able to keep my home well maintained

26. I buy the clothes and personal care items my child needs

27. I am able to arrange for repairs to be done to my home when needed

28. I am able to plan my child's social and recreational activities

Table 3 continued.

Father Self-Efficacy Scale Draft Items

Safety and Protection

- 29. I am able to keep my child safe
- 30. I am able to respond appropriately in emergency situations when my child is hurt
- 31. I know how to arrange my home to minimize safety hazards
- 32. I have a really hard time judging whether or not an activity is safe for my child*
- 33. I know when it is time to step in to protect my child from harm

Discipline and Control

- 34. I am able to explain rules to my child in a way he or she can understand.
- 35. I am able to keep myself calm when my child misbehaves
- 36. I am patient with my child when he or she tests the rules I put in place
- 37. I often don't know what to do when my child misbehaves*
- 38. I am able to help my child cope with his or her feelings

Nurturing

- 39. I can be affectionate towards my child without worrying about what other people think.
 - 40. I can sense when my child is starting to feel frustrated or upset
 - 41. I express my love and caring for my child through the games and activities we share
 - 42. I am able to comfort my child
 - 43. I don't know how to respond to my child when he or she is feeling upset or frustrated*
-

Table 3 continued.

Father Self-Efficacy Scale Draft Items

Accessibility

- 44. I am always there for my child
- 45. I am able to make time to spend with my child
- 46. I am mentally and emotionally there for my child when he or she needs me
- 47. I have a lot of difficulty balancing the needs of my work with the needs of my family*

Instrumental Care and Routines

- 48. I am able to tend to most aspects of my child's daily care such as feeding, bathing, sleep routines
- 49. I can provide the daily care my child needs
- 50. I have difficulty maintaining consistent routines for my child*
- 51. I have a good understanding of what my child likes and dislikes

Play

- 52. I know how to play with my child at his or her level
 - 53. I can always think of fun things to do with my child
 - 54. I can be silly and playful with my child
 - 55. I know what toys and games interest my child
-

Note. Items with “*” are reverse scored

boundaries, pressures, acceptance, and learning/knowledge. These nine subscales contain substantial overlap with Coleman and Karraker's (2003) dimensions.

In comparison to the other existing scales, it is apparent that at least four of the parenting dimensions found on the FSES are not represented on any PSE scales: parenting in context, financial responsibility, process responsibility, indirect care. Three other dimensions (teaching, accessibility, nurturing) have some overlap with existing scales; however, it appears that fathers in the current study understand these dimensions in ways that are qualitatively different than mothers. Taken together, these differences between parenting dimensions identified by fathers in this study and with existing scales provide justification for further exploration and testing of the FSES.

4.0 PHASE 2

This second phase of the research corresponds to Loevinger's (1957) structural validity phase of scale development in which draft scale items are completed by participants and their responses to the items are evaluated psychometrically.

4.1 Phase 2 Methods

4.1.1 Research Ethics. Phase 2 and Phase 3 of this research received approval from the Research Ethics Board at the University of Regina (Appendix D).

4.1.2 Procedure. It is becoming increasingly common to collect data over the internet for social science research in general (Hoonakker & Carayon, 2009) and to gather initial validation evidence for new scales in particular (e. g., Daniel, Bridges & Martens, 2013). Studies have demonstrated that data collected on the internet are reliable and valid (Schwarzer, Mueller, & Greenglass, 1999), and results obtained do not differ from more traditional paper and pencil methods (Ritter, Lorig, Laurent & Matthews, 2004). Some scholars have noted that internet research reduces the amount of time needed to spend in recruitment and as such is an excellent method for getting the sample sizes necessary to validate new instruments (Riva, Teruzzi, & Anolli, 2003). While there may be concern that online surveys exclude some individuals, data for 2010 from Statistics Canada's Canadian Internet Use Survey found that 79% of Canadians had home internet access and 93% of households of three or more people had home internet access (Statistics Canada, 2011). Internet surveys are thus a reliable, efficient and valid investigative procedure.

Fathers were invited to complete the draft FSES online through the use of Survey Monkey internet software (www.surveymonkey.com). Survey Monkey employs a 128-bit

SSL encryption protocol (i.e., the same protocol used by financial institutions) to ensure the security of the test data. When potential participants were directed to the online survey, an introductory page was shown that included an item for them to check off to indicate their consent to participate (Appendix E). Consenting fathers then completed the 55 item draft version of the FSES and a demographic profile (Appendix F). Participants were then informed that there would be a follow-up study and they were invited to provide their email address if they were interested in participating in the follow-up study. In order to match responses to the subsequent study while maintaining privacy, participants were asked to create their own unique identification number by providing the last four digits of their home telephone number followed by the first two numbers of their house or building number. Participants did not receive any form of compensation for their involvement in this study.

Canadian fathers with at least one child between the ages of 2 to 6-years-old were eligible to participate. This age range was chosen in order to provide a sample similar to the one used in interviews to generate the FSES items. However, the age range was extended in order to sample a fuller range of preschool children and to be consistent with other recent PSE studies with young children (Meunier & Roskam, 2009; Murdock, 2012). The sample was further limited to families in which the child was not a twin or triplet, and developmental disabilities were not believed to be present.

Fathers were recruited by a variety of means. First, a classified advertisement was placed on usedregina.com in the community notices, information wanted section (see Appendix G for the text of the ad).

Second, a telephone call was placed to each daycare facility in Regina. The purpose of the study was explained to each director and inquiries were made as to whether there may be any parents who would qualify for the study and be interested in obtaining more information. It was then mutually determined how best to recruit potential participants for this study from their clientele. Typically, directors agreed to either put up a poster in their centre (Appendix H) or to circulate a call to participate to daycare parents via email.

Third, potential participants were sought through a parent-child music program. Four of these classes were visited in person where a brief overview of the study was provided to parents. Cards with the researcher's name, email address and internet link to the survey were made available. Using the principles of snowball sampling (Mertens, 2005), parents were also encouraged to pass along these information cards to anyone they thought may be interested in participating in the study. The link to the survey was also posted on the local music class website by one of the instructors.

Fourth, information about the study and an invitation to participate was circulated to all registered students at the University of Regina via the Student Affairs Office, and to staff and faculty via the university's miscellaneous list serve. Following this posting, the link to the survey was circulated on Twitter.com by a faculty member with a substantial online following.

Fifth, information about the study, an invitation to participate, and the survey link was posted by a locally run website that promotes events, products and services for children and families. Lastly, the researcher personally contacted individuals known to

have small children to either invite their participation or to pass along contact information to anyone they knew who may fit the inclusion criteria.

4.1.3 Participants. Using the recruiting strategies described above, 397 fathers began the online survey and 260 completed all items. Of those 260 participants, 17 had children whose ages were out of the requested age range, 11 indicated that their preschooler was from a multiple birth, and six indicated their child had received a diagnosis of a developmental disability. A further two participants were excluded as they indicated they lived outside of Canada. Therefore, the final study sample consisted of 224 fathers. Of these 224 fathers, 152 of them indicated they would be willing to participate in the next phase of the research and provided their email contact information.

Table 4 displays the demographic information regarding the study sample. The average age of fathers in this study was 35.8 ($SD = 5.4$). The majority were legally married (87.9%) and Caucasian (93.8%). Overall, participants were well-educated, with 79% reporting receiving a postsecondary degree or diploma. Participants reported moderate to high levels of income, with 80.7% reporting a total family income of at least \$60,000. In terms of paid work, 92.0% were employed and averaged 39.0 hours of work per week. The number of children in the family ranged from one to six with an average of 2.2 children per family. The target children that fathers were asked to think about when completing the FSES ranged in age from 24 to 72 months and were just under 4 years of age on average ($M = 46.3$ months; $SD = 13.2$). Slightly over half of the children were male (54.9%).

4.1.4 Analysis Plan. Based on Clark and Watson (1995), preliminary analyses were conducted and decisions were made regarding the inclusion or exclusion of

Table 4

Phase 2 Participant Demographic Information.

Province of Residence	
Alberta	25 (11.2%)
British Columbia	16 (7.1%)
Manitoba	3 (1.3%)
New Brunswick	1 (0.4%)
Nova Scotia	1 (0.4%)
Ontario	12 (5.4%)
Quebec	1 (0.4%)
Saskatchewan	165 (73.7%)
Marital Status	
Single	6 (2.7%)
Married	197 (87.9%)
Common Law	17 (7.6%)
Separated	1 (0.4%)
Divorced	3 (1.3%)
Age, <i>M (SD)</i>	35.8 (5.4)

Table 4 continued

Phase 2 Participant Demographic Information

Ethnicity

Caucasian	210 (93.8%)
Aboriginal	2 (0.9%)
African	2 (0.9%)
Asian	2 (0.9%)
Hispanic	3 (1.3%)
Middle Eastern	2 (0.9%)
Mixed	5 (2.2%)

Education

11 years or less	1 (0.4%)
High School	16 (7.1%)
Some Postsecondary	30 (13.4%)
College / Tech	43 (19.2%)
Undergraduate Degree	80 (35.7%)
Graduate Degree	54 (24.1)

Employed in paid work	206 (92.0%)
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Hours worked <i>M (S.D.)</i>	39.0 (15.2)
------------------------------	-------------

Table 4 continued

Phase 2 Participant Demographic Information

Family Income	
< \$20, 000	7 (2.1%)
\$20,000 – 40,000	15 (6.7%)
\$40,000 – 60,000	18 (8.0%)
\$60,000 – 80,000	30 (13.4%)
\$80,000 – 100,000	38 (17.0%)
> \$100,000	115 (51.3%)
Child Sex	
Male	123 (54.9%)
Female	101 (45.1%)
Child Age in Months, <i>M (SD)</i>	46.3 (13.2)
No. Children in Family, <i>M (SD)</i>	2.2 (1.0)

individual items. Analyses included an exploration of highly unbalanced items and an examination of item-to-total correlations. To empirically assess the hypothesized underlying structure of a scale and to further aid in data reduction, exploratory factor analysis was conducted. Recommendations by Costello and Osbourne (2005) regarding factor extraction, rotation, and the number of factors to retain were followed. Finally, inter-item correlations of items comprising the retained factors were examined to check for possible redundant items. With 224 participants, this study exceeds minimum recommendations of sample size (Floyd & Widaman, 1995; Tabachnick & Fidell, 2007).

4.2 Phase 2 Results

4.2.1 Initial Descriptive Analyses. First, to assess for the presence of outliers, the overall distribution of FSES scores was explored. Scores of the 55 items were averaged to derive a mean FSES score that could potentially range from 1 – 9. Average scores were chosen as there is precedence in the literature for using mean scores in family functioning measures (Epstein, Baldwin, & Bishop, 1983) and in efficacy measures (Salonen et al., 2009).

Scores on the FSES were standardized and one participant's score was an outlier (i. e., $z = 5.9$). As such, the participant's scores on all measures were deleted from the dataset and not included in the subsequent analyses. Following deletion, average FSES scores ranged from 5.0 to 8.9 ($M = 7.58$; $SD = .72$). The scores were non-normally distributed with skewness of $-.93$ ($SE = 0.16$) and kurtosis of 1.6 ($SE = 0.33$).

4.2.2 Individual Item Distributions. Next, the distribution of each FSES item was assessed to determine which items were highly unbalanced and thus candidates for deletion. There were 12 items for which 80% of fathers responded either 8 or 9 (i.e.,

completely agree). These items with the corresponding percentage endorsement are detailed in Table 5. Given the lack of variability of responses to these 12 items, it was decided to exclude them from further analyses.

4.2.3 Reliability and Item-to-Total Correlations. Next, the reliability of the remaining 43 items using Cronbach's alpha was examined as was the individual item-to-total correlations. Two items had correlations $\leq .10$: "I have a really hard time judging whether or not an activity is safe for my child", $r = .10$; "I am not very good at teaching my child how the world works", $r = .10$. With those two items removed from the analysis, the internal reliability of the remaining 41 items was $\alpha = .91$ and the corrected item-to-total correlations ranged from $r = .14$ to $r = .71$ with a mean corrected item to total correlation of .47.

4.2.4 Exploratory Factor Analyses. The next step in the analysis was to explore the latent structure of the remaining 41 FSES items through the use of Exploratory Factor Analysis (EFA). Since the overall FSES scores were found to be negatively skewed and positively kurtotic, factors were extracted using the principal axis factoring method. As the factors were expected to correlate with each other, promax rotation was employed. Retention of factors was informed by first conducting a parallel analysis using SPSS syntax written by O'Connor (2000) and then by examining the scree plot. To improve the replicability of results, items that loaded strongly on one factor (i.e., ≥ 0.50) and minimally on any others (i.e., $\leq .20$) were retained.

To help determine the number of factors to extract, a parallel analysis was first conducted comparing the actual data set to 1000 randomly-generated parallel data sets. As can be seen in Table 6, the eighth eigenvalue from the actual data exceeds the eighth

Table 5.

Items for Which Over 80 % of Participants Responded Either 8 or 9

Item	%
2. I am able to teach my child right from wrong	81.1
15. I am able to contribute my fair share to our family's income	85.2
16. I am able to pay most bills on time	89.7
20. I am able to ensure that my child is well taken care of	84.7
23. If my partner had to suddenly go away for a week, I would be able to step in and be completely in charge	85.2
29. I am able to keep my child safe	89.2
30. I am able to respond appropriately in emergency situations when my child is hurt	87.9
39. I can be affectionate towards my child without worrying about what other people think.	88.8
41. I express my love and caring for my child through the games and activities we share	80.7
42. I am able to comfort my child	82.9
54. I can be silly and playful with my child	87.4
55. I know what toys and games interest my child	82.5

eigenvalue from the random data, however the ninth eigenvalue of the actual data is smaller than that generated from the random data sets. Thus, the results of this analysis suggested that eight factors should be retained.

Following the results of the parallel analysis, an exploratory factor analysis was conducted using SPSS 18 extracting eight factors. The Kaiser-Meyer-Olkin statistic of sampling adequacy was .869 and Bartlett's test of sphericity was significant ($p < .001$) indicating that the data were appropriate for factor analysis (Field 2005). In total, the eight factors accounted for 51.1% of the variance. Parallel analysis however, tends to yield more factors than are typically warranted (Buja & Eyuboglu, 1992). According to Costello and Osbourne (2005), the scree plot is considered to be among the best alternatives available for researchers when deciding how many factors to retain. The scree plot suggests that three or perhaps four factors are present in the data set (Figure 1). To determine the best factor structure from among the most likely alternatives, three more EFAs were conducted forcing five, four and three factors.

The five factor solution accounted for 45.5% of the variance. The fifth factor contained only two items that loaded greater than .50: "I am patient with my child when he or she tests the rules I put in place"; "I am able to keep myself calm when my child misbehaves". When the EFA forcing four factors was conducted, the results accounted for 42.7 % of the variance and yielded four cleanly loading factors with no cross-loadings (Table 7). The first factor comprises 12 items with loadings greater than .50. The items of this first factor deal with certain aspects of teaching and discipline as well as understanding and responding to the child's needs. As such, this factor could broadly be called Positive Engagement. The two items that had previously loaded onto the fifth

Table 6

Parallel Analysis Comparison of Raw data Eigenvalues with the 95th Percentile Random Data Eigenvalues

Factor	Raw data Eigenvalue	95 th percentile Random Data Eigenvalue
1	11.07	1.24
2	3.00	1.10
3	1.87	1.01
4	1.64	.92
5	1.20	.85
6	.92	.79
7	.75	.73
8	.72	.67
9	.61	.63

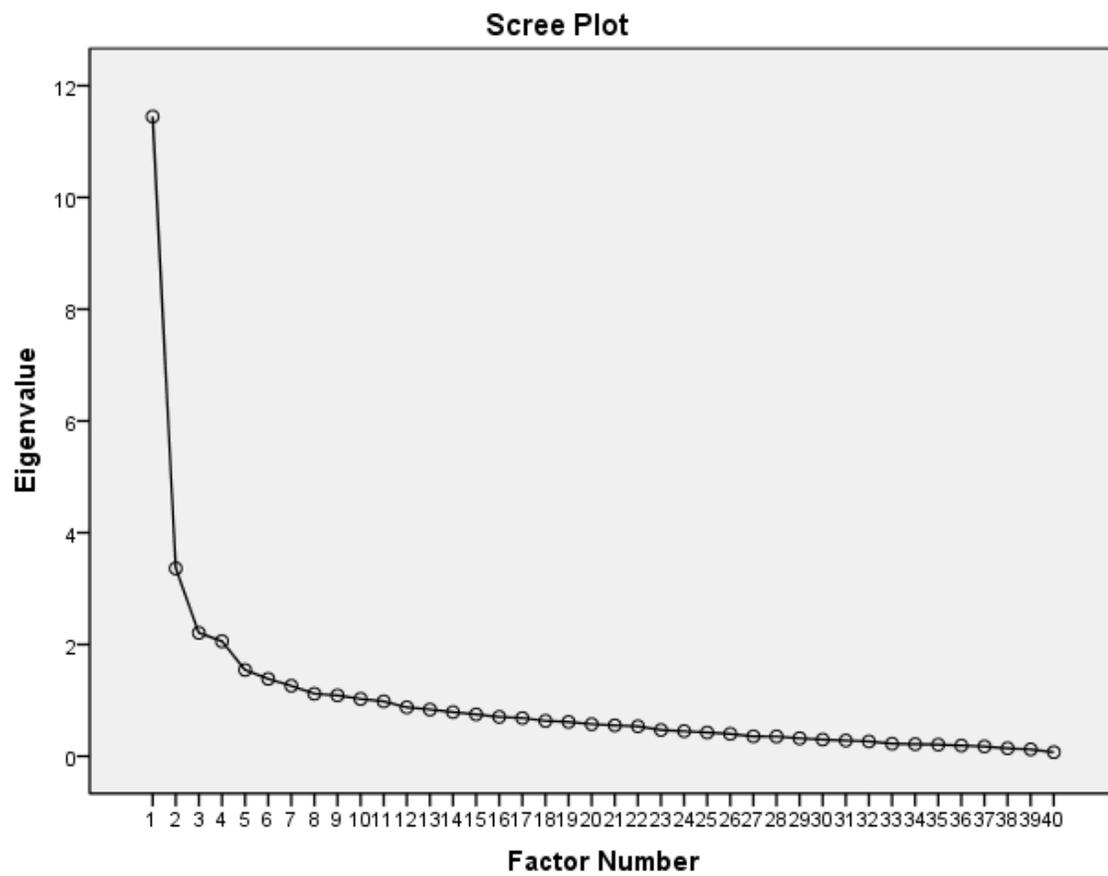


Figure 1. Scree plot produced from the exploratory factor analysis of the Fathering Self Efficacy Scale draft items.

factor were now present on the first factor. The second factor comprises six items that appear to relate to some aspect of tending to the child's needs and as such, this second factor can be called, Direct Care. The third factor contains four items that clearly relate to providing for the family. This third factor can be called Financial Responsibility.

Finally, the fourth factor comprises five items that pertain to home maintenance and advance planning to meet the child's needs. This fourth factor can thus be referred to as Indirect Care.

By comparison, the three factor EFA accounted for 38.7% of the variance and found three cleanly loading factors with no cross-loadings (Table 8). The factors that emerged were very similar to the first three factors from the previous analysis. The first factor contains the same 12 items as the four factor solution with the addition of one item ("I know how to arrange my home to minimize safety hazards"). The first factor can still broadly be called Positive Engagement. The second factor comprises the same six items that made up the Direct Care factor in the previous analysis. The third factor remains unchanged from the previous analysis containing the same four items that pertain to Financial Responsibility.

Prior to reporting the internal consistency of the overall scale and the subscales, the inter-item correlations of items comprising each of the three and four factor solutions were examined. There were two items on Factor 1, Positive Engagement, that were highly correlated with each other. Item 36 ("I am patient with my child when he or she tests the rules I put in place") and item 35 ("I am able to keep myself calm when my child misbehaves") correlated with each other, $r = .89$. Upon reflection, these two items are very similar in wording and given such high correlations, it was decided that one of the

Table 7

Factor Loadings for Four Factor EFA

Item	Factor			
	1	2	3	4
36. I am patient with my child when he or she tests the rules I put in place	.831	-.023	-.147	-.176
34. I am able to explain rules to my child in a way he or she can understand.	.780	-.095	-.151	.050
3. I know how to encourage my child's interest in the world	.771	-.153	-.047	.001
1. I am a positive role model for my child	.661	-.018	.161	-.029
38. I am able to help my child cope with his or her feelings	.658	.022	-.012	.049
4. I am able to instill important values in my child	.647	-.092	.175	-.049
46. I am mentally and emotionally there for my child when he or she needs me	.589	.202	.109	.017
52. I know how to play with my child at his or her level	.588	.020	.121	.017
33. I know when it is time to step in to protect my child from harm	.580	-.167	.094	.077
53. I can always think of fun things to do with my child	.579	-.026	.065	.151

Table 7 continued

Factor Loadings for Four Factor EFA

40. I can sense when my child is starting to feel frustrated or upset	.528	.035	.057	-.011
51. I have a good understanding of what my child likes and dislikes	.490	.164	.061	.055
31. I know how to arrange my home to minimize safety hazards	.476	-.123	.053	.298
44. I am always there for my child	.473	.323	.128	-.081
12. I know what to do when my partner needs parenting support	.449	.070	-.036	.163
8. I work well with my partner or spouse to meet my child's needs	.423	.132	.157	-.112
19. I can usually anticipate what my child will ask for before he or she does	.396	.114	-.157	.078
6. I am able to teach my child skills such as catching a ball, using tools, and using playground equipment	.369	-.120	.191	.137
10. I am as good a parent as my partner is	.304	.288	-.086	.105
37. I often don't know what to do when my child misbehaves	.238	.125	-.067	.031
7. I am able to be more "hands on" with my child than my father was with me	.230	-.062	-.090	.029

Table 7 continued

Factor Loadings for Four Factor EFA

43. I don't know how to respond to my child when he or she is feeling upset or frustrated	.225	.212	-.056	-.027
48. I am able to tend to most aspects of my child's daily care such as feeding, bathing, sleep routines	-.168	.811	.019	-.070
9. I'm usually able to do my fair share of the childcare responsibilities	.032	.723	-.084	.005
49. I can provide the daily care my child needs	.067	.669	-.066	.001
11. I do less childcare than most fathers I know	-.157	.588	-.056	.136
47. I have a lot of difficulty balancing the needs of my work with the needs of my family	-.100	.557	.023	-.005
45. I am able to make time to spend with my child	.220	.526	.136	.053
50. I have difficulty maintaining consistent routines for my child	.066	.321	.158	-.053
14. I am able to provide financially for my family in the long term	-.030	-.047	.886	.008
13. I am able to meet the immediate financial needs of my family	-.064	-.041	.867	-.050
18. Even in tough times, I am able provide financially for my family	-.026	-.013	.834	.018
17. I usually am able to put money aside for my child's future	-.002	.069	.700	-.070

Table 7 continued

Factor Loadings for Four Factor EFA

25. I am able to keep my home well maintained	-.163	.015	.107	.886
24. I always ensure that my home is clean and tidy	-.116	.095	.028	.784
27. I am able to plan my child's social and recreational activities	.195	.071	-.185	.617
26. I am able to arrange for repairs to be done to my home when needed	.000	.008	.207	.608
22. I am able to book the health appointments my child needs and make sure that he or she attends these appointments.	.039	.028	-.170	.530
28. I buy the clothes and personal care items my child needs	.165	-.104	-.224	.411
21. I am able to arrange for appropriate babysitting	.078	-.078	.131	.348

Table 8

Factor Loadings for the Three Factor EFA

Item	Factor		
	1	2	3
34. I am able to explain rules to my child in a way he or she can understand.	.819	-.079	-.151
3. I know how to encourage my child's interest in the world	.800	-.170	-.049
36. I am patient with my child when he or she tests the rules I put in place	.795	-.124	-.175
38. I am able to help my child cope with his or her feelings	.672	.042	-.010
1. I am a positive role model for my child	.656	-.051	.156
4. I am able to instill important values in my child	.647	-.141	.169
53. I can always think of fun things to do with my child	.619	.048	.085
33. I know when it is time to step in to protect my child from harm	.617	-.141	.109
52. I know how to play with my child at his or her level	.591	.018	.120
46. I am mentally and emotionally there for my child when he or she needs me	.572	.204	.101

Table 8 continued

Factor Loadings for Three Factor EFA

31. I know how to arrange my home to minimize safety hazards	.559	.034	.096
40. I can sense when my child is starting to feel frustrated or upset	.525	.019	.050
51. I have a good understanding of what my child likes and dislikes	.489	.189	.060
12. I know what to do when my partner needs parenting support	.480	.162	-.017
44. I am always there for my child	.422	.270	.101
19. I can usually anticipate what my child will ask for before he or she does	.412	.161	-.156
6. I am able to teach my child skills such as catching a ball, using tools, and using playground equipment	.411	-.059	.214
8. I work well with my partner or spouse to meet my child's needs	.381	.060	.135
28. I buy the clothes and personal care items my child needs	.269	.136	-.156
7. I am able to be more "hands on" with my child than my father was with me	.253	-.051	-.089
37. I often don't know what to do when my child misbehaves	.239	.143	-.072

Table 8 continued

Factor Loadings for Three Factor EFA

fse43re I don't know how to respond to my child when he or she is feeling upset or frustrated	.202	.200	-.071
fse48 I am able to tend to most aspects of my child's daily care such as feeding, bathing, sleep routines	-.240	.754	-.025
fse9 I'm usually able to do my fair share of the childcare responsibilities	-.029	.730	-.111
11. I do less childcare than most fathers I know	-.185	.684	-.060
49. I can provide the daily care my child needs	.014	.669	-.094
47. I have a lot of difficulty balancing the needs of my work with the needs of my family	-.149	.556	-.001
45. I am able to make time to spend with my child	.180	.554	.123
24. I always ensure that my home is clean and tidy	.090	.492	.121
25. I am able to keep my home well maintained	.086	.452	.204
27. I am able to plan my child's social and recreational activities	.330	.419	-.092
10. I am as good a parent as my partner is	.305	.352	-.086
22. I am able to book the health appointments my child needs and make sure that he or she attends these appointments.	.156	.334	-.089
26. I am able to arrange for repairs to be done to my home when needed	.148	.326	.282

Table 8 continued

Factor Loadings for Three Factor EFA

50. I have difficulty maintaining consistent routines for my child	.020	.287	.138
14. I am able to provide financially for my family in the long term	-.065	-.071	.915
13. I am able to meet the immediate financial needs of my family	-.111	-.097	.884
18. Even in tough times, I am able provide financially for my family	-.059	-.030	.860
17. I usually am able to put money aside for my child's future	-.053	.007	.700
21. I am able to arrange for appropriate babysitting	.152	.118	.190

items should be deleted from the scale. Item 35 was selected for elimination because it has a slightly lower factor loading compared to item 36 on both the three and four factor solution. The remaining items had acceptable inter-item correlations. For the four-factor EFA, the internal reliability for all items loading above .50 is $\alpha = .89$. For the three-factor EFA, the internal reliability for all items loading above .50 is $\alpha = .88$. The internal reliability of the factors and the intercorrelations between factors are found on Table 9.

Both the three and four factor solutions are plausible and make theoretical sense. Thus, for the next phase of the research, the decision was made to retain the items comprising the fourth factor as well as the additional Factor 1 item found on the three factor solution. By doing so it would then be possible to test both alternate models in a new sample of fathers. In reviewing the items comprising the fourth factor, it was observed that one of the items was double barreled, "I am able to book the health appointments my child needs and make sure he or she attends these appointments". This item was split into two separate items for the next phase of the research: "I am able to book the health care appointments my child needs", and "I ensure that my child attends the health appointments he or she needs". Therefore, a total of 28 items were tested in the next phase of the research.

Table 9

Correlations Among the Factors.

	1.	2.	3.	4.
1. Positive Engagement	.89 / .90	.53	.41	.58
2. Direct Care	.62	.78	.12	.47
3. Financial Responsibility	.46	.23	.88	.29
4. Indirect Care.	--	--	--	.81

Note. The correlations from the four factor solution are above the diagonal and the correlations from the three factor solution are below the diagonal. The internal consistency using Cronbach's alpha of each factor is reported on the diagonal. For the four factor solution, Factor 1 $\alpha = .89$ and the three factor solution Factor 1 $\alpha = .90$

5.0 PHASE 3

Phase 3 corresponds to Lovinger's (1957) external validity phase of scale development in which associations between the new scale and existing scales are examined. The goals of this stage are to provide an examination of the convergent, discriminant and concurrent validity of the new measure. The factorial validity of the FSES was also tested using confirmatory factor analysis.

5.1 Study 3 Methods

5.1.1 Procedure. The procedure for Phase 3 was similar to Phase 2. Data were again collected online using Survey Monkey and Canadian fathers of preschool children were invited to participate. In addition to the FSES and the demographic profile, fathers were asked to complete measures of general self-efficacy, domain general PSE, father involvement, parenting stress and depressive symptoms. As part of the validation process, spousal reports of fathering self-efficacy were also sought. Once fathers had completed their questionnaires and demographic profile, they were asked whether or not they believed their spouse would be interested in participating. If they answered affirmatively, fathers were asked to provide their spouses' email address and first name. Spouses were then sent one email, personalized with their first name, soliciting their participation (Appendix I). Mothers were asked to complete the FSES as they believed it applied to their spouses, a measure of father involvement and a demographic profile. The spousal version of the FSES was identical to the father self-report version with wording changes to the initial articles of each item from *I can* to *my spouse is able to*.

In some cases as the data collection phase of the project continued, it was anticipated that mothers may participate in the study before their spouses. To prepare for

this possibility, after mothers had completed their questionnaires and demographics, they were asked whether or not their spouse had participated in the research. If they answered negatively, mothers were asked to provide their spouses' email address and first name. Spouses were then sent one email, personalized with their first name, soliciting their participation (Appendix J). As a means of matching spousal reports to fathers' data, participants were asked to create a unique tracking number when they completed the demographic profile. This number comprised the last four digits of the participants' home telephone numbers and the first two digits of their house or apartment numbers. Participants did not receive any form of compensation for their involvement in this study.

As in the previous phase of the research, the sample was limited to families in which the child was not a twin or triplet, and developmental disabilities were not believed to be present. As spousal involvement was a key consideration of the validation of the measure, recruitment efforts were focused upon fathers who were cohabiting with their child's mother. The decision was made to limit the sample in this way as previous research has documented how differing parenting arrangements are associated with differing experiences and stresses (Fabricus, Braver, Diaz, & Velez, 2010; Marsiglio & Hinojosa, 2010). As such, the relationships between PSE and the external validity measures may also differ.

5.1.2 Recruitment. E-mails were sent to the 152 participants from Study 2 who indicated they would be interested in participating in this final phase of the research (Appendix K). Only two e-mails were undeliverable. As with Study 2, the majority of advertising took place online and similar recruiting efforts within the Regina area took place. These efforts included advertising in the local media, posting on two separate,

locally run websites that promote events, products and services for children and families, a community baby shower, and a trade fair which targeted parents with infants, toddlers and preschool aged children.

Additional efforts were made to advertise nationally. For example, study information was posted through the online newsletter of the pan-Canadian SSHRC and CURA funded Father Involvement Research Alliance (FIRA). The three provincial father involvement co-ordinators from British Columbia, Alberta, and Ontario agreed to circulate study information to their respective networks. Additional online recruiting took place in Ontario via the Maternal Newborn and Early Child Development Resource Centre and the Ontario Health Promotion Office. Advertising for the study was also provided on the website *parents2parents.ca* as well as through their various social media outlets. Subsequent social media exposure was secured courtesy of the Vanier Institute of the Family and the Canadian Association of Family Resource Programs (FRP Canada). Study information and a call for participants was also sent to Graduate Student Associations at 28 post-secondary institutions across the country. Finally, a paid online advertisement was posted on Facebook targeting married men in Canada between the ages of 21 and 50 (Appendix L).

5.1.3 Participants. Using the recruiting strategies described above, 394 fathers and 152 mothers began the research by providing demographic information; however 48 fathers and 20 mothers did not complete all of the FSES items. Of the remaining participants, six mothers and three fathers were excluded because they indicated they lived outside of Canada. A further four fathers were removed from the analysis because they indicated that they were either single or divorced. There were 62 fathers who

indicated that they had also participated in the previous phase of the research. Three additional fathers were removed since they responded to the FSES items by responding with the same extreme values (i.e., all 1's or 9's) to all items. Of the remaining 277 potential father participants, 17 identified a child that was out of the requested age range, seven indicated that their preschooler was from a multiple birth, and three indicated their child had received a diagnosis of a developmental disability. Therefore, the total number of new participants for this phase of the research was 247 fathers and 126 mothers. However, of these 126 mothers, 66 were able to be matched to data from fathers using the procedures described in the Analysis Plan section. Therefore, only the data from these 66 mothers was able to be utilized for analysis.

Table 10 displays the demographic information regarding the study sample. The average age of parents in this study was 36.9 years ($SD = 5.3$) for fathers and 34.7 years ($SD = 4.4$) for mothers. The majority were legally married (87.0% of fathers and 98.5% of mothers) and Caucasian (84.2% of fathers and 97.0% of mothers). Overall, participants were well-educated with 81.3% of fathers and 86.3% of mothers attaining a postsecondary education diploma or degree. Participants also reported moderate to high levels of income with 79.4% of fathers and 80.4% of mothers reporting a total family income of at least \$60,000. The majority of fathers were employed in paid work averaging 41.2 hours of work per week. By comparison, 81.8% of mothers were employed in paid work averaging 26.3 hours of work per week. On average, participants' children were just under four years of age with fathers' children being on average 47.6 months of age and mothers' children being 47.7 months.

Table 10

Phase 3 Participants' Demographic Information

	Fathers <i>n</i> = 247	Mothers <i>n</i> = 66
Province of Residence		
Alberta	31 (12.6%)	10 (15.2%)
British Columbia	20 (8.1%)	4 (6.1%)
Manitoba	3 (1.2%)	1 (1.5%)
New Brunswick	5 (2.0%)	0
Newfoundland	2 (0.8%)	0
Nova Scotia	4 (1.6%)	0
Prince Edward Island	2 (0.8%)	0
Ontario	57 (23.1%)	12 (18.2%)
Quebec	5 (2.0%)	2 (3.0%)
Saskatchewan	98 (39.7%)	37 (56.1%)
No response	20 (8.1%)	0
Marital Status		
Married	215 (87.0%)	65 (98.5%)
Common Law	14 (5.7%)	1 (1.5%)
No Response	18 (7.3%)	---
Age, <i>M</i> (<i>SD</i>)	36.9 (5.3)	34.7 (4.4)

Table 10 continued

Phase 3 Participants' Demographic Information.

Ethnicity

Caucasian	208 (84.2%)	64 (97.0%)
Aboriginal	7 (2.8%)	0
African	2 (0.8%)	0
Asian	5 (2.0%)	2 (3.0%)
Hispanic	2 (0.8%)	0
Middle Eastern	1 (0.4%)	0
Mixed	11 (4.5)	0

Education

11 years or less	3 (1.2%)	0
High School	12 (4.9%)	2 (3.0%)
Some Postsecondary	31 (12.6%)	7 (10.6%)
College / Tech	29 (11.7%)	13 (19.7%)
Undergraduate Degree	93 (37.7%)	28 (42.4%)
Graduate Degree	62 (25.1%)	16 (24.2%)

Employed in paid work	221 (89.5%)	54 (81.8%)
Hours worked <i>M (SD)</i>	41.2 (16.2)	26.3 (16.9)

Table 10 continued

Phase 3 Participants' Demographic Information.

	Fathers	Mothers
<hr/>		
Family Income		
< \$20,000	1 (0.4%)	2 (3.0%)
\$20,000 – 40,000	11 (4.5%)	2 (3.0%)
\$40,000 – 60,000	21 (8.5%)	9 (13.6%)
\$60,000 – 80,000	34 (13.8%)	10 (15.2%)
\$80,000 – 100,000	52 (21.1%)	11 (16.7%)
> \$100,000	110 (44.5%)	32 (48.5%)
Child Sex		
Male	133 (53.8%)	35 (53.0%)
Female	114 (46.2%)	31 (47.0%)
Child Age in Months, <i>M (SD)</i>	47.6 (14.2)	47.7 (14.3)
No. Children in Family, <i>M (SD)</i>	2.1 (0.8)	2.0 (0.8)

5.1.4 Measures

Fathering Self-Efficacy. Fathering self-efficacy was assessed using the 28 items of the Fathering Self Efficacy Scale that emerged from the three and four factor EFA in Phase 2. For this phase, the order of presentation of the items was randomized using a freely available online random number generator (<http://www.randomizer.org/>). As in the previous study, participants responded to statements using a 9-point Likert scale, with 1 representing *strongly disagree* to 9 representing *strongly agree*. An average overall FSES score and average subscale scores were derived by calculating the participants' mean scores to the items with higher scores representing greater perceptions of PSE. Cronbach's alphas for the scale will be presented with the results of the factorial validity.

Demographic Profile. Participants were asked to provide basic information regarding their education, income and relationship with their spouse. This profile was identical to the one used in Phase 2 of the study (Appendix F) with one exception. Since spousal reports were being sought, respondents were asked to identify whether they were a mother or a father.

Convergent Validity

General Self-Efficacy. General self-efficacy was measured using the General Self-Efficacy Scale (GSE; Jerusalem and Schwarzer, 1992; Schwarzer et al., 1999; Appendix M). The GSE assesses an individual's broad and stable sense of personal competence to deal effectively with stressful situations. The scale consists of 10 items scored on a four-point Likert scale, with higher scores reflecting perceptions of higher self-efficacy. The GSE has shown internal consistency values ranging from 0.75 to 0.90 (Schwarzer et al., 1999). The scale has been shown to be equivalent across cultures with

exploratory factor analyses continually yielding one global dimension (Schwarzer & Scholz, 2000). The unidimensionality of the GSE has been supported by large scale, confirmatory factor analyses (Scholz, Gutierrez-Dona, Sud & Schwarzer 2002). Validity evidence includes positive correlations between GSE and self-regulatory beliefs as well as positive correlations between GSE and quality of life indicators (Luszczynska et al., 2005). In this study, the internal reliability of this measure was $\alpha = .86$ for fathers

Domain General PSE. Fathers' domain general self-efficacy was assessed using the 7-item efficacy subscale of the Parenting Sense of Competence Scale (PSOC; Johnston & Mash, 1989; Appendix N). This scale assesses one's feelings of satisfaction and efficacy with parenting. Items are rated on a six-point Likert scale from *strongly agree* to *strongly disagree* with higher scores indicating a greater sense of self-efficacy. A more recent review of this measure confirmed the factor structure for both mothers and fathers (Ohan, Leung & Johnston, 2000). Internal consistency of the efficacy subscale was $\alpha = .76$ in the original study by Johnston and Mash (1989), and $\alpha = .80$ in a follow-up study by Ohan et al. (2000). Validity of the PSOC was investigated through its relationship to other indicators of family life. For example, higher levels of child behaviour problems were associated with lower levels of efficacy (Johnston & Mash, 1989) while greater marital satisfaction was associated with higher efficacy scores (Ohan et al., 2000). In this study, the internal consistency was $\alpha = .87$ for fathers.

Concurrent Validity

Paternal Responsibility. Fathers' perceptions of their parental responsibility was assessed with the Parental Responsibility Scale (PRS; McBride & Mills, 1993; Appendix O). This instrument consists of 14 child related tasks that parents of preschoolers

commonly undertake (e.g., scheduling health appointments, supervising morning routines, making child care arrangement). Fathers are asked to indicate which parent has primary responsibility for each task on a 5-point Likert scale ranging from *mother almost always* to *father almost always*. Consistent with the Lamb model of father involvement (Lamb et al., 1985, 1987), this measure defines responsibility as remembering, planning and scheduling the activity regardless of who actually carries it out. Scores on the PRS can range from 14 to 70 with higher scores indicating a higher degree of paternal responsibility. McBride and Mills report the internal consistency of this measure to be $\alpha = .79$ for fathers and $\alpha = .77$ for mothers. In terms of validity, fathers who reported greater marital satisfaction also reported higher levels of parental responsibility. In this study, the internal consistency of this measure was $\alpha = .78$ for fathers and $\alpha = .77$ for mothers.

Discriminant Validity

Depressive Symptoms. The Center of Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977; Appendix P) was used to assess depressive symptoms. This scale consists of 20 items that are used to determine the occurrence of different dimensions of depression over the past week, including depressed mood, guilt, feelings of worthlessness, helplessness, and hopelessness, slower psychomotor activity, lower appetite, and disturbance to sleep. Examples of questions include “I felt depressed,” “My sleep was restless,” and “I thought my life had been a failure.” Questions are answered on a four point scale, with 0 being *rarely or none of the time* (less than 1 day), and 3 being *most or all of the time* (5 to 7 days). The scale was deemed to be valid for use with clinical and non-clinical (general public) samples (Radloff, 1977). Coefficient alpha has

been reported at $\alpha = .88$ at base-line and during a four-year follow-up (Frone, Yardley & Markel, 1997). In this study, the internal consistency of this measure was $\alpha = .87$.

Parenting Stress. The Parenting Stress Scale (Berry & Jones, 1995; Appendix Q) was used to assess parenting stress. The 18 items on this scale describe various aspects of the parent-child relationship and the parent's feelings towards it. Items are rated on a five-point Likert scale from *strongly disagree* to *strongly agree* with higher scores indicating the presence of greater perceived stress. In the original study by Berry and Jones (1995), the internal reliability was reported to be $\alpha = .83$ and 6-week test-retest reliability was $\alpha = .81$. Whenever possible, the scale was completed by both mothers and fathers in the same house with no statistically significant gender differences found on the total score. However, the scale did differentiate between mothers of children receiving treatment for behavioural problems versus mothers of children not in treatment. Evidence of convergent validity was provided by correlating the PSS with two other commonly used stress scales. In this study, the internal consistency of this measure was $\alpha = .86$ for fathers.

5.1.5 Analysis Plan

Factorial Validity. To assess the factorial validity of the FSES, both the three factor and four factor solutions of the FSES that emerged in Phase 2 were tested in this second sample of fathers using confirmatory factor analysis following recommended practices regarding model fit (Garson, 2012; Gignac, 2009, Kline, 2011). Alternative two and one factor structures were also investigated to determine if other models provided a better fit for the data (Floyd & Widaman, 1995).

Test-Retest Reliability. To assess the relative stability of FSES scores, test-retest reliability was calculated. During Phase 3, participants were asked whether they participated in Phase 2 of the research. If they answered affirmatively, participants were asked to re-enter the ID number they had previously created during Phase 2. Matching the Phase 2 and Phase 3 participant-generated identification numbers found a total of 40 matching cases. To determine test-retest reliability, participants' average FSES Phase 3 FSES score was compared to their average score of the same FSES items from Phase 2.

Associations with Other Measures. To assess convergent validity, correlations between fathers' FSES scores and GSE and domain general PSE were calculated. To assess discriminant validity, correlations between fathers' FSES scores and measures of depressive symptoms and parenting stress were calculated. To assess concurrent validity, correlations were calculated between fathers' FSES scores and a measure of parent responsibility as well as the number of children fathers reported parenting.

To assess the concurrent validity of the FSES, the correspondence between fathers' self-reported PSE and spousal ratings were compared. Fathers' self-generated identification numbers were matched to mothers' identification numbers. Since the sample was limited to cohabiting couples, it was presumed that couples would generate the same identification number. A total of 69 matches out of a possible 126 mothers who completed the research were found. It is possible that spouses did not generate the same matching number (i.e., using non matching cell phone numbers). During recruiting, many mothers completed the research before their spouses. Though their spouses were invited to participate via email it is likely that not all of them did. To ensure that the 69 matches represented parents in the same household, a visual inspection of demographic and child

information was conducted. In so doing, it was found that one match was actually three men who appeared to have entered the same random id number (i.e, 123456). These three participants reported different demographic information and family information and were removed from the comparative analysis. A second match was two other men who entered the identical matching number. These individuals also reported differing demographic and family information, and were also eliminated from this analysis. An additional four matching reported substantially different child data in terms of child sex or age. However, two of these pairs had the same IP address and one of the couples also matched demographic data, suggesting that they were from the same household. One match, however, reported different family incomes and as such was also not included in the comparative analysis. Thus, a total of 66 matching mother-father pairs remained.

To explore the potential for differing predictors of different aspects of fathers' PSE, a series of multiple regression analyses were conducted with the FSES total score and FSES subscale scores as the dependent variables. To control for demographic variables, father age, total number of years spent in post-secondary education, and family income, were entered on the first step. On the second step, measures of general self-efficacy, domain-general PSE, depressive symptoms, parenting stress, and parent responsibility were entered.

5.2 Phase 3 Results

5.2.1 Factorial Validity. Prior to exploring the associations of the FSES to other measures, it was important to determine whether the three-factor or four-factor model should be utilized. Therefore to assess the structural validity of the FSES, the three and four factor structures of the FSES that emerged in Study 2 were tested in this second

sample of fathers using confirmatory factor analysis (CFA). Only fathers who did not participate in Study 2 were included in these analyses.

Using AMOS 18 software, the data were fitted using Maximum Likelihood estimation. There were no missing data. FSES scores were examined for univariate and multivariate normality. Following Kline's (2011) recommendations regarding interpretation of absolute skew and kurtosis values, there were no problematic departures from normality in the data. Absolute skew values ranged from 0.2-2.1 and absolute kurtosis values ranged from 0.03-6.1. To assess for multivariate outliers, the squared Mahalanobis distance values were examined to determine if any of the cases appeared substantially different from the rest (i.e., differences in Mahalanobis distance values greater than 20; Byrne, 2010). No values were substantially apart from the other cases.

The four-factor CFA model was not an adequate fit to the data, $\chi^2(318) = 857.5$, $p < .001$; SRMR = .08, CFI = .82, RMSEA = .083 (90% CI .076 - .090), AIC = 977.5. Modification indices suggested that the errors between one item pair on the Indirect Care Factor were highly correlated, "I ensure that my child attends the health appointments he or she needs", and "I am able to book the health care appointments my child needs". This is not surprising as these two items were previously a single, double-barrelled item in Phase 2 of the research. Allowing these errors to correlate results in a nested model that may be compared to the original parent model (Klein, 2011). This change improved model fit somewhat, however, the model remained a poor fit to the data, $\chi^2(317) = 782.5$, $p < .001$, $\Delta \chi^2(1) = 75.0$, $p < .001$ SRMR = .07, CFI = .84, RMSEA = .077 (90% CI .070 - .084), AIC = 904.5.

By comparison, the three-factor model adequately fits the data using liberal fit criteria, $\chi^2(206) = 465.9$, $p < .001$, SRMR = .06, CFI = .89, RMSEA = .072 (90% CI .063 - .080), AIC = 559.90. Note however that the CFI value falls just below the recommended value of .90. Modification indices did not suggest any obvious areas of model improvement. The largest modification values suggested covarying the errors for two pairs of items comprising the Positive Engagement factor: “I know how to play with my child at his or her level” and “I can always think of fun things to do with my child”, MI = 14.8; “I am patient with my child when he or she tests the rules I put in place” and “I know when it is time to step in to protect my child from harm”, MI = 13.5. However, making these modifications had a minimal effect on model fit. Comparing the AIC values of the three-factor solution and the modified four-factor solution indicates that the three factor model is the better fit to the data, $\Delta_i = 344.6$. The results of the three factor CFA model are depicted in Figure 2 and the 22-items of the FSES are found in Appendix R.

Two alternate solutions to the three-factor model were then explored to determine whether a better fitting model could be found. First, using the same items as the three-factor model, an alternate, two-factor solution was examined. Given the strong association that emerged between the Direct Care factor and the Responsiveness factor, the items comprising these two factors were specified to load on one factor. The remaining four items continued to load on the Financial Responsibility factor. As in the previous analysis, the two latent factors were allowed to covary. This two-factor model was a poorer fit for the data, $\chi^2(208) = 554.3$, $p < .001$, SRMR = .07, CFI = .85, RMSEA = .082 (90% CI .071 - .097), AIC = 644.33, $\Delta_i = 84.4$.

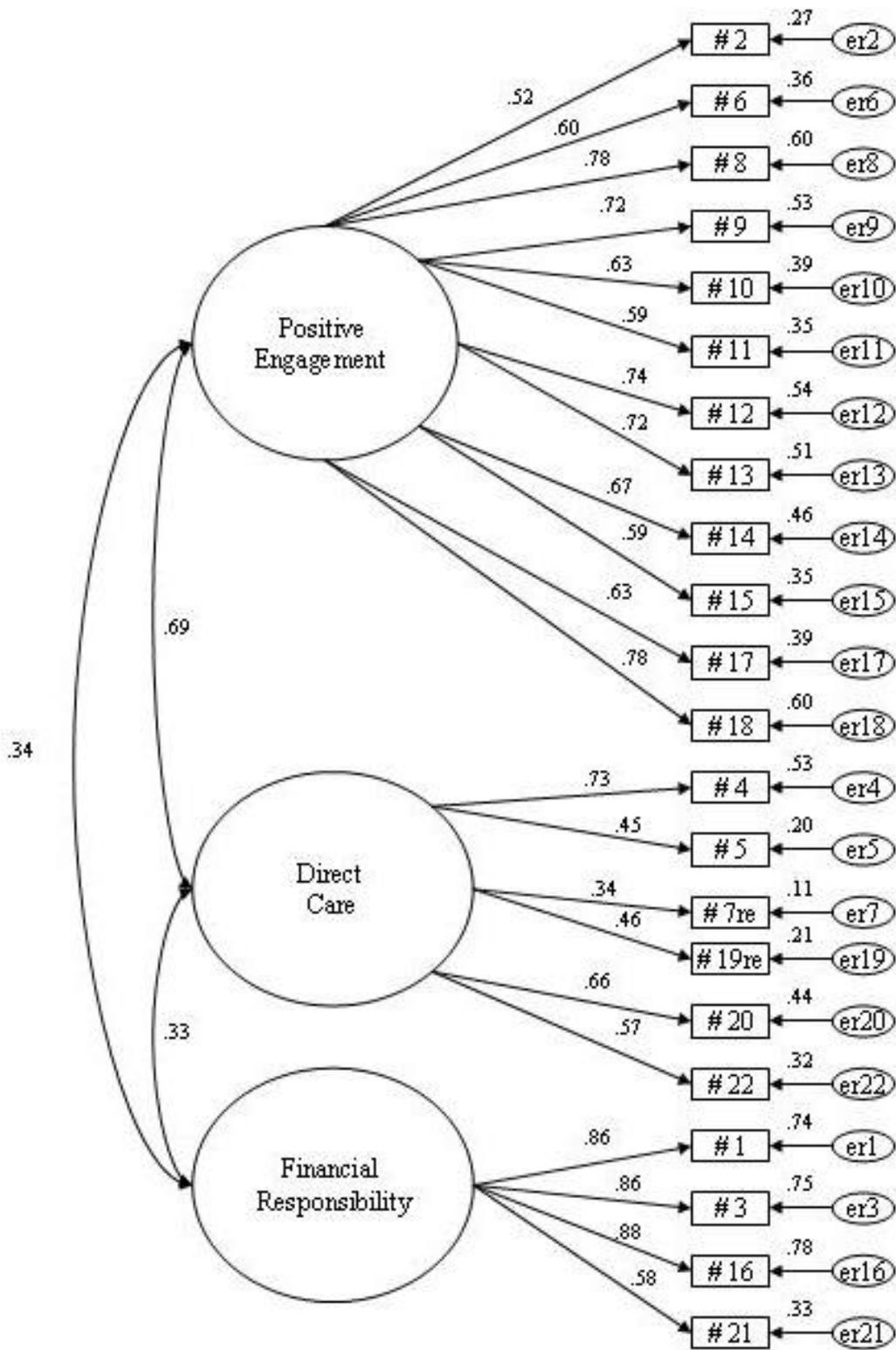


Figure 2. Three-Factor Confirmatory Factor Model of the FSES

The second alternate solution tested was a single-factor model. This one-factor model was a poor fit to the data, SRMR = .11, CFI = .65, RMSEA = .13 (90% CI .119 - .134), AIC = 1119.98. Comparing the AIC values between the three factor and one-factor model demonstrated the superiority of the three factor model, $\Delta_i = 560.1$.

Given these CFA results, the three-factor solution was deemed the best fit for the data. Therefore, scores on the 22-item version of the FSES were utilized for the remaining analyses. The overall reliability of the 22 items was $\alpha = .88$. The individual subscale reliabilities were: Positive Engagement, $\alpha = .90$, Direct Care, $\alpha = .68$ and Financial Responsibility, $\alpha = .85$. Conducting tests of measurement invariance between mothers and fathers was considered. However, the small sample of mothers precluded the possibility of invariance testing at this time.

5.2.2 Descriptive Analyses. Table 11 provides descriptive statistics for the primary study variables. Fathers in this study demonstrated relatively high domain-specific parenting self-efficacy beliefs (as measured by the FSES), high domain general parenting self-efficacy (as measured by the PSOC) and high general self-efficacy (as measured by the GSE). Participants reported low to moderate levels of parenting stress and low depressive symptomology. The associations between fathers' average FSES scores were examined in relation to demographic variables. An independent samples t-test found no statistically significant difference in FSES scores between Caucasian and non-Caucasian respondents, $t(245) = 0.29$, *ns*, $d = .05$. Bivariate correlations found that FSES scores were not correlated with father age, $r(226) = .06$, number of years spent in post-

Table 11

Phase 3 Descriptive Statistics for Study Variables

Variable	<i>N</i>	Potential Range	Observed Range	<i>M (SD)</i>
Fathering Efficacy	247	1 – 9	4.41 – 9.00	7.58 (0.81)
Domain General PSE	239	7 – 42	15 – 42	32.21 (5.3)
General Self-Efficacy	238	10 – 40	17 – 40	33.08 (4.0)
Depressive Symptoms	231	0 – 60	0 – 32	9.00 (7.1)
Parenting Stress	235	18 – 90	18 – 58	34.90 (8.7)
Parent Responsibility	242	14 – 70	22 – 70	39.31 (5.4)
Maternal Ratings of Father Efficacy	122	1 – 9	3.62 – 8.86	7.20 (1.1)

secondary education $r(228) = .07$, or number of hours spent per week in paid work $r(228) = .07$. However, there was a statistically significant correlation between FSES scores and family income indicating that participants with higher incomes reported greater PSE scores, $r(227) = .28, p < .001$ (Table 12).

To assess the relative stability of FSES scores, test-retest reliability was calculated for the 40 participants who completed both Study 2 and Study 3. Participants' average Phase 3 FSES scores were compared to their average scores of the same 22 items from Phase 2. The test retest reliability for the instrument was $r(38) = .80$. A paired sample *t*-test was also conducted to compare participants' scores from Phase 2 ($M = 7.7$) to scores from Phase 3 ($M = 7.6$). No statistically significant changes were found, $t(39) = 1.47, ns, d = 0.24$.

5.2.3 Convergent Validity. To assess convergent validity, bivariate correlations between fathers' FSES scores and GSE and domain general PSE were conducted (Table 12). As expected, there was a strong positive association between fathering efficacy and domain general PSE $r(237) = .56, p < .001$ and a moderate to strong positive association between fathering efficacy and general efficacy, $r(236) = .43, p < .001$.

5.2.4 Discriminant Validity. To assess discriminant validity, bivariate correlations between father's FSES scores and measures of depressive symptoms and parenting stress were computed (Table 12). There was a strong negative association between fathering efficacy and parenting stress $r(233) = -.51, p < .001$ and a moderate negative association between fathering efficacy and depressive symptoms, $r(229) = -.38, p < .001$.

Table 12

Phase 3 Correlations Among Study Variables

Variable	1.	2.	3.	4.
1. FSES Total		.88***	.62***	.73***
2. FSES Positive Engagement			.31***	.51***
3. FSES Financial Responsibility				.22***
4. FSES Direct Care				
5. General Self-Efficacy				
6. Domain General PSE				
7. Depressive Symptoms				
8. Parenting Stress				
9. Parent Responsibility				
10. Father Age				
11. Education				
12. Family Income				

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

Table 12 continued

Phase 3 Correlations Among Study Variables

Variable	5.	6.	7.	8.
1. FSES Total	.43***	.56***	-.38***	-.51***
2. FSES Positive Engagement	.48***	.60***	-.34***	-.47***
3. FSES Financial Responsibility	.14*	.18**	-.24***	-.23***
4. FSES Direct Care	.27***	.41***	-.28***	-.42***
5. General Self-Efficacy		.50***	-.35***	-.35***
6. Domain General PSE			-.35***	-.46***
7. Depressive Symptoms				.52***
8. Parenting Stress				
9. Parent Responsibility				
10. Father Age				
11. Education				
12. Family Income				

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

Table 12 continued

Phase 3 Correlations Among Study Variables

Variable	9.	10.	11.	12.
1. FSES Total	.26***	.06	.07	.28***
2. FSES Positive Engagement	.24***	.02	.04	.12
3. FSES Financial Responsibility	.05	.12	.00	.47***
4. FSES Direct Care	.28***	.03	.12	.13*
5. General Self-Efficacy	.11	-.10	.03	.11
6. Domain General PSE	.19**	-.16*	-.02	.07
7. Depressive Symptoms	-.05	.13*	-.04	-.13*
8. Parenting Stress	-.03	.08	.02	-.10
9. Parent Responsibility		.09	.10	.13*
10. Father Age			.20**	.32***
11. Education				.24***
12. Family Income				

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

5.2.5 Concurrent Validity. To assess concurrent validity, bivariate correlations were computed between fathers' FSES scores and a measure of parent responsibility as well as the number of children fathers reported parenting. As expected there was a statistically significant positive association between fathering efficacy and parenting responsibility, $r(240) = .26, p < .001$ (Table 12). However, contrary to expectation, there was no statistically significant association between FSES scores and number of children, $r(245) = -.11, ns$.

To assess the correspondence of fathers' self-reported average FSES score and spousal ratings, bivariate correlations and paired sample t-tests were conducted. A statistically significant correlation was found between father and spousal ratings, $r(64) = .47, p < .001$. There was no statistically significant difference between self ratings and spousal ratings, $t(65) = 1.54, ns, d = 0.19$. This finding indicates that fathers' self-reported PSE has a strong correspondence to ratings of an observer.

5.2.6 Predictors of PSE. Four multiple regression analyses were conducted with FSES total scores and FSES subscale scores as the outcome variables. To control for the effects of demographic variables, fathers' age, number of years in post-secondary education and family income were entered on the first step. On the second step, general self-efficacy, domain-general PSE, depressive symptoms, parenting stress, and parent responsibility were entered.

For the total FSES score, the overall model was statistically significant, $F(8, 219) = 26.78, p < .001$ and accounted for 49% of the variance in FSES total scores (Table 13). The second block of variables accounted for the greatest proportion of the variance in FSES total scores (42%). In the final regression equation, family income, general self-

Table 13

Multiple Regression Assessing Predictors of the FSES Total Score

Step / Variable	B	SE B	β	r	R^2	F for
					Increase	ΔR^2
Step 1					.07	6.10***
Age	-.01	.01	-.03	.06		
Education	.00	.02	.01	.07		
Total Family Income	.19	.05	.28***	.27		
Step 2					.42	36.27***
Age	.02	.01	.10 ^t	.06		
Education	.00	.01	.00	.07		
Total Family Income	.10	.04	.15**	.27		
General Self-Efficacy	.03	.01	.13*	.42		
Domain General PSE	.06	.01	.36***	.57		
Parenting Stress	-.02	.01	-.23***	-.49		
Depressive Symptoms	-.01	.01	-.08	-.38		
Parent Responsibility	.03	.01	.17***	.26		

Note. Final $R^2 = .49$; ^t $p < .10$, * $p < .05$. ** $p < .01$. *** $p < .001$.

efficacy, domain general PSE, parenting stress and parent responsibility predicted fathers' FSES scores.

For the Positive Engagement factor, the overall model was statistically significant, $F(8, 219) = 23.30, p < .001$ and accounted for 46% of the variance in Positive Engagement subscale scores (Table 14). The second block of variables accounted for the greatest proportion of the variance (44%). In the final regression equation, general self-efficacy, domain general PSE, parenting stress and parent responsibility predicted fathers' Positive Engagement scores.

For the Financial Responsibility factor, the overall model was statistically significant, $F(8, 219) = 10.44, p < .001$ and accounted for 28% of the variance in Financial Responsibility subscale scores (Table 15). Family income accounted for the greatest proportion of the variance. The addition of the second block of variables accounted for a lesser though still statistically significant proportion of the variance in scores (5%). However, in the final regression equation, only family income predicted fathers' Financial Responsibility scores.

For the Direct Care factor, the overall model was statistically significant, $F(8, 219) = 13.95, p < .001$ and accounted for 34% of the variance in Direct Care subscale scores (Table 16). Family income was statistically significant upon entry. However, with the addition of the second block of variables, family income was no longer statistically significant. Thus, in the final regression equation, domain general PSE, parenting stress and parent responsibility predicted fathers' Direct Care scores.

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Table 14

Multiple Regression Assessing Predictors of the FSES Positive Engagement Subscale

Step / Variable	B	SE B	β	r	R^2	F for
					Increase	ΔR^2
Step 1					.02	1.10
Age	-.00	.01	-.03	.02		
Education	.01	.02	.02	.04		
Total Family Income	.09	.05	.12	.12		
Step 2					.44	36.10***
Age	.02	.01	.11*	.02		
Education	.00	.01	.01	.04		
Total Family Income	-.01	.04	-.01	.12		
General Self-Efficacy	.05	.01	.21***	.47		
Domain General PSE	.06	.01	.36***	.59		
Parenting Stress	-.02	.01	-.21***	-.47		
Depressive Symptoms	-.01	.01	-.04	-.34		
Parent Responsibility	.02	.01	.13*	.20		

Note. Final $R^2 = .46$; * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 15

Multiple Regression Assessing Predictors of the FSES Financial Responsibility Subscale

Step / Variable	B	SE B	β	r	R^2	F for
					Increase	ΔR^2
Step 1					.23	21.93***
Age	-.01	.02	-.03	.12		
Education	-.05	.03	-.11 ^t	.01		
Total Family Income	.63	.08	.50***	.46		
Step 2					.05	2.97*
Age	.01	.02	.03	.12		
Education	-.05	.03	-.11 ^t	.01		
Total Family Income	.57	.08	.45***	.46		
General Self-Efficacy	-.00	.03	-.01	.15		
Domain General PSE	.03	.02	.11	.21		
Parenting Stress	-.01	.01	-.06	-.22		
Depressive Symptoms	-.03	.02	-.12 ^t	-.23		
Parent Responsibility	-.00	.02	-.00	.07		

Note. Final $R^2 = .28$; ^t $p < .10$, * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 16

Multiple Regression Assessing Predictors of the FSES Direct Care Subscale

Step / Variable	B	SE B	β	r	R^2	F for
					Increase	ΔR^2
Step 1					.03	2.09
Age	-.01	.01	-.02	.03		
Education	.04	.02	.11	.13		
Total Family Income	.09	.06	.11	.13		
Step 2					.31	20.53***
Age	.01	.01	.06	.03		
Education	.03	.02	.10	.13		
Total Family Income	.00	.05	.00	.13		
General Self-Efficacy	.01	.02	.03	.27		
Domain General PSE	.06	.01	.28***	.44		
Parenting Stress	-.03	.01	-.25***	-.40		
Depressive Symptoms	-.01	.01	-.04	-.28		
Parent Responsibility	.06	.01	.27***	.32		

Note. Final $R^2 = .34$; * $p < .05$. ** $p < .01$. *** $p < .001$.

6.0 DISCUSSION

This study extends our understanding of the parental self-efficacy construct in several important ways. By focusing on fathers, this study addresses a significant concern in the PSE literature that fathers have been chronically understudied (Coleman & Karraker, 1997; de Montigny & Lacharite, 2005; Jones & Prinz, 2005). While the majority of studies assess PSE on scales designed for and validated on samples of mothers (Sevigny & Loutzenhiser, 2010), the final product of this research is the first domain-specific PSE scale developed for and validated with fathers. This project also extends the theoretical (Connell, 1995, 2000; LaRossa, 1997) and empirical literature (Doucet, 2006, Miller, 2011) that suggests fathering is not equivalent to mothering by articulating the parenting roles and tasks especially salient for men. Rather than employing a rational-theoretical approach to scale item development, the parenting domains and tasks represented on the scale were grounded in the real life experiences of Canadian men. The emergence of this new scale will be important to ongoing research into fathering and provides an important contribution to the ongoing development and evaluation of therapeutic family interventions (Bloomfield & Kendall, 2012).

Scale construction followed Bandura's (2006) recommendations for PSE scale construction and validation efforts were guided by Loevenger's (1957) phases of scale development. Following the qualitative analysis of father interviews, subject matter experts were consulted to help assess the face and content validity of the new PSE instrument (Simms & Watson, 2007). A total of 55 draft scale items were distributed to participants and psychometrically evaluated. The revised item scale was then completed by a new sample of fathers who also completed other measures to assess convergent,

discriminant and concurrent validity. Spousal reports of fathering efficacy were also obtained to provide additional evidence of concurrent validity. Overall, the results offer support for the construct validity of a 22-item, 3-factor, Fathering Self-Efficacy Scale.

6.1 Parenting Roles and Responsibilities Identified by Fathers

The first step in this study was to explore how fathers understand their roles and responsibilities in caring for their young children. In total, 11 different themes (i.e., parenting dimensions) were identified from interviews with fathers. To determine whether the 11 parenting dimensions were adequately captured on existing domain-specific PSE scales, a comparison was made with the two other existing domain specific PSE scales designed for use with mothers (Coleman & Karraker, 2003; Kendall & Bloomfield, 2005).

The parenting dimensions identified by fathers in the current study clustered into three groupings: Parenting dimensions well represented on existing scales, parenting dimensions present on existing scales but articulated differently by fathers, and novel parenting dimensions not well articulated on existing scales.

6.1.1 Parenting Dimensions Overlapping with Existing Scales

Play. Not surprisingly, fathers described the importance of being able to play with their child as an important feature of their parenting role. Previous research has found that father-child play is an important aspect of the relationship (Paquette, 2004), and influences development in important ways (Renk et al., 2012). Other research reviews have noted that fathers tend to spend more of their available time playing with their children relative to other care giving tasks (Pleck & Masciadrelli, 2004). Compared to mothers, fathers are noted to engage in more physical, rough and tumble play as well as

to challenge their children (John, Halliburton, & Humphrey, 2012). There are exceptions to this style however, as clearly not all fathers will play with their children in the same way (Hoffman, 2011). Nevertheless, paternal play is an important vehicle by which fathers engage positively with their children and thereby enhance their PSE. For example, Ball (2009) studied the parenting experiences of Aboriginal Canadian fathers, many of whom had been adversely affected by the residential school experience and had not been exposed to positive male role models. Many of her participants described learning about how to parent and developing confidence in their parenting skills through playing with their children.

Discipline and Control. Fathers in this study endorsed the notion that part of their fathering role included disciplining their children. For the participants, discipline included the establishment and enforcement of rules as well as the implementation of behavioural consequences. The importance placed on this role is not surprising given that historically men have been looked upon as primarily a disciplinarian (Griswold, 1993; Lamb, 2000). Discipline, however, is not the sole purview of fathers, and both Coleman and Karraker (2003) and Kendall & Bloomfield (2005) incorporated discipline subscales on their PSE measures.

Safety and Protection. Fathers in this study endorsed the notion that part of their role entailed ensuring the safety and protection of their children. Specifically, ideas relating to the safety of the environment as well as ensuring the physical and emotional safety of the child were prevalent. Coleman and Karraker (2003) also have a protection subscale on their measure designed for mothers of toddlers. Interestingly, Kendall and Bloomfield (2005) have only one item on the self-acceptance subscale pertaining to

safety (e. g., “My child feels safe around me”). This lack of coverage on the part of Kendall and Bloomfield is perplexing given that it was raised by a number of men in the current study. In addition, there is not a protection subscale on an earlier domain-specific PSE scale designed by Coleman and Karraker (2000) for use with mothers of school-age children. Similarly, the protection dimension is not represented on Meunier and Roskam’s (2009) scale for parents of young children. While these latter authors drew upon both Coleman and Karraker’s (2000; 2003) scales, they provide no indication as to why they have excluded protection from their assessment.

It is possible that protection is especially important for fathers when children are younger and arguably more vulnerable. Once children reach school age, perhaps protection either becomes less salient or is manifest in different ways. However, protection has been identified as an important aspect of father involvement across the childhood years (Day, 2008; Palkovitz, 1997). It could also be that protection is especially salient for men. Consider that Kendall and Bloomfield (2005) developed their instrument based on focus groups of mothers. This is not to say that mothers do not place value on protecting their children. Rather, it may be that the mothers were less likely to discuss safety and protection as a separate parenting domain apart from nurturing and other care giving tasks (c.f. Haddock et al, 2003). This is one plausible alternative as protection has traditionally been associated with the role of the father (Daly & Ball, 2012).

Instrumental Care and Routines. A few fathers in the current study identified tending to the instrumental care needs and routines of their children as being part of their role. Instrumental care includes things such as seeing to the basic day-to-day care as well

as daily routines such as a morning or bedtime routine. This parenting dimension is represented on Coleman and Karraker's (2003) scale. In the current study though, few fathers discussed this domain of parenting, leading to speculation on the part of the researcher that instrumental care may be the least salient aspect of parenting for the men in my study. However, tending to instrumental care needs has been identified as an important way fathers are actively involved with their children (Hoffman, 2011).

It is possible that for the fathers interviewed in the first phase of the research, instrumental care giving activities are taken for granted as a fact of everyday life with small children. It may stand to reason then, if instrumental care is something that participants do routinely and automatically, it may not have been deemed terribly interesting to talk about. For example, Miller (2011) reports that in her study, fathers were more apt to talk about *doing* fatherhood in active and visible ways especially in the community. In contrast, mothers were more likely to discuss daily care activities done around the house (Miller, 2005 as cited in Miller, 2011). Fathers, however, are not completely uninvolved in daily care-giving tasks. Research reviews have documented that fathers have become more involved in direct care giving of their children in the past 40 years and that these activities are likely to occur around work time especially on evenings and weekends (Pleck & Masciadrelli, 2004). However, mothers still report performing the majority of these tasks (Loutzenhiser, Seigny & Thompson 2010). It is perhaps not surprising then that fathers have reported feeling less competent in providing daily care routines for their toddlers than did mothers (Kwong, Han, Jeon, & Bingham, 2012). One study found that greater father involvement in caregiving was associated with a decrease in supportive and an increase in undermining coparenting behaviour (Jia &

Shoppe-Sullivan, 2011). Taken together, care giving activities are an important aspect of parenting for fathers but one that in some circumstances may be contested.

In sum, four dimensions of parenting were identified by fathers during qualitative interviews as being important aspects of their parenting role.

6.1.2 Parenting Dimensions Present on Existing Scales but Articulated Differently

Teaching. The notion of teaching one's children about the world was identified by participants in this study as important to their parenting. This parenting dimension is also present on Coleman and Karraker's (2003) scale and as such there is some overlap with the findings of the current study. For example, Coleman and Karraker's teaching scale includes items pertaining to *teaching about the world* as well as facilitating the learning of concepts, literacy, numeracy and encouraging cognitive development in general. A number of studies have demonstrated an association between positive father involvement and children's cognitive development (Allen, Daly, & Ball 2012), though the exact mechanisms accounting for this association remain uncertain and contested (Pleck, 2010a).

The results from the current study diverge from the narrow focus on learning to promote cognitive development. For many of the fathers who were interviewed, notions of moral teaching (i.e. teaching children right from wrong and instilling desired values) and teaching by example (i.e., role modelling) were important components of teaching. However, a review of existing PSE scales found no items that address issues of teaching right from wrong. This exclusion is particularly surprising considering that men have historically been considered to be important contributors to their children's moral

education (Lamb, 2000), with many fathers continuing to fulfil this function (Tamis-LeMonda, 2004).

Accessibility. Fathers in the current study identified the importance of being accessible to their children. This notion parallels one of the original three dimensions of the father involvement construct whereby the father is psychologically and physically available for interaction with his child (Lamb et al., 1985). This dimension is represented on Coleman and Karakker's (2003) *Emotional Availability* subscale (e.g., "Even when I have had an unusually distressing day, I think my child knows I am available to meet his or her emotional needs"). In her ethnography of fathers, Doucet (2006) found that her participants would often cite the importance of *just being there* and *spending time* with their child. Accessibility is a key precursor to both positive engagement and care giving (Pleck, 2010).

Nurturing. Fathers in the current study discussed their role as nurturer for their children. Within this context, they described the importance of being able to demonstrate basic love and affection towards their children. Such discussions were hardly surprising given that the *nurturing father* is said to represent the most common, desirable ways of fathering today (Lamb, 2000). Items reflecting basic love and affection appeared on both domain specific scales designed for use with young children. For example, Coleman and Karraker (2003) developed a specific *nurturance* scale that included items such as "My child feels very loved by me", and "I definitely fulfill my parental duties when it comes to providing emotional support for my child". Similarly, Kendall and Bloomfield's scale (2005) contain several items related to nurturing such as, "I am able to show affection towards my child", and "I am able to comfort my child".

In the current study, however, fathers also described their nurturing as being enacted in gendered ways through active and physical play. This different way of understanding nurturing was also noted by Doucet (2006) in her study of primary care giving fathers. This blurring of the demarcation between play and nurturing has been noted in the work of Paquette (2004). He has noted that fathers tend to engage in greater amounts of rough and tumble play, and encourage their children to take risks while maintaining their safety and security. This interaction style serves to strengthen the emotional bond and attachment between the father and child (Paquette & Dumont, 2012).

6.1.3 Novel Parenting Dimensions Not Well Articulated on Other Scales

Parenting in Context. The theme identified as Parenting in Context has two subcomponents. The first was the commonly expressed notion that parenting occurs within the context of the partner relationship and as such parenting roles are shared and negotiated with the child's mother. This idea parallels the findings of Doucet's (2006) ethnography of single and primary caregiving fathers. In her analysis, Doucet refers to fathering as a "mother led dance". Similarly, other recent qualitative studies have commented how omnipresent mothers were in fathers' accounts of their own parenting (Dermott, 2008). Miller (2011) also notes this maternal presence and contrasts it with earlier work she completed with mothers in which fathers were rarely discussed. She attributes differences partially to differing constructions of masculinities and femininities. In particular, women's lives have been conflated with motherhood and the ideals of being a woman. However, she suggests fathers have to struggle more with reconciling traditionally feminine aspects of care giving with still prevalent understandings of masculinities.

Another possible way of understanding mothers' presence in fathers' accounts may be rooted in the separate sphere ideology that became entrenched in North America with the advent of the industrial revolution. As paid work in the labour force became divorced from unpaid work at home, the man's sphere became that of business and commerce while the woman's sphere was that of the home and the family (Haddock, et al., 2003). Some have argued that since the domestic sphere was one in which women could exercise power and control in an otherwise patriarchal system, some mothers have acted as gatekeepers to mediate and control the involvement of fathers (DeLuccie, 1995; Townsend, 2002). Maternal gatekeeping has been defined as "a collection of beliefs and behaviours that ultimately inhibit a collaborative effort between men and women in family work by limiting men's opportunities for learning and growing through caring for home and children" (Allen & Hawkins, 1999, p. 200). However, feminist researchers advocating for greater gender equality note that fathers typically do not want to take over and become *mothers* (Doucet, 2006). Rather, the majority of men studied endorse the notion that their role is complementary to that of their child's mother (Dermott 2008, Miller, 2011).

There is also reason to believe that mothers' presence in fathers' accounts of parenting emerges slowly beginning with pregnancy. As prospective fathers do not experience physical changes, they come at parenting with an outside-in orientation to parenting that defers to the experiences of their spouse (Miller, 2011). Following birth, mothers are taken to be the experts at parenting largely due to their experience with pregnancy and breastfeeding (Doucet, 2006). However, this expert status may also develop as a result of the greater amount of exposure and hence experience with infants

that mothers typically garner (Lamb & Lewis, 2010). This greater experience afforded to mothers may be inadvertently reinforced by Canada's social policy. Beginning in 2000, the federal government instituted a 35 week parental leave benefit in addition to the 15 week maternity leave benefit following the birth of a baby. However, the parental leave benefit is to be shared between parents. As such fathers' use of leave is typically negotiated with mothers, most often leading mothers to maximize use of the benefit (McKay, Marshall & Doucet, 2012). Thus an early pattern of negotiation with partners is established which may lead to an ongoing domino effect of subsequent negotiated and differed decisions (Miller, 2011).

Despite the importance of shared, negotiated responsibilities in childcare, items on existing PSE scales appear to implicitly assume that parenting tasks are completed in a one-on-one environment that is separate from the couple relationship. This orientation is surprising given that scholars have argued that fathering is best understood within a systemic framework (Cabrera, Fitzgerald, Bradley, & Roggman, 2007; McHale, 2007). The couple environment may be especially important for fathers given that studies have shown that the couple relationship has a significant impact on both father behaviour (Doherty et al., 1998; Fagan & Cabrera, 2012) and the father-child relationship (Cummings, Merrilees & George, 2010). Bradford and Hawkins (2006) further propose that competent fathering is best understood as the result of a developmental process that is facilitated by the context of a committed, intimate relationship.

Another subcomponent of the Parenting in Context theme reflects the notion that parenting occurs within a specific socio-historical context. For fathers in this study, their parenting occurs in comparison to a specific exemplar (i.e., how their own father

parented) or an imagined, societally-sanctioned ideal. While such comparative items are absent from Coleman and Karraker's (2003) measure, there is some mention of them on Kendall and Bloomfield's (2005) scale. Specifically, the subscale titled *self-acceptance* contains three items (e.g., "I manage the pressures of parenting as well as other parents do") and the subscale titled *pressures* contains two items (e.g., "It is difficult to cope with other people's expectations of me as a parent").

In discussing attainment of a parenting ideal, fathers made comparisons to how they perceived their roles to that of other men they knew. However, contemporary models of representing an ideal father may be difficult to envision (Daly, 1993), and as such some men made cross-generational comparisons to their own fathers. Other research reports similar comparisons with men either trying to emulate their own fathers or acting in reaction to how they were parented (Townsend 2002). Typically and not surprisingly, many men reported being more involved with their young children than their fathers. This parallels the findings of a recent study of Turkish fathers who reported their involvement with their children to be greater than the previous generation (Unuvar, 2012). A review of fathering research in the United States also found levels of direct engagement with children have risen steadily over the past 30 years (Pleck & Masciadrelli, 2004). Taken together, these findings serve to highlight that discussions of fathers' roles are embedded within a larger socio-political context (Mandell, 2002).

Financial Responsibility. This parenting dimension was the third most prevalent endorsed by fathers. Included here were notions related to providing financially for the family, ensuring bills are paid and long term financial planning. It is important to note this area that has not been assessed on any of the PSE instruments reviewed. Financial

responsibility or breadwinning has long been associated with the fathering role and has historically been associated with good fathering (Christianson & Palkovitz, 2001; Lamb, 2000). Throughout nearly all of North American history, the prototypical bad father denied his paternity and did not support his child financially. Indeed, this longstanding concern about the *deadbeat dad* suggests the centrality of the breadwinning role of North American fathers. This prominence is further entrenched in the legal system in that men must provide financially for any children of whom they are determined to be the biological father (Mandell, 2002). Interestingly however, men are not legally required to provide for their children emotionally or in any other way.

With the cultural shift of the last 35 years towards the ideal of an actively present, involved, nurturing father, breadwinning is no longer considered as the sole way men demonstrate care for their children (Dermott, 2008). However, several writers have noted that it still remains an important part of the fathering role. For example, Townsend (2002) identified four facets of fathering with providing for the family being seen as the most critical. In comparison, one of the recurring themes in Miller's (2011) longitudinal study of the transition to fatherhood is the ever-present tension between wanting to be physically available and involved with one's child though needing to be separated in order to earn a living. This tension is implicit in the interviews conducted with fathers for the current study in that fathers identified a variety of roles they fulfil with their children in addition to financial provision.

Recent reports provide evidence that financial provision remains an important aspect of fathers' lives in Canada. While 74% of couples report being dual income, fathers remain the primary breadwinner in approximately two thirds of families

(Marshall, 2009). These financial realities appear also to have influenced the proportion of fathers who participate in the parental leave program offered through Employment Insurance. Since its inception, the uptake in parental leave in Canada by fathers outside of Quebec has remained between approximately ten to twelve percent. Since the maximum payout from this benefit is less than \$500 per week, it is not economically viable for many fathers to participate in the program (McKay et al., 2012).

Process Responsibility. This theme was relabelled following review by subject matter experts to better reflect Pleck's (2010a) reconceptualization of the father involvement construct. The focus is upon responsibility as process (i.e., making sure the child is well taken care of); including planning for appointments, activities and childcare, ensuring in general that the child is well cared for and anticipating the child's needs. This aspect of parenting is only alluded to briefly on existing scales with only one item from each of Coleman and Karraker's (2003; i.e., "When I leave my child in someone else's care, I make sure that the substitute care provider will be capable of protecting my child from harm") and Kendall and Bloomfield's (2005) scales (i.e., "I can plan activities that my child will enjoy").

On Meunier and Roskam's (2009) measure, there is a subscale assessing what they describe as the related cognitive construct of *parental responsibility*. Their conceptualization, however, has little resemblance to Pleck's understanding of process responsibility. Rather, the items on the subscale in question measure notions of how responsible parents feel for their child's behaviour (i.e., "Children's behaviour problems are often due to mistakes parents make"). The idea of process responsibility is also found in Doucet's (2006) study of primary caregiving fathers. She refers to one aspect of care

that her participants discuss as administrative or “seeing the need (as opposed to filling the need)”. The fathers in her study clustered into four styles including acting as assistants, partners, managers, and network builders. As Pleck (2010a) indicates, these four styles represent a continuum of process responsibility.

Indirect Care. A number of participants identified as part of their role as a father that they are responsible for tending to the non-routine maintenance of their house including renovations. Also included in this theme were comments related to tending to daily household chores. Virtually all PSE scales focus exclusively on tasks or activities that parents do with their children. As such, the dimension of indirect care is under-represented on the existing scales. There are no indirect care items on Kendall and Bloomfield’s (2005) scale, and two items on Coleman and Karraker’s (2003) safety and protection subscale (i.e., “Providing a safe, hazard-free environment for my child is very difficult for me;” and “I have my home arranged to prevent as many accidents as possible with my toddler”).

However, indirect care has been explicitly identified as one way that fathers are involved in the lives of their children. According to Pleck (2010a), indirect care activities are those undertaken for the benefit of the child but do not necessarily involve interaction with the child. This includes material indirect care (purchasing and arranging goods and services for the child) as well as social indirect care (fostering community connections), but excluding breadwinning. The lack of consideration of this parenting dimension may be another reflection of the focus on maternal experiences of parenting that tends to centre on direct interaction with children (Miller, 2011). Yet the findings in this study are supported by the work of Doucet (2006) who found that non-routine maintenance work

was an important component of fathers' roles for the men she interviewed. As such, the current study echoes Doucet's argument that notions of caring should be broadened to include indirect care and domestic responsibilities fulfilled by men. The notion of indirect care as an important aspect of fathering may be critiqued by some who note that maintenance tasks are undertaken by many men regardless of their parenting status. However, as articulated by Coltrane (2004), such upkeep and maintenance tasks have a different meaning for fathers and are often undertaken with the welfare of the child in mind. Also consider that in the current study this theme emerged as men were discussing their varied roles *as fathers*.

6.1.4 Summary of Parenting Dimensions. In order to better understand paternal PSE, this was the first study to create items based on the actual lived experiences of fathers. From interviews conducted with fathers inviting participants to discuss their perceptions of their parenting roles, 11 parenting dimensions were articulated. While some overlap was found between fathers' responses and existing PSE scales, important differences were found as well. Fathers articulated their roles in the areas of teaching, accessibility, and nurturing in ways not found on maternally-derived PSE scales. These findings lend support to previous research findings that while fathers and mothers may report fulfilling similar parenting responsibilities, the ways in which responsibilities are practically manifest often differ (Doucet, 2006). Fathers also identified parenting responsibilities that were previously not included on any PSE instruments. Thus, by not imposing a maternal lens a priori onto the study of fathers' PSE, salient parenting tasks hitherto not studied were investigated. As such, this study makes a significant contribution to the literature by representing fathers' actual experiences in this research

(Lamb & Lewis, 2010; Youngblade et al., 1993). To serve as an additional content validity check, the parenting dimensions identified by fathers were reviewed and confirmed by subject matter experts. The resulting items were then psychometrically tested with a sample of fathers.

6.2 Factor Structure and Reliability of the FSES

Following the psychometric testing of the FSES, items representing nine of the 11 qualitatively-derived parenting dimensions loaded onto three distinct factors. The three factor structure of the FSES replicated in a follow-up study with a different sample of Canadian fathers. The three factor solution was found to be superior to alternate four-factor, two-factor and one-factor solutions. The FSES also demonstrated good internal consistency and test-retest reliability. Items from six of the 11 qualitatively-identified parenting dimensions are present on the first factor called Positive Engagement. Items from four qualitatively identified parenting dimensions comprise the second factor called Direct Caregiving, while items on the third factor are comprised entirely of Financial Responsibility. The responses of fathers indicate that they perceive fathering as multidimensional (Day & Lamb, 2004) and that fathering is a balancing act between providing financially, and direct engagement with their children (Miller, 2011).

The finding that items representing 11 qualitatively-identified parenting dimensions loaded onto only three factors may be initially surprising. However, factor analysis by its nature is a data reduction technique that seeks to represent the most parsimonious data structure (Garson, 2012). Clearly there was conceptual overlap between items first thought to represent different parenting dimensions and as such there are not clean demarcations between parenting tasks. To the best of this writer's

knowledge, Coleman and Karraker's (2003) scale and Kendall and Bloomfield's (2005) scale have not been factor analysed. It is entirely possible that the items they have assigned to specific subscales may load onto completely different latent factors. In an earlier study of PSE and school age children, Coleman and Karraker (2000) posited a six subscale structure for their scale. However following their EFA, four factors were found to be present and several items did not load as expected. Similarly, in the development of their scale, Meunier and Roskom (2009) found that items first thought to represent emotional availability and nurturance loaded together onto one factor. The current finding that the three factor structure replicated when tested with a different sample of fathers lends further support to the factorial validity of the FSES.

The resulting factor structure of the FSES provides empirical support to Pleck's (2010a) revised conceptualization of the father involvement construct. The primary component of Pleck's model is positive engagement activities and bears striking resemblance to the first factor found in the current study. Pleck also asserts that while providing for the family may be an important aspect of fathering typically not entailing direct interaction with the child, it is conceptually distinct from both process responsibility and indirect care. In support of this theory, financial responsibility clearly emerged as an aspect of fathers' PSE separate from engagement, care giving and other indirect care activities. This is the first time that financial provision has been represented on any scale assessing PSE.

The items and structure of the FSES also provide linkages to historical conceptions of good fathering. As discussed previously, fathers' role has traditionally been associated with the ability to provide financially for the family (Daly & Ball, 2012).

The results of this study are consistent with other research that has argued for continuing to consider the importance of breadwinning for fathers (Christianson & Palkovitz, 2001). At different points in history, father's role was seen primarily as associated with ensuring the moral education and discipline of his children. The first six items of the Positive Engagement factor of the FSES relate to either teaching or discipline. Of note, two of the teaching items have moral undertones and relate to being a positive role model for the child and the father's ability to instil desired values. Further the discipline items are not representative of harsh or punitive punishment. In keeping with the reports of fathers who were interviewed, the tone and content of the discipline items have undertones of teaching and guidance. The origin of the word *discipline* comes from the Latin root, *disciplina*, which means *to teach*. Therefore, for the over 500 men who participated in various phases of this research, there appears to be a fluid boundary and overlap between notions of discipline and teaching.

There were also some unexpected findings regarding the factor structure of the FSES. Given that scholars have argued for expanding our understanding of fathers' involvement and care-giving activities to include aspects of indirect care (Doucet, 2006; Pleck 2010a), it was anticipated that there would be some indirect care representation on the final version of the FSES. Process responsibility and indirect care were discussed by fathers in the qualitative portion of the research. A fourth, Indirect Care factor emerged as a possible solution in Phase 2 of the research, however, no indirect care items were retained on the FSES. One possible explanation for this apparent contradiction is that it may be another manifestation of the culture versus conduct divide. LaRossa (1988) noted that actual fathering conduct or behaviours typically lags behind popular discourses

regarding the shifting cultural ideals of fathering. For example, while Pleck refers to process responsibility as an executive function of parenting, available evidence suggests that it is mothers who primarily fulfil this function. Many fathers assume the role of *helping their wives* when specifically requested to do so (Coltrane, 1996). Even in the case of primary care giving fathers, approximately half identified themselves as assistants to their spouses (Doucet, 2006). The notion of *helping out* was indeed prevalent in the interviews conducted for the current study. Further study into the types of indirect care activities and process responsibilities fathers actually perform is warranted.

Another unexpected finding was in regard to co-parenting. The context of the co-parenting relationship has been identified as an important component of fathering by both previous research (Fagan & Cabrera, 2012; Jia & Shoppe-Sullivan, 2011) and by the fathers in the first phase of this research. Yet no co-parenting items were retained on the newly developed Fathering Self-Efficacy Scale. Consider that according to Bandura (1997) support and encouragement from others is one of the informational sources of self-efficacy. Therefore, the ability to work well with one's partner may not represent a category of parenting tasks per se. Rather, it is likely that the parenting relationship with one's spouse provides a key context in which PSE develops for fathers. The feedback fathers receive regarding their parenting from their spouse is an important determinant of PSE rather than a subdomain of PSE. This distinction is supported by previous research evidence that found relationship quality with one's spouse to be a predictor of PSE for fathers and mothers of toddlers (Sevigny & Loutzenhiser, 2010). Taken together, the findings of the current study echo work of other scholars who argue for the importance of exploring the vital role that context in general and co-parenting in particular plays in

understanding fathers' beliefs and behaviours (Fagan & Cabrera, 2012; Lamb & Lewis, 2010).

6.3 Relationship of the FSES with Other Measures

Phase 3 of the research corresponded to the external validity phase of scale development (Loevinger, 1957) in which associations between the newly derived FSES scale and other measures were examined. As expected, the FSES demonstrated good evidence of convergent validity when compared to other self-efficacy measures. A strong positive correlation was found between the FSES and a domain-general PSE scale. The magnitude and direction of this association was comparable to previous research conducted with mothers (Coleman & Karraker, 2000; 2003; Crncec et al., 2008). As expected, domain-specific assessment appears to provide distinct information not available from domain-general measures as evidenced by the relatively large amount of unexplained variance between the constructs. In addition, domain general PSE was a significant predictor of total FSES scores as well as the Positive Engagement subscale and Direct Care subscale scores.

This study found important results regarding the association between the domain-specific FSES and general assessments of efficacy. Earlier research found no statistically significant association between general self-efficacy and domain-specific PSE in fathers (Sevigny & Loutzenhiser, 2010). However, in that study PSE was assessed using a scale developed for and validated with mothers. The authors noted the null finding indicated that the skills required to execute various parenting tasks were thought by fathers to be different from the skills they use to navigate challenges in other domains of life. Similar to the current study, Murdock (2012) found that GSE predicted domain general PSE. The

author asserted that since there was no valid domain specific measure of fathers' PSE, the domain general approach was the best option for assessing PSE in men. Such was certainly a reasonable argument at the time. However, the results of the current study demonstrate that when PSE items reflect parenting tasks fathers deem important, an association exists between GSE and domain-specific PSE. The direction and magnitude of the associations are similar to those found in measures validated for mothers (Coleman & Karraker, 2000; 2003). In the current study, GSE also emerged as a significant predictor of both the total FSES score and the Positive Engagement subscale score.

It is interesting that total family income was associated with fathers' PSE. This finding supports those scholars who have speculated on the potential importance of considering the impact of other contextual factors on PSE and the influence of socioeconomic status on parenting (Coleman & Karraker, 1997, Jones & Prinz, 2005; Lamb & Lewis, 2010). Family income was also a significant predictor of total FSES scores and Financial Responsibility subscale scores. This important finding has implications for the development of family interventions.

Statistically significant associations were found between parenting stress and FSES scores. This finding is consistent with several other studies demonstrating that PSE and parenting stress co-vary (Jones & Prinz, 2005). For example, McBride (1989) found that stress was associated with parenting competence of preschool aged children. However, in their study of parents and infants, Reece and Harkless (1998) found no association between parenting stress and fathers' PSE. Since the toddler and preschool period has been identified as a particularly stressful time for parents, it may be that parenting stress becomes a more important variable to study as children age out of

infancy. In support of this proposition, Sevigny and Loutzenhiser (2010) found that parenting stress was a strong predictor of fathers' PSE. Their finding was replicated in the current study as parenting stress was significantly associated with total FSES scores as well as the Positive Engagement and Direct Care subscale scores. Clearly parenting stress is an important variable to study with PSE. Given the design of the current study, it is not possible to determine causal influences of one variable on the other. However, Rezendes and Scarpa (2011) found that domain-general PSE partially mediated the relationship between mothers' parenting stress and anxiety/depressive symptoms. More research is needed to further explore the associations between these variables in a sample of fathers.

The finding that lower levels of paternal PSE were associated with higher levels of paternal depression is consistent with prior research (Gross & Tucker, 1994; Salonen et al., 2009; Sevigny & Loutzenhiser, 2010). Depression in fathers is another area that has been understudied and as such much less is known about the phenomenon (Goodman, 2004). There is some evidence that depression in men may manifest differently than in women. Women who are depressed tend to cry more (Matthey, Barnett, Kavanagh, & Howie, 2001) and are more likely to experience somatic symptoms (i.e., sleep disturbances, bodily pain, impaired physical functioning; Kornstein et al., 2000). Conversely, depressed men tend to report more instances of anger attacks, affective rigidity, self-criticism, alcohol and drug abuse (Cochran & Rabinowitz, 2000; Piccinelli & Wilkinson, 2000; Winkler, Pjrek, & Heiden, 2004). Consistent with prior research (Sevigny & Loutzenhiser, 2010), in the current study, paternal depression did not emerge as a statistically significant predictor of PSE. It is possible that a different pattern of

results may be found if depressive symptoms were assessed with instruments more sensitive to depression in men (Madsen & Juhl, 2007). Given that paternal depression has been shown to influence both parenting behaviours and child mental health (Ramchandani et al., 2008; Wilson, & Durbin, 2010), further research is needed to better understand how to support and intervene with fathers.

Good evidence of concurrent validity of the FSES was found. Statistically significant positive correlations were found between domain-specific PSE and a measure of father involvement. This finding provides initial support that fathers' parenting beliefs are associated with their perceptions of their actual behaviour. The magnitude of the association between these two measures was modest. A possible reason for the modest association may be that the paternal involvement measure used has been identified as an index of process responsibility (Pleck, 2010a). Since no items relating to process responsibility or indirect care were retained on the final version of the FSES, the strength of the bivariate association between the two measures makes more sense. More research is needed to further explore ways of validly assessing fathers' beliefs regarding responsibility and indirect care. Nevertheless, when entered into a regression equation with the other study variables, the father involvement measure was a significant predictor of PSE. This important finding is supported by the theory that parenting beliefs are a determinant of father involvement (Lamb et al., 1987). More research is needed to clarify the directionality of effects and the influence of other determinants of father involvement (Pleck & Masciadrelli, 2004).

Independent assessments of father's PSE were obtained by securing spousal reports. The inclusion of spouses was an important feature of the study as the majority of

PSE research relies solely on self-report (Jones & Prinz, 2005). Associations were found between self and spousal reports and there was no statistically significant difference between the ratings. These findings provide greater confidence in the overall accuracy of fathers' self-reports and provides a key contribution to the validity of the measure.

6.4 Clinical Implications

Given the positive relationship between PSE and child adjustment, strengthening parents' PSE is an important clinical goal (Barnes & Adamson-Macedo, 2007; Crncec et al, 2008; Bloomfield & Kendall, 2007). Reliable and valid instruments are vital for pre-program and post-program assessment purposes (Mertens, 2005). This newly developed scale designed specifically for fathers will be of great use to practitioners. Specifically, having a clearer understanding of in which parenting dimensions fathers have particular strengths or weaknesses will better enable the development of effective interventions and parent training strategies. For example, moral teaching and positive discipline were important aspects of fathers' PSE. As such, intervention efforts should focus on teaching fathers age appropriate discipline skills as well as exploring the varying ways that moral teaching may manifest.

Since financial provision has been identified as an important aspect of fathers' PSE, it is important to consider the effects of unemployment on fathers' parenting. In doing so, one must be cautious not to presume that fathers who do not work outside the home are somehow inferior to working fathers. Such a presumption would further entrench notions of hegemonic masculinity (Connell, 2000). There are many paths that lead a man to become a primary care father, and the majority of these men function well and do not require clinical services (Doucet, 2006). In the current study, family income did not

predict fathers' PSE in the areas of Positive Engagement or Direct Care. This finding suggests that economic factors may influence different aspects of fathers' PSE in varying ways. Nevertheless, if a man loses his job suddenly or is chronically unemployed, his sense of what it means to be a father could be challenged (Shirani, Henwood, & Coltart, 2012). Individual or group treatment may be indicated in such circumstances. However, the associations between fathering and financial providing are variable and require further study (Pleck, 2010b).

Given that the importance of the couple relationship was a prevalent theme of Phase 1 of this research, couple level interventions may have important implications for fathers' parenting behaviours (Cowan & Cowan, 2003). For example, the ways in which fathers parent are often different than the ways of mothers and these differences can become a source of contention (Doucet, 2006; Miller, 2011). Specifically, established behavioural approaches such as communication training and problem solving training may be effective (Datillio, Epstein & Baucom, 1998). Communication training focuses on developing the couple's ability to express their thoughts and feelings clearly, learning how to listen to messages and delivering messages in a constructive manner. Problem solving training is a specific class of communication training in which the couple is supported to identify problems in their relationship, generate possible solutions that are mutually acceptable, and then implement the chosen solution.

Given the importance of parenting stress as a predictor of fathers' PSE, intervention efforts could focus on the identification of aspects of parenting the man finds most stressful and then working to reduce the impact those stressors may have. The specifics of the intervention, however, would vary depending upon the nature of the

identified stress. For example, a source of stress may be related to disagreements with one's spouse regarding parenting strategies or styles. In such a case, couple therapies may also be appropriate. Another source of stress may be a lack of knowledge related to child development and corresponding unrealistic behavioural expectations. As such an intervention could focus upon enhancing understanding of his child's development and the use of age appropriate discipline when needed. Alternatively, it may be that the child has a very different personality than the father and that coping with this dissimilarity is a key source of the stress. In this instance, an intervention may include information regarding different personalities and may include a component to increase the father's self awareness.

It remains unclear though, what is an optimal level of parental self-efficacy. Crncec et al. (2008) have provided the only study to explore clinical cut-off scores on a PSE measure. As their sample was comprised of parents of infants, it is unclear what an appropriate clinical cut-off would be for parents of older children. While Sanders and Woolley (2005) found that mothers of children with conduct problems had lower PSE compared to a community sample, the authors stop short of suggesting a lower limit to PSE scores that would indicate suitability for intervention. Leerkes and Crockenberg (2002) suggest that a moderately high level of self-efficacy may be optimal though they do not specify what that would be. Also, that study found that while mothers with moderately high PSE displayed greater sensitivity during interactions with their infants, a small number of women who reported very high PSE were less sensitive to their infants' distress. This finding demonstrates that consistent with social cognitive theory (Bandura, 1997), self-efficacy predicts behaviour when expectations regarding task difficulty are

congruent with abilities. That is, unrealistically high PSE may be dysfunctional in challenging situations. Therefore, interventionists should be cautious of falsely inflating a client's PSE. One possible solution may be the implementation of a program that allows parents to practice new skills with their child directly in the session. Practicing skills with the guidance of a therapist would increase the likelihood the parent would experience success. This success would improve PSE for the given task and these beliefs would be grounded by actual experience gained in session.

6.5 Limitations

No study is without limitations and the current study is no exception. First, the participants for the three phases of this study were largely healthy, well-functioning adults. As such the associations among the research variables may differ in a clinical sample. Second, since study participants were self-selected, the sample is comprised largely of Caucasian, well-functioning, middle-class fathers. To learn more about the PSE construct, it will be important to study more diverse family forms living in a wider variety of circumstances. For example, much remains to be learned of the applicability of the FSES to low income fathers, or gay fathers. However, since much of the literature drawn for this study also predominantly used self-selected samples of Caucasian, middle class families, the results of the present study have some comparability to prior research. Third, the samples used for the first and third phases of the study comprised biological fathers in two parent households. As such, future research should explicitly explore the use of the FSES with single fathers, step-fathers, or other *social fathers* (Ball & Daly, 2012). However, since over 80% of fathers live with their children at least some of the time, it is likely that the current results will generalize to some degree to the larger

Canadian population (Beaupre, Dryburgh, & Wendt, 2010). Fourth, since the role of the father is intricately tied to culture (Lamb, 2010), future research needs to test the FSES in other cultures. While such endeavors may include international research, much remains to be learned about PSE in differing Canadian cultures. For example, Ball (2012) has begun to document unique aspects of fathering found within Aboriginal cultures that she argues are a result of colonialism and the residential school system. Future research needs to consider paternal PSE in aboriginal cultures in light of differing histories and contexts. Fifth, while the FSES was validated in this study through the use of self-report and the ratings of spouses, no independent behavioural or observational data were obtained. Future research needs to address this gap.

6.6 Future Directions

With the development of a promising new PSE scale developed for and tested with fathers of young children, opportunities for future research abound. As parenting tasks may differ across differing ages of children, the FSES may need to be refined and further validated with other ages of children. For example, some writers have commented on the important role fathers play in facilitating their children's community involvement particularly in the realm of coaching sports teams (LaRossa 1997; Ball & Daly, 2012). While such activities begin to occur in the preschool years in some families, these pursuits are most often solidified in the school age years. In terms of parenting adolescents, the focus of parenting tasks shifts towards less direct care tasks and towards more guidance and monitoring (Bodenschieder et al, 1997).

While a few recent studies have explored predictors of PSE in fathers (Murdock, 2012; Sevigny & Loutzenhiser, 2010), the instruments used to assess PSE in those studies

were validated with mothers. It would be informative to explore whether the previously obtained patterns of results hold when tested with the FSES. As mentioned previously, the sample used to validate the FSES consisted primarily of two parent, heterosexual families. A fruitful area of future research would be to confirm (or disconfirm) the factor structure of the measure when tested with fathers from differing family formations including but not limited to single fathers, step fathers and gay fathers.

While the effects of context on fathering has been discussed at some length in this dissertation, the particular context of the father-child relationship has not been thoroughly explored. While fathers clearly influence child development in various ways (Allen et al., 2012), the importance of bidirectional effects of children on fathers' PSE should not be overlooked. Previous research has suggested child characteristics may have a particular influence in respect to father responsivity, and fathers' emotional self-management (Daly & Ball, 2012).

The majority of parenting dimensions identified in the qualitative component of this research are present to varying degrees on the final FSES scale. However indirect care and process responsibility are notably absent despite their theoretical and practical importance (Doucet, 2006; Pleck, 2010). Further independent exploration of how men operationalize these parenting dimensions may elucidate ways of better capturing the beliefs and associated parenting tasks. Related to this notion, future research needs to consider financial provision when exploring the effects of parenting beliefs and father involvement.

In this study, good evidence of concurrent and convergent validity were found. However, further evidence of discriminant validity should be sought. As there have been

few systematic, theory driven studies examining the covariates of paternal PSE, such an approach will be an important growth area for future research. In addition, the predictive validity of the FSES should be explored. For example, while PSE is a determinant of positive father involvement, it has been understudied in that context. The emergence of the FSES has the potential to stimulate new research exploring the associations between the PSE and involvement constructs. Related to these associations, the literature on parenting styles has become explicitly part of the father involvement framework (Pleck 2010a). It would be advantageous to examine the relationships between authoritative parenting and PSE.

Earlier in this dissertation, the generalizability of measures designed specifically for mothers and subsequently used with fathers was critiqued. With the emergence of a father-centred PSE scale, questions of its applicability to mothers must be established to determine whether the FSES may be validly used with mothers. For example, it is possible that financial provision and moral teaching are also salient issues for mothers that hitherto have not been adequately explored on maternal measures of PSE. Future research needs to explore the FSES with mothers with careful attention paid to similarity of factor structure (Finley, Mira & Schwartz, 2008) and measurement equivalence (Adamsons & Buehler, 2007). Exploring mothers' responses may inform subsequent revision of the FSES and contribute to a continuing evolution of our understanding of the PSE construct.

6.7 Conclusion

This study makes important contributions to the understandings of parental self-efficacy (PSE). Most importantly, the final product of this research is a new domain

specific self report measure of PSE in fathers with young children. The Fathering Self-Efficacy Scale (FSES) is a psychometrically reliable instrument that demonstrates good initial evidence of construct validity. Prior research has focussed almost exclusively on the experiences of mothers leading to a restriction in understanding of PSE in fathers (Seigny & Loutzenhiser, 2010). Items appearing on the FSES were derived from a thematic analysis of interviews conducted with fathers. As such, the FSES is the first PSE instrument to be developed that is grounded in the actual experiences of fathers. With few exceptions, other existing PSE scales employ rationally-derived items that are based on various theories. A limitation of the rational approach is that there are implicit assumptions regarding the tasks parents perform which may restrict our understanding and cause researchers to miss potentially novel parenting contributions or formulations (Doucet, 2006).

The current study has endeavoured to remain true to Bandura's (1997) social cognitive theory. Unfortunately there has been considerable variability in the ways PSE has been conceptualized and measured. Confusion arising from differing terminology being used interchangeably with PSE and limitations in measuring PSE render interpretation of existing results difficult and as such the advancement of knowledge suffers (de Montigny & Lacharite, 2005; Sabatelli & Waldron, 1995). In addition, the toddler/preschool period was specifically selected for study as evidence suggests this may be an especially good time to study fathers' PSE. During this developmental period fathers typically become more actively engaged with their children (Fox & Bruce, 1999; Loutzenhiser et al., 2009; Pleck & Masciadrelli, 2004). An increasing amount of engagement with their children provides the opportunity for fathers to experience success

or failure in various parenting tasks and make fathers especially susceptible to the effects of verbal feedback from their significant other (Bandura, 1997, Doherty et al., 1998).

A key finding of this study is that historical notions of the role of the father remain important to fathers of young children. In particular, the role of guiding disciplinarian and moral teacher remain important to fathers as does the role of financially providing for their families. By exploring parenting themes expressed as important by fathers of young children a remarkable concordance with father involvement theory emerged. As such, the FSES could serve in the future as an important tool in both the PSE and fathering literatures. In addition, since PSE has been shown to be linked to child developmental outcomes and can be modified by environmental changes, better understandings of PSE may lead to innovative family interventions.

While much has been learned about PSE over the past 30 years, a great deal remains to be discovered particularly about fathers' PSE. This study has found that while there is overlap in the tasks that mothers and fathers perform, there are a range of differences as well. Fathering is clearly not synonymous with mothering and thus new ways of understanding and assessing fathers' experiences are needed to advance knowledge. The development of the Fathering Self-Efficacy Scale represents an important initial effort in the study of fathers' parenting beliefs. It is hoped that this new measurement tool will contribute to further study of men's parenting as equal to women's parenting with the ultimate goal of supporting family life and improving the developmental outcomes of children.

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Appendix A

Letter to day care directors



DEPARTMENT OF PSYCHOLOGY
Child and Family Research Group

Regina, Saskatchewan
Canada S4S 0A2
phone: (306) 337-2592
fax: (306) 585-5429
email: sevigph@uregina.ca

December 14, 2006

Dear Sir or Madame,

I am currently completing my Master's degree in Psychology at the University of Regina and am looking for parents to participate in **The Parenting Toddlers Study**. This research is being conducted for my MA thesis under the supervision of Dr. Lynn Loutzenhiser. I am interested in meeting two parent families whose first-born child is between the ages of approximately 18 – 30 months.

Participation in this study involves:

- Completing some questionnaires
- Participating in an interview conducted in the family's home

I am wondering if this opportunity may be of interest to any of the families at your centre. I will follow up this letter with a telephone call within the next few days to talk in further detail about my study.

Thank you in advance for helping us to learn more about parenting toddlers.

Sincerely,

Phillip R. Sevigny

Appendix B

Advertising Poster

Are you a first-time parent with a toddler under the age of three?

We are looking for mothers and fathers interested in talking to us about their parenting experiences.



For more information or if you are interested in participating in the Parenting Toddlers Study please call the Child and Family Research Group at **337-2592**.



Dr. Lynn Loutzenhiser
Department of Psychology
Ph: 585-4078.

Your participation is greatly appreciated!!!

Appendix C

Phase 1 Consent Form



UNIVERSITY OF
REGINA

DEPARTMENT OF PSYCHOLOGY
Child and Family Research Group

Regina, Saskatchewan
Canada S4S 0A2
phone: (306) 337-2592
fax: (306) 585-5429
email: seignph@uregina.ca

Agreement to Participate in Research Project

Assignment #

Name of Participant

The Parenting Toddlers Study

Primary Researcher: Phillip R. Seigny

You are being asked to take part in a research project. This project is being conducted towards the completion of a thesis by a student in the Master of Arts program in Psychology under the supervision of Dr. Lynn Loutzenhiser. All research projects carried out by the Department of Psychology are covered by the rules of the Research Ethics Board at the University of Regina.

The researcher will explain the purpose of the study. Explanations of how the project will be carried out and what will be expected of you will be provided. All risks and benefits of participating in this study will be made known to you. In the interests of informed consent, please ask any questions you may have before agreeing to participate in this study.

Below is an explanation of the research study. Please read through it carefully and ask any questions you may have. If you decide to participate in the study please sign the form below.

1. Purpose of the Study. The purpose of this project is to increase our understanding of aspects of family life and parenting.
2. Explanation and Procedures.
 - 1) You will be asked to complete 8 questionnaires about yourself, and your family. These questionnaires should take about 1 to hour to do.
 - 2) You will be interviewed regarding your experiences and beliefs of being a parent. This interview should take about one hour.

3. Discomforts and Risks. The questionnaires and interview ask you to provide personal information about yourself and your family. Some people find it uncomfortable or stressful to answer questions of this nature. You may choose to leave such questions unanswered.
4. Benefits. There is no direct benefit that you will receive for participating in this study; however, we very much appreciate your willingness to take part in this important study.
5. Confidentiality. All of the information collected during this study will be treated as confidential records. While the results of the research study will likely be shared with other people and may be published in scientific reports, your name and the fact that you participated in the study will be kept confidential.

All information collected as part of this study will be kept in the strictest confidence. Interview records will contain no identifying information, and will be coded to ensure anonymity. The questionnaire and interview information will be kept in a locked cabinet at the University of Regina. This data will be kept for a minimum of five years upon the completion of the study. Access to this information will be limited to the primary researcher and the research supervisor.

A limit to our confidentiality policy will only occur in cases of suspected or observed child maltreatment which researchers are mandated to report to appropriate authorities.

6. Refusal/Withdrawal. The decision whether to participate in this study is entirely up to you. Also, if you decide now to participate, you will be able to change your mind later and withdraw from the project at any time without penalty.
7. Rights and Complaints. If you have any questions about your rights as a participant, or if you would like to discuss your participation in this study, you may contact the University of Regina Research Ethics Board at (306) 585-4775.

I acknowledge that I have read the above explanation of This Project that all of my questions have been satisfactorily answered, and I choose to participate in this research study. I have received a copy of this consent form.

Signature of Participant

Date

Signature of Participant

Date

Signature of Researcher

Date

Appendix D

Ethical clearance



OFFICE OF RESEARCH SERVICES
M E M O R A N D U M

DATE: September 9, 2010
 TO: Phillip R. Sevigny
 Psychology
 FROM: Dr. Bruce Plouffe
 Chair, Research Ethics Board
 Re: **Understanding Parental Self-Efficacy in Fathers (File # 93S0910)**

Please be advised that the University of Regina Research Ethics Board has reviewed your proposal and found it to be:

1. APPROVED AS SUBMITTED. Only applicants with this designation have ethical approval to proceed with their research as described in their applications. For research lasting more than one year (Section 1F), **ETHICAL APPROVAL MUST BE RENEWED BY SUBMITTING A BRIEF STATUS REPORT EVERY TWELVE MONTHS**. Approval will be revoked unless a satisfactory status report is received. Any substantive changes in methodology or instrumentation must also be approved prior to their implementation.
2. ACCEPTABLE SUBJECT TO MINOR CHANGES AND PRECAUTIONS (SEE ATTACHED). Changes must be submitted to the REB and approved prior to beginning research. Please submit a supplementary memo addressing the concerns to the Chair of the REB.** Do not submit a new application. Once changes are deemed acceptable, ethical approval will be granted.
3. ACCEPTABLE SUBJECT TO CHANGES AND PRECAUTIONS (SEE ATTACHED). Changes must be submitted to the REB and approved prior to beginning research. Please submit a supplementary memo addressing the concerns to the Chair of the REB.** Do not submit a new application. Once changes are deemed acceptable, ethical approval will be granted.
4. UNACCEPTABLE AS SUBMITTED. The proposal requires substantial additions or redesign. Please contact the Chair of the REB for advice on how the project proposal might be revised.


 Dr. Bruce Plouffe

cc: Lynn Loutzenhiser – Psychology

** supplementary memo should be forwarded to the Chair of the Research Ethics Board at the Office of Research Services (Research and Innovation Centre, Room 109) or by e-mail to research.ethics@uregina.ca

Phone: (306) 585-4775
 Fax: (306) 585-4893
www.uregina.ca/research

Appendix E.

Introduction to Phase 2 online survey

The Fathers of Young Children Study

Primary Researcher: Phillip R. Sevigny

You are being asked to take part in a research project. This project is being conducted towards the completion of a dissertation by a student in the PhD program in Psychology under the supervision of Dr. Lynn Loutzenhiser. All research projects carried out by the Department of Psychology are covered by the rules of the Research Ethics Board at the University of Regina.

Below is an explanation of the research study. Please read through it carefully and if you agree to participate, please check the YES box at the end of this form.

6. Purpose of the Study. The purpose of this study is to increase our understanding of fathers' beliefs regarding parenting young children.
7. Explanation and Procedures. You will be asked to complete one questionnaire on-line that should take about 10-15 minutes.
8. Benefits, discomforts and risks. There is no direct benefit that you will receive for participating in this study; however, we very much appreciate your willingness to take part in this important study. No discomfort or risks are anticipated with your participation in this study.
9. Confidentiality. All of the information collected during this study will be confidential. While the results of the research study will likely be shared with other people and may be published in scientific reports, no information that can identify you will be collected. You will anonymously complete the questionnaire(s). The findings from the study will only be used in aggregate with the responses of all the other participants.

All information collected as part of this study will be kept in the strictest confidence. While the data collection is done online, it will be protected using 128 bit SSL security protocols (the same as used by banking institutions). To help insure your confidentiality, please close your internet browser upon completion of the survey. There is a very small possibility that your information may be intercepted by third parties using sophisticated tools. The data, while being compiled on-line, are only accessible through a user name and password. Your files will be electronically deleted after 5 years upon completion of the study. Access to this information will be limited to the primary researchers.

It is also important for you to know that "Survey Monkey", a web-survey company that is located in the USA, is the host of this on-line research. This company is subject to U.S. laws; in particular, the US Patriot Act that allows authorities access to the records of internet service providers. Survey Monkey's servers record incoming IP addresses - including that of the computer that you use to access the survey. However, no connection is made between your data and your computer's IP address. If you choose to participate in the survey, you understand that your responses to the survey questions will be stored and accessed in the USA.

5. Refusal/Withdrawal. The decision whether to participate in this study is entirely up to you. If you do not submit the completed questionnaires and answers to questions, your data will be deleted.

6. Rights and Complaints. This project was approved by the Research Ethics Board, University of Regina. If research participants have questions or concerns about their rights as participants, they may contact the Chair of the Research Ethics Board at (306)585-4775 or by email at research.ethics@uregina.ca.

A summary of the findings of this research will be available from the following website after December 31, 2011: <http://uregina.ca/~loutzlyn/ResearchFindings.html>

Please print and retain a copy of this form for your records

I acknowledge that I have read the above explanation of this research project, and I choose to participate in this research study.

How old is this child? _____ years & _____ months

What sex is this child?

- Female
- Male

Is this child from a set of multiples (e.g. a twin)?

- Yes
- No

Has this child received a diagnosis of a developmental disability?

- Yes
- No

Appendix G

Classified Advertisement text

Fathers of Young Children Survey

Are you a father with at least one child between 2 and 6 years old? For my PhD research (supervised by Dr. Lynn Loutzenhiser) at the University of Regina, I am trying to better understand fathers parenting beliefs. I am looking for fathers to complete a new questionnaire I have developed. From start to finish it should take less than 15 minutes. By clicking on the following link you will be taken directly to a page with some more information and the questionnaire. If you are not taken directly to the questionnaire, please copy and paste the link into the address bar of your browser.

(insert survey link here)

Thanks in advance for your help with this,

Phillip R. Sevigny, M.A.
Child and Family Research Group
University of Regina

Appendix H

Advertising poster example

Are you a father with at least one child 2-6 years old?



Please participate in this PhD Study to improve
understanding of fathers' beliefs about parenting

Respond to an on-line survey

<http://www.surveymonkey.com/s/LMYXCFX>

If you require more information, contact Phillip Seigny
Child and Family Research Group
seignph@uregina.ca

Dr. Lynn Loutzenhiser, Supervisor
Department of Psychology
Ph: (306) 585-4078

Appendix I

Spousal email invitation to participate

Dear (Name),

Your spouse recently participated in my University of Regina PhD research project. The aim of this online study is to better understand parenting beliefs. Your spouse has indicated that you may also be interested in participating in the research. Since I am looking for the perspectives of mothers and fathers, your input is important. Participation is completely voluntary and anonymous. You will be asked to complete one questionnaire I have developed, and a series of short questionnaires created by other researchers.

Responding to the surveys usually takes approximately 15 minutes. Please click on the following link and you will be taken directly to the beginning of the survey. If you are not taken there directly, please copy and paste the link into the address bar of your browser.

(insert survey hyperlink here)

If you have any questions you may contact me directly at Phillip.Sevigny@uregina.ca or my research supervisor Dr. Lynn Loutzenhiser at Lynn.Loutzenhiser@uregina.ca. This project has been approved by the Research Ethics Board, University of Regina.

Please forward this to anyone else you think may be interested in participating in this study.

Thank you in advance for your help,

Phillip R. Sevigny, M.A.
Child and Family Research Group
University of Regina

Appendix J

Father recruiting email sent when spouses completed the research first.

Dear (Name),

Your spouse recently participated in my University of Regina PhD research project. The aim of this online study is to better understand parenting and explore differences between mothers and fathers. Your spouse has indicated that you may also be interested in participating in the research. Participation of fathers in my study is very important. Your responses will help researchers and service providers better understand and meet the needs of fathers. Participation is completely voluntary and anonymous. You will be asked to complete one questionnaire I have developed, and a series of short questionnaires created by other researchers.

Responding to the surveys usually takes approximately 15-20 minutes. Please click on the following link and you will be taken directly to the beginning of the survey. If you are not taken there directly, please copy and paste the link into the address bar of your browser.

(insert survey hyperlink here)

If you have any questions you may contact me directly at Phillip.Sevigny@uregina.ca or my research supervisor Dr. Lynn Loutzenhiser at Lynn.Loutzenhiser@uregina.ca. This project has been approved by the Research Ethics Board, University of Regina.

Please forward this to anyone else you think may be interested in participating in this study.

Thank you in advance for your help,

Phillip R. Sevigny, M.A.
Child and Family Research Group
University of Regina

Appendix K

Email sent to those Phase 2 participants willing to participate in Phase 3

Hello!

I wanted to thank you for your participation several weeks ago in my University of Regina PhD research project (supervised by Dr. Lynn Loutzenhiser) focusing on fathers' parenting beliefs. This project would not be possible without the support of fathers like you, willing to share your knowledge and your time!

At the completion of the survey, you indicated you would be interested in participating in the next phase of the project which is now underway. I still need fathers with at least one child between 2 and 6 years of age to complete one questionnaire I have developed, and a series of short questionnaires developed by other researchers.

In total, responding to the surveys should take approximately 20 minutes. Please click on the following link and you will be taken directly to the beginning of the survey. If you are not taken there directly, please copy and paste the link into the address bar of your browser.

(insert survey hyperlink here)

Please forward this email to anyone else you think may be interested in participating in this study.

Thanks in advance for your help with this,

Phillip R. Seigny, M.A.
Child and Family Research Group
University of Regina
Email: seignph@uregina.ca

Appendix L

Paid Facebook advertisement.

Fathers of young children



Fathers living with spouse/partner & with at least one child age 2-6 needed for University of Regina research. Take the survey now!

Appendix M

General Self-Efficacy Scale

Please read the following statements, and think about how each best suit you. Circle the number according to your response. If you have trouble deciding which response to choose, pick the one you initially thought of.

	Not True	Barely True	Moderately True	Exactly True
1. I can always manage to solve difficult problems if I try hard enough.	1	2	3	4
2. If someone opposes me, I can find the ways and means to get what I want.	1	2	3	4
3. It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
4. I am confident that I could deal efficiently with unexpected events.	1	2	3	4
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
6. I can solve most problems if I invest the necessary effort.	1	2	3	4
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
8. When I am confronted with a problem, I can usually find several solutions.	1	2	3	4
9. If I am in trouble, I can usually think of a solution.	1	2	3	4
10. I can usually handle whatever comes my way.	1	2	3	4

Appendix O

Parental Responsibility Scale

The following items are about activities that many parents do with their young children. We would like you to tell us who has the responsibility for each activity.

Responsibility in this sense means who remembers, plans, and schedules the activity, regardless of who actually ends up doing it. It is possible to have responsibility for an activity without actually doing it. Circle the number that is most appropriate for each item.

Activities:	<u>Mother Always Responsible</u>	<u>Mother Usually Responsible</u>	<u>Both Parents Responsible</u>	<u>Father Usually Responsible</u>	<u>Father Always Responsible</u>
1. Take the child to preventive health care clinic.	1	2	3	4	5
2. Buy child's clothes.	1	2	3	4	5
3. Buy child's toys.	1	2	3	4	5
4. Supervise a part of morning routine, e.g., dressing, breakfast, etc.	1	2	3	4	5
5. Clean child's room.	1	2	3	4	5
6. Determine when to take child to pediatrician due to illness.	1	2	3	4	5
7. Determine appropriate clothes for child to wear.	1	2	3	4	5
8. Spend special time at bedtime, e.g., read a story	1	2	3	4	5
9. Take child on special trip/outing, e.g., zoo, park, etc.	1	2	3	4	5
10. Make babysitting arrangements.	1	2	3	4	5

	<u>Mother Always Responsible</u>	<u>Mother Usually Responsible</u>	<u>Both Parents Responsible</u>	<u>Father Usually Responsible</u>	<u>Father Always Responsible</u>
11. Determine and implement discipline strategies.	1	2	3	4	5
12. Stay at home or make child care arrangements when child is sick.	1	2	3	4	5
13. Determine appropriate time and putting child to bed at night.	1	2	3	4	5
14. Selecting a child care arrangement for child.	1	2	3	4	5

Appendix P

Center of Epidemiologic Studies Depression Scale

Below is a list of some of the ways you may have felt or behaved. Please indicate how often you have felt this way during the past week by circling the appropriate space.

	Rarely or None of the Time (Less than 1 day)	Some or a Little of the Time (1-2 days)	Occasionally or a Moderate Amount of the Time (3-4 days)	Most or All of the Time (5-7 days)
1. I was bothered by things that usually don't bother me.	0	1	2	3
2. I did not feel like eating; my appetite was poor.	0	1	2	3
3. I felt that I could not shake off the blues even with help from my family or friends.	0	1	2	3
4. I felt that I was just as good as other people.	0	1	2	3
5. I had trouble keeping my mind on what I was doing.	0	1	2	3
6. I felt depressed.	0	1	2	3
7. I felt that everything I did was an effort.	0	1	2	3
14. I felt hopeful about the future.	0	1	2	3
14. I thought my life had been a failure	0	1	2	3

14. I felt fearful.	0	1	2	3
11. My sleep was restless.	0	1	2	3
12. I was happy.	0	1	2	3
13. I talked less than usual.	0	1	2	3
14. I felt lonely.	0	1	2	3
15. People were unfriendly.	0	1	2	3
16. I enjoyed life.	0	1	2	3
17. I had crying spells.	0	1	2	3
18. I felt sad.	0	1	2	3
19. I felt that people disliked me.	0	1	2	3
20. I could not get "going."	0	1	2	3

Appendix Q

Parental Stress Scale

The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with your child or children typically is. Please indicate the degree to which you agree or disagree with the following items by placing the appropriate number in the space provided.

1 = Strongly disagree 2 = Disagree 3 = Undecided 4 = Agree 5 = Strongly agree

- ___ 1. I am happy in my role as a parent.
- ___ 2. There is little or nothing I wouldn't do for my child(ren) if it was necessary.
- ___ 3. Caring for my child(ren) sometimes takes more time and energy than I have to give.
- ___ 4. I sometimes worry whether I am doing enough for my child(ren).
- ___ 5. I feel close to my child(ren).
- ___ 6. I enjoy spending time with my child(ren).
- ___ 7. My child(ren) is an important source of affection for me.
- ___ 8. Having child(ren) gives me a more certain and optimistic view for the future.
- ___ 9. The major source of stress in my life is my child(ren).
- ___ 10. Having child(ren) leaves little time and flexibility in my life.
- ___ 11. Having child(ren) has been a financial burden.
- ___ 12. It is difficult to balance different responsibilities because of my child(ren).
- ___ 13. The behavior of my child(ren) is often embarrassing or stressful to me.
- ___ 14. If I had it to do over again, I might decide not to have child(ren).
- ___ 15. I feel overwhelmed by the responsibility of being a parent.
- ___ 16. Having child(ren) has meant having too few choices and too little control over my life.
- ___ 17. I am satisfied as a parent.
- ___ 18. I find my child(ren) enjoyable.

