DISSERTATION

IDENTIFYING SUPPORT NEEDS AND INTERVENTION OPPORTUNITIES FOR PERINATAL FATHERS: AN EXPLORATORY SEQUENTIAL MIXED METHODS STUDY

Submitted by

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ABSTRACT

IDENTIFYING SUPPORT NEEDS AND INTERVENTION OPPORTUNITIES FOR PERINATAL FATHERS: AN EXPLORATORY SEQUENTIAL MIXED METHODS STUDY

The transition to fatherhood is a time of increased stress and risk for depressive and anxiety disorders for fathers. Father adjustment affects family well-being, but support programs that target perinatal fathers are not widely available, and it can be difficult to engage fathers in the programs that are available. Identifying the support needs of perinatal fathers and opportunities for intervention is an important and underexplored avenue for promoting early healthy family development.

The following dissertation includes a review of developmental theories and extant literature and proposes a model of paternal perinatal development. Three studies are then presented using an exploratory mixed methods design. Study A explores perinatal father experiences and perceptions of their support needs. Study B quantitatively assesses social support as a predictor of parenting engagement, role conflict, and well-being in postpartum fathers. Study C investigates qualitative and quantitative evidence for a proof-of-concept evaluation of a piloted community-based group intervention program called DadSpace.

Findings from Study A indicate that fathers find value in connecting with other fathers and are interested in support and information that are relevant to fathers. Findings from Study B indicate that both social support and self-efficacy are significant predictors of postpartum father parenting engagement and well-being, including work-home role conflict and satisfaction,

parenting stress, depression, and anxiety. Findings from Study C demonstrate that perinatal fathers find value in a program that connects them with other fathers and supports them in exploring issues relevant to them; however, recruitment remains a challenge.

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DEDICATION

For Tyler,

who has provided such a good example of fathering to our children and supported me tirelessly.

You are as much a part of this work as I am.

And for Jimmie Snider (Granny),

who was always proud of me and would have loved to see me finish.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: OVERVIEW OF THE STUDIES AND THEORETICAL ORIENTATION

Statement of the Problem

The transition to fatherhood constitutes a major life change for most adult men, with accompanying adjustments to roles and responsibilities and increased stressors. A growing body of evidence suggests that the perinatal period before and after the birth of a child is a vulnerable one for parents, including fathers (see Baldwin et al., 2018, and Recto & Champion, 2020, for reviews), yet fathers are routinely underserved by perinatal support programs (Panter-Brick et al., 2014). Calls are growing to identify effective screening and intervention programs for perinatal fathers (J. Y. Lee et al., 2018; Panter-Brick et al., 2014; Walsh et al., 2020). Although a few interventions have been attempted, a comprehensive approach to targeting interventions for perinatal fathers is needed (J. Y. Lee et al., 2018).

Failing to routinely support early fathering is likely having significant and unmeasured effects on families. Father involvement is linked to a multitude of positive child development outcomes (Sarkadi et al., 2008). A secure father-child relationship is also protective for children when other risks are present, such as high marital conflict (Volling et al., 2006) and maternal depression (Hossain et al., 1994). Early father involvement has also been found to support maternal well-being (Giurgescu & Templin, 2015). When fathers struggle to adapt to the parenting role, they may withdraw, reducing their ability to support their children's development. Halme et al. (2006) found that fathers who experience high levels of parenting stress are less likely to be engaged with their pre-school aged children and to have reduced availability for their children. Depressive symptoms in fathers are also predictive of later internalizing and externalizing symptoms in children (Shelton & Harold, 2008).

Intervening in paternal well-being at the beginning of the parenting journey may have long-term benefits for children and families. The following dissertation seeks to answer the question of how best to support perinatal father adjustment. The theoretical framework reviews existing developmental theories and applies them to a model for paternal perinatal development. Using a mixed-methods approach, three studies are then presented that seek to understand the needs of perinatal fathers, the value of support, and the potential for engaging fathers in perinatal intervention programming.

Theoretical Framework and Review

A comprehensive theoretical framework covering the transition to fatherhood may assist researchers and interventionists in identifying opportunities for supporting perinatal fathers and the developing family. In the following section, I review both life course theory and bioecological theory in the context of perinatal fatherhood and propose a comprehensive developmental model of perinatal fatherhood. I then review existing literature in the context of the model and provide recommendations for targeting interventions to perinatal fathers.

Theories of Development: A Life Course Perspective

Although becoming a father most often involves a biological role, the experience of fatherhood is a social one. Engagement with the fatherhood role depends on interactions between father and infant, father and family, family and culture, and the historical period in which all of it is occurring. Fathers develop within contextual layers of relationships and environment, and father development is best conceptualized within a relational developmental systems (RDS) meta-theoretical paradigm (Overton, 2013). RDS metatheory rejects a nature vs. nurture dichotomy in favor of an integrated perspective in which development occurs within biological, social, organizational, and historical contexts that influence and are influenced by each other

(Overton, 2013). Relevant developmental theories emphasizing life transitions and contexts include life course theory (Elder, 1975; Elder, 1998; Elder et al., 2015) and bioecological theory (Bronfenbrenner, 1977; Bronfenbrenner & Morris, 2006). These two theories have developed in tandem, and each has been influential to the other, so they will both be addressed here.

Life Course Theory

The life course perspective of human development theorizes that development occurs across the life span and is influenced by social and temporal contexts in addition to biology (Elder et al., 2015). Elder et al. (2015) cataloged the development of the life course perspective over the 20th century and collected the central concepts of life course perspectives into a cohesive theory of human development, outlined in five paradigmatic principles. Each principle is described below and linked to father development in particular.

The *principle of life-span development* posits that development occurs throughout life, not only in childhood (Elder et al., 2015). Earlier development influences later development, and behavioral continuity is likely to mean that changes later in life may be smaller compared to early life. Transition points, such as the transition to parenthood, create opportunities to adjust roles and behaviors and may become turning points in the life course that alter the trajectory of a person's life. Transitions and turning points are characterized by a multitude of possible changes, including social contexts, experiences, relationships, and group membership (Elder et al., 2015). Becoming a parent is a potentially significant developmental transition in the life course, involving changes to roles, relationships, group membership, and life experiences. Draper (2003) described a process of liminality, in which men who are becoming fathers are between social statuses, and emphasized the importance of helping men step into the new role of father. The relative newness of father involvement in prenatal care, childbirth support, and infant care and

the lack of consistent support systems for fathers, suggests a more ambiguous transition into parenting for men. Given that transition points are natural opportunities for change, the transition to parenthood makes an ideal focus for interventions to support healthy trajectories of personal and family development.

Effectively engaging fathers who are in the transition to parenthood may be an important aspect of intervention. The *principle of human agency* posits that individuals co-construct their life course and influence their own development through the meanings they make of events in their lives and the choices and actions they take in response to those events (Elder et al., 2015). Although the transition to parenthood is an opportunity for adult development, father engagement in the process is required. Perinatal fathers face multiple decision points and meaning-making opportunities regarding their perceptions of the fathering role, their preparation for and engagement in the role, decision making around how to use the time and energy available to them, and levels of involvement with their children and co-parents. Societal recognition of the importance of father engagement is gaining traction. In the United States, a government initiative promoting responsible fatherhood has provided funding to intervention programs seeking to increase engagement in the fathering role, particularly for fathers who are unmarried or not residing with their children (Office of Family Assistance, 2020). While this is an admirable endeavor, programs that focus on getting fathers to show up without giving them the developmental supports to be successful in the role are still likely to fall short in accomplishing their goals for both fathers and children.

The choices available to fathers are supported or constrained by the contexts they live and work within. The *principle of linked lives* states that development occurs interdependently in the context of shared relationships, and that these relationships influence the development of the

individual (Elder et al., 2015). The choices fathers make are partly regulated by the people and organizations the father interacts with, such as by encouraging or discouraging involvement, providing access to the infant, availability of family leave, societal and family expectations of fathers, and the infant's responsiveness to the father. I think it is important to note that, much as maternal-infant health is a top public health priority, the lives of mothers and infants are often also linked with the father; hence, supporting father well-being and engagement is likely to also support healthy development for the mother and baby.

Life course theory also pays particular attention to the temporal context of development – both by age in the life span and time in history. The *principle of timing* states that development is age-graded, such that development is altered by the timing of a particular transition event in the life course (Elder et al., 2015). The potential to become a father spans multiple decades of a male's life, from early adolescence to middle or even late adulthood in some cases. Men can become fathers around the same time as their peers, or much earlier or later than their peers, with accompanying differences in the spectrum of social roles and resources. There may also be generational differences in the models of fatherhood they grew up with, including the fathering they experienced and the expectations for the role placed on their own fathers or father-figures as influenced by the social expectations of the time.

This ties into the *principle of historical time and place*, which states that individual development is shaped by the period in time and location of where a person lives (Elder et al., 2015). Expectations for fathering and available resources may vary widely by culture, nation, geographic location (e.g., urban vs. rural), and social stratification. Fathering has also undergone a shift in recent generations in developed Western societies, with increased discussion about the fathering role in response to the feminist movement (Doucet & Lee, 2014), as well as discourse

on the potential for fathers to promote positive development in their children (Lamb, 2010), and a growing expectation for fathers to be involved caregivers, coined "new fatherhood" (Gregory & Milner, 2011). The increased interest in developing effective fatherhood programs is an example of the principle of historical time and place at work.

Effective interventions depend on identifying and intervening in specific processes influencing development. Elder et al. (2015) described linking mechanisms that occur in the interactions between individuals and their social and temporal contexts. Linking mechanisms are processes of interaction that contribute to developmental change. These processes proposed by Elder et al. (2015) include the interaction between age and historical time, situational constraints on an individual's behavior, personal cycles of control that seek to balance resources and expectations, and accentuation of existing personal attributes. Fathers must make decisions about how limited quantities of time and energy are divided between domains such as family, work, spouse, and community (Palkovitz, 2002), and these contexts influence fathers' decision making and capacity to engage in each domain. Currently, the contextual influences on fatherhood are themselves changing, adding complexity to processes of father development. For example, social pathways to parenting are becoming more complex, with fewer parents marrying prior to having a baby (Wildsmith et al., 2018), parenting happening later in the lifespan on average than in previous generations (Mathews & Hamilton, 2016), and increased variability in family structures (Pew Research Center, 2015). Interventions must be sensitive to the multiple pathways to fatherhood and their related processes. Bronfenbrenner's (1977) bioecological theory helps to further define the processes occurring between individual and ecological contexts in development.

Bioecological Theory

Bioecological theory (Bronfenbrenner, 1977; Bronfenbrenner & Morris, 2006) categorizes developmental influences into person, process, context, and time. The theory pays particular attention to the interactional processes that take place between the developing individual and their various ecological contexts (e.g., relationships, institutions, and societies), similar to Elder's (2015) processes of linked lives. Although Bronfenbrenner (1977) focused his model most on development in childhood, bioecological theory can be applied to later life development as well. Characteristics of person, process, context and time as conceptualized by Bronfenbrenner and Morris (2006) are described below.

Person characteristics include a person's dispositional traits and behaviors, as well as their resources (e.g., skills, knowledge, and abilities) and demand characteristics (Bronfenbrenner & Morris, 2006). Demand characteristics are the ways a person elicits a reaction from their environment, as when a parent tries to coax a smile from their infant or when an infant seeks to have its needs met by getting the attention of a caregiver. Demand characteristics are important contributors to relational interactions that occur with others.

The father's own personal characteristics contribute to his development. Father involvement is influenced by dispositional characteristics such as self-efficacy (Trahan, 2018), personality traits (Boyce et al., 2007), and coping style (Livingston et al., 2021). Personal resources such as knowledge of parenting and skills in caregiving support fathers' well-being (Boyce et al., 2007). Fathers may also utilize demand characteristics to negotiate for time with their baby, such as requesting family leave or addressing maternal gatekeeping behaviors (controlling access to the infant). The personal traits, resources, and characteristics of fathers are an important part of interactional processes, as are the traits and characteristics of their infants and co-parents.

Immediate interactions between a person and the people and institutions in their environment are termed *proximal processes* (Bronfenbrenner & Morris, 2006). When these processes occur in "progressively more complex reciprocal interactions" (p. 797), they can alter the developmental trajectory of the person. Similar to life course theory, developmental outcomes of these processes are also driven by a person's own thoughts and feelings about their experiences. As such, fathers may benefit from interventions that address relationships as well as internal appraisals and expectations. Bronfenbrenner and Morris (2006) additionally emphasize the importance of moderating factors in the person or environment that influence the degree and directionality of change in response to proximal processes. Moderating factors can help to target interventions to the populations that would most benefit from them. Gender, race/ethnicity, and SES are commonly evaluated moderators, but other characteristics may also be valuable to assess with perinatal fathers, such as residential status, marital status, systems of support, and mental health. Palkovitz (2002) identified social and temporal variables as likely to moderate the interaction between father and infant.

Bronfenbrenner (1977) described *ecological contexts* as layers of influence a person exists within. The most proximal are those the developing person directly interacts with (the microsystem), such as family members, friends, and institutions like school or employers. Indirect external environments (the exosystem) such as neighborhoods, spouse's employer, government agencies, and media, influence microsystems in ways that can further promote and constrain the individual's development. Bronfenbrenner also noted the developmental importance of interactions between those in a person's microsystem (coined the mesosystem), such as interactions between spouse and friends or extended family. More broadly still, personal

development is constrained by broad cultural and societal influences, including governmental policies and societal pressures (the macrosystem).

From the father's vantage point, the child is an important microsystem. Indeed, fathers who are interacting with and caring for their children experience neurohormonal changes that help shape nurturing behavior (Abraham et al., 2014). Other factors, such as infant demand characteristics, and characteristics of the mother or other caregivers, if present, are also likely to shape the father's development. For example, maternal gatekeeping behavior - the ways a mother discourages or encourages father interaction with the infant - has been well documented as having the potential to invite or inhibit involvement in fathering (McBride et al., 2005). More broadly, family leave policies and workplace culture toward parenting can promote or constrain fathers' availability to engage in child rearing (Knoester et al., 2019; Perry-Jenkins et al., 2017), and cultural identities contribute to a father's interpretation of his role in the family (Shears, 2007).

Perinatal fathers are subject to all of these types of contexts and interactions, and interventions need to be sensitive to the various pressures and constraints fathers experience as they adapt to the role. Interventions need to address contextual relationships important to fathers, such as by involving mothers or developing workplace or government policies promotive of father involvement. Interventions may also take the position of supporting fathers in advocating for their needs and promoting positive interaction with the relevant people and organizations in their lives.

As with Elder's focus on historical time, Bronfenbrenner and Morris (2006) identify time scales as important to development. They defined *time* in terms of the developmental processes that are unfolding, ranging from near-term interactions (microtime) to longer-term changes that

are occurring at a societal level (macrotime). Change at all levels is noted to be discontinuous, with periods of continuity in between (Bronfenbrenner & Morris, 2006). As in life course theory, life transitions are likely to be periods of increased change rather than continuity, making them ideal for intervention.

Cox and Paley (1997) described transition points such as the transition to parenthood as periods of adaptive self-organization, in which a family system and the individuals within it must reorganize to accommodate changing conditions. Brief interventions at the transition to fatherhood may promote healthy adaptation for fathers and their families adjusting to new parenthood. Intervening later in fatherhood would likely require more intensive and longer participation to disrupt established behavior patterns. Supporting fathers from the beginning may be more cost effective (Panter-Brick et al., 2014) and more beneficial to families than waiting until later on to alter trajectories of parenting and well-being.

The Double ABC-X model of family adjustment and adaptation (McCubbin & Patterson, 1983) further outlines processes of family change occurring under conditions of high stress. It is briefly reviewed here due to its relevance as a change process. Although the transition to parenthood is most often an expected one, the changes a new child brings to the family are often accompanied by periods of heightened stress, including role conflict (Shorey & Chan, 2020), fatigue (Loutzenhiser et al., 2015), and decreased relationship satisfaction (Doss et al., 2009). Families may also experience additional stressors such as racism or minority stress, lack of resources, medical complications during birth, a fussy or difficult temperament infant, and mental health symptoms in one or both partners. According to the Double ABC-X model, parents initially attempt to cope with stressors by seeking help and gathering resources as well as making meaning of the changes in their lives (McCubbin & Patterson, 1983). Their success at these

coping tasks eventually leads to a period of stability that is characterized by new developmental trajectories of adaptation (e.g., adaptive self-organization, adjustment, well-being, cooperation) or maladaptation (e.g., substance use, conflict, or abuse). Families negotiate these processes together, with individuals contributing to processes of family adjustment in more or less helpful ways (McCubbin & Patterson, 1983). Interventions, where they exist, may provide an important resource for fathers and families to move toward positive adaption at the transition to parenthood.

Applied to child development, the bioecological model suggests the potential importance of the father as a relational figure influential to child development. Father involvement in caregiving supports positive child development in a multitude of ways, including cognitive, emotional, and social domains (Sarkadi et al., 2008), and fathers can be important attachment figures for their children (Brown et al., 2012). Taken by itself, fathers' ability to influence child development from infancy is a strong argument for promoting father well-being and quality involvement.

Considered together, life course theory and bioecological theory provide many potential avenues for exploring the early development of fathers and point to possible opportunities for intervention. Researchers have applied these theories to models of paternal developmental processes, such as the interaction between family leave policy, involvement, and fathers' neurohormonal characteristics as in the biobehavioral model of emergent fatherhood (Bakermans-Kranenburg et al., 2019) and the conceptual model of father involvement (Palkovitz, 2002). A number of possible processes and avenues remain to be modeled specifically for paternal development at the transition to parenthood. The following offers an attempt at a comprehensive model of father development at the transition to parenthood.

Toward a Comprehensive Developmental Model of Perinatal Fatherhood

The proposed model (Figure 1) utilizes the person, process, context, and time framework as an organizational starting point. Person factors are divided into antecedents, factors at the time of transition, and outcomes. Both place-based and relational contexts are listed. Transitional processes occur in bidirectional interactions between person and context and facilitate change

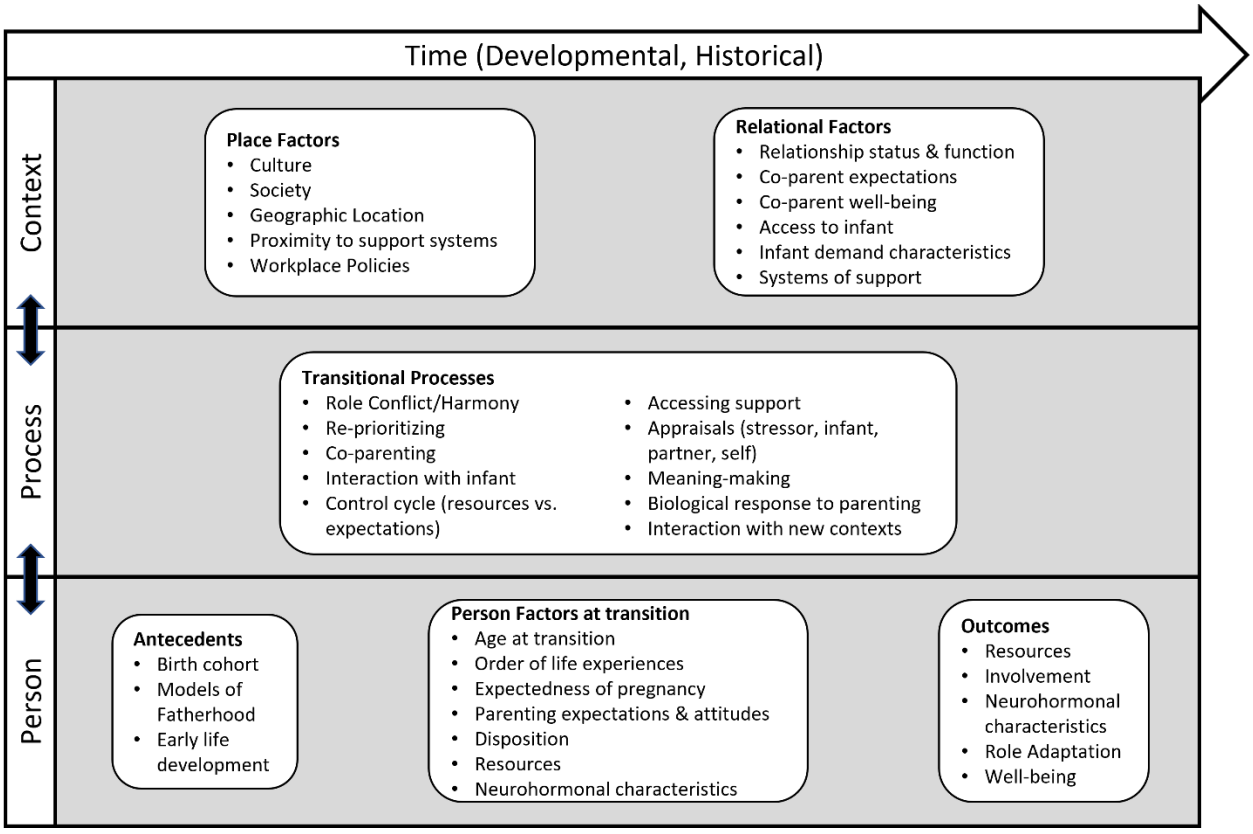

Figure 1. *Developmental Model of Perinatal Fatherhood.*

over time (development). Some components present in this model have already been well-researched, and others remain to be explored. Research literature in each area is reviewed here and gaps are identified.

Person Factors in the Father

Antecedents. Identified antecedent personal characteristics of the father include birth cohort, models of fatherhood, and early life development experiences such as quality of the parenting that was received and family characteristics like socioeconomic status and racial-ethnic identities. Different birth cohorts experience variation in sociocultural norms and historical events. Fathers can become parents over a relatively long portion of the lifespan, so their life experiences are likely to vary depending on their birth cohort, including the models of fatherhood they grew up with and historical changes in expectations for fathers. Although expectations for fathers are shifting, the possible effect of birth cohort on fathers' perceptions of these expectations remains to be explored. Relatedly, models of fatherhood and parenting from childhood may be important in fathering behaviors and decisions. Fathers who had very close or very distant relationships with their own parents in childhood have been found to have more positive attitudes about fatherhood after having a child compared to fathers with average closeness with their own parents (Beaton & Doherty, 2007). Fathers who did not grow up with positive role models have expressed a desire to do better for their own children (Daly, 1993). Models of masculinity also play a role, and adherence to hegemonic models of masculinity is associated with reduced parenting involvement and higher use of harsh discipline (Petts et al., 2018).

In addition to the models of parenting fathers grew up with, the parenting they received facilitates their development as children into adulthood. Children's relationships with their parents set the stage for adult functioning. The quality of fathers' childhood relationships with and between their parents have been identified as important factors in their well-being as adults at the transition to fatherhood (Durkin & Morse, 2001), and reported quality of fathers' childhood attachment relationships is significantly associated with differences in the quality of

their parenting behaviors with their own children (McFarland-Piazza et al., 2012). Experiences of abuse and neglect in childhood have been associated with later increased risk of poor parenting in adulthood, but few studies have included fathers, and the evidence for this association in fathers is mixed (Greene et al., 2020). Childhood socioeconomic status (SES) and minority stress may also influence later parenting, but continuities into adulthood make it difficult to parse out the particular effect of childhood. As one example, adolescent fathers are more likely to come from disadvantaged and minority backgrounds (Bamishigbin et al., 2019). Some evidence also suggests possible biological pathways for early childhood experiences to set the stage for later parenting sensitivity through changes in the neuroendocrine system (Gettler, 2016).

Personal factors at the perinatal transition. Personal characteristics of the father help guide and shape fathers' interests and experiences through the transition to parenthood. Factors include the father's disposition, personal resources, neurohormonal characteristics, and age as well as the order of fathers' life events (e.g., career, marriage, parenthood), the expectedness of the pregnancy, and fathers' expectations of and attitudes toward parenting. These characteristics are highly relevant to the interactional processes that occur between the father and his family and society at the transition to parenthood.

Dispositional characteristics of the father include personality, personal self-efficacy, support-seeking behavior, and coping style. Paternal self-efficacy and personal expectations have been found to predict father involvement (Trahan, 2018), and low self-efficacy is associated with paternal distress (Giallo et al., 2014; Keeton et al., 2008) and depressive symptoms (de Montigny et al., 2006). Psychological distress in perinatal fathers is also associated with high levels of neuroticism (Boyce et al., 2007), and paternal oversensitivity is associated with a poor paternal-

infant attachment relationship (Wynter et al., 2016). Differences in coping style are also related to men's psychopathology and adaptation to the role in the perinatal period. (Livingston et al., 2021). For example, avoidant coping has been found to predict depressive symptoms in an African American sample (Bamishigbin et al., 2017).

In addition to personal traits, internal resources such as parenting skills and knowledge play a role in how fathers interact with their families. These resources may have been attained during earlier development (such as by caring for a sibling), or fathers may seek to acquire these resources at the time of transition by taking classes, talking to experienced parents, or accessing educational resources. Perinatal fathers have expressed a desire for quality information to help them prepare for parenthood (Entsieh & Hallström, 2016), suggesting resource seeking is an active part of the perinatal transition. When fathers lack sufficient information about pregnancy and childbirth, they are at increased risk for distress (Boyce et al., 2007). Sufficient personal resources may help fathers to feel less stressed and more prepared for the fathering role. Perinatal fathers with higher self-esteem, self-management skills, and relational skills have been found to have lower levels of parenting stress (Ketner et al., 2019), and fathers who feel competent as parents are more likely to be involved with their children (Coley & Hernandez, 2006).

Biological factors such as hormones and neurological functioning also play a role in the fathering transition. Lower levels of testosterone in prenatal fathers have been found to predict increased parenting involvement and higher levels of support given to the mother (Edelstein et al., 2017). The perinatal transition can also bring about changes in fathers' neurobiology that are related to their parenting behaviors. Brain structures have been found to change in expectant fathers even in very early pregnancy as compared to childless men, and these neural changes are

sensitive to fathering attitudes and external stimuli such as interacting with an infant (Diaz-Rojas et al., 2021).

Additional factors such as the age of the father at the birth of his child, the order of events in the father's life, and expectedness of pregnancy may affect the father's introduction to and experience of parenthood. If the parenting transition is off-time or otherwise outside of societal norms, fathers may experience additional stressors or barriers to involvement. Health outcomes in fathers have been found to vary depending on their age at the birth of their first child, with younger fathers having poorer health outcomes than older fathers (Einiö et al., 2019). Children of adolescent or much older fathers are also more likely to have health complications themselves (Bamishigbin et al., 2019; Bray et al., 2006).

Unintended pregnancy can also pose unique challenges to new parents. Approximately one-third to one-half of U.S. pregnancies are unintended (Lindberg & Kost, 2014). Having an unintended pregnancy reduces men's likelihood of living with their child and being involved in caregiving (Lindberg et al., 2017), and becoming a father unexpectedly may increase the stress fathers feel around trying to adapt to the role while having other plans (such as education or career prospects) disrupted (Shirani & Henwood, 2011). In the other direction, delayed contraception due to infertility or other life events can create feelings of being on pause or having anticipated life events compressed toward older ages (Shirani & Henwood, 2011). Relationship status or timing also matters, such that not being married to or having a committed relationship with the child's mother can be a barrier to involvement. Fathers who are only acquaintances with their child's mother are less likely to be involved in childcare (Fagan & Palkovitz, 2007).

Fathers' perceptions of their roles and responsibilities, the availability of resources for them to use, and their expectations around fathering are all sensitive to the larger cultural and social contexts fathers live within. Place-based and relational contexts all influence a father's individual experiences and subsequent adjustment. Evidence for the importance of exosystemic and macrosystemic place-based contexts is reviewed next.

Place-Based Contexts

Place-based contexts are so identified because they vary depending on the society and culture a father is born into, as well as the social structures that exist around the father and family during the child-bearing years, including proximity to support systems, workplace, and geographic factors like resource availability and neighborhood. Parenting practices vary widely by culture (Bornstein, 2012), but differences in fathering practices are less well-researched than for mothering. Cruz et al. (2011) found that having culturally based positive attitudes about the fathers' role predicted positive father involvement for Mexican-American fathers. Both Hofferth (2003) and Shears (2007) found differences in types of involvement activities conducted by African-American, European-American, and Latino fathers. Cultural norms can also influence fathers' biological responsiveness to parenting (Gettler, 2016), and fathers who adhere to culturally defined hegemonic norms of masculinity are less likely to engage in high-quality parenting behaviors (Petts et al., 2018). Identifying cultural differences that promote positive involvement would be useful in helping to target and adapt interventions for different populations.

Societal systems of oppression contribute to the difficulties marginalized fathers may experience at the transition to parenthood. Racial minority fathers are more likely to experience postpartum depression (Recto & Champion, 2020), and economic inequality can create barriers

to involvement. Geolocation and social class have been found to influence father involvement in both Chinese fathers (Li, 2020) and U.S. fathers (Hofferth, 2003). Material support, such as paid leave, is associated with lower depressive symptoms in fathers (Bamishigbin et al., 2017).

Availability of paid leave varies widely between countries (Chzhen et al., 2019), however. Where government policy does not require paid leave, the availability of paid paternity leave differs by workplace, and even when available, its use can be affected by perceptions of how committed the worker is to the workplace versus family (Shafer et al., 2021). The influence of perceptions of commitment suggests that, in addition to policy, attention needs to be paid to how supportive and encouraging the workplace actually is for fathers to be involved in family life. Where paid leave is available, longer paternity leave-taking is associated with positive trajectories of parenting engagement and may be especially valuable for nonresident fathers (Knoester et al., 2019). Job quality, workplace policies, and benefits can also affect parent well-being (Giallo et al., 2014; Perry-Jenkins et al., 2017).

Geography also plays a role in proximity to informal support systems. When parents live farther away from their own parents and siblings, they report receiving less support (Mulder & van der Meer, 2009). Availability of resources and systems of support for perinatal fathers are also likely to vary based on whether fathers live in rural or urban environments. More research is needed to understand cultural and societal differences in father experiences during the perinatal period and how norms and policies can support healthy development for fathers and families.

In addition to the contextual influences of place, relational contexts also provide important microsystems for father development and set the stage for much of the daily interaction perinatal fathers experience. Relationships with immediate and extended family and

friends can both promote and inhibit father involvement and well-being. The next section reviews the most salient relational contexts perinatal fathers are likely to encounter.

Relational Contexts

Considering that fathering is a relational experience, interactions between the father, infant, and significant other or co-parent are very important to father development. These microsystem relationships are the crucible for many transitional processes that create the repeating interactions necessary for personal change. The relationship between the father and spouse or co-parent is a major influence on father development. Co-parent characteristics, such as maternal well-being and support for father involvement, can mutually affect the experiences of fathers. Similarly, fathers are influenced by personal characteristics of their infants and by the opportunity to interact with their infants. Support systems such as medical professionals, family, and friends also provide interactions that can shape fathers' developmental trajectories.

The coparenting relationship. A wealth of studies point to the relationship with the baby's mother as a critical component of father experiences. Given that parenting literature initially focused on the mother-child relationship, it is perhaps unsurprising that much research has been conducted seeking to understand the father in the context of his relationship with the mother. The coparenting relationship is both highly sensitive to the transition to parenthood and an influencer of the transitional experiences of each parent.

Couple relationship satisfaction has been found to decline sharply after the birth of the first child (Doss et al., 2009). Such satisfaction is sensitive to individual parent well-being and interaction. Perinatal relationship satisfaction has been predicted by maternal and paternal depressive symptoms, shorter relationship length, and the quality of couple communication (Trillingsgaard et al., 2014). Reduced marital satisfaction can have far-reaching consequences on

the parental transition. For married fathers, higher marital satisfaction is predictive of higher father involvement and coparenting quality, and mothers' perceived relationship quality predicts mothers' support of fathers' parenting (Christopher et al., 2015). Maternal relationship satisfaction is also associated with fathers' relative share of childcare tasks (Schober, 2012). Reciprocally, both mothers' supportive coparenting (Durtschi et al., 2017) and fathers' perceptions of being cared for or controlled by their partners (Durkin & Morse, 2001) are important factors in couple relationship quality. When relationship quality is poor, fathers are more likely to struggle. Relationship quality is an important factor in fathers' perinatal psychological distress (Boyce et al., 2007; Garthus-Niegel et al., 2020; Giallo et al., 2014).

Fathers may also be affected by the well-being of their co-parents. Findings related to the effect of maternal well-being on fathers are mixed. Paulson et al. (2016) found that maternal depressive symptoms do not predict later paternal depressive symptoms in the perinatal period, but Chhabra et al., (2020) found in a meta-analysis that maternal postnatal depressive symptoms and marital distress are primary risk factors for paternal postnatal depression. Fathers may respond to maternal depression by changing their own parenting involvement. Fathers have been found to increase caregiving for their young children when mothers are depressed, but only when marital conflict is low (Planalp & Braungart-Rieker, 2016).

The couple or co-parent relationship may also indirectly affect the father-infant relationship. Relationship status and relationship transitions have been linked with father involvement. Unmarried fathers who are cohabiting or who transition into a cohabiting union with the mother are most likely to be involved in childcare, even over and above fathers who are married to the child's mother (McClain & Demaris, 2011). Spousal disharmony has also been found to mediate the association between father psychological distress and negative perceptions

of the infant (Skjothaug et al., 2018), and poor relationship quality is also associated with reduced father-to-infant attachment (Wynter et al., 2016). Fathers' personal factors may be more important to involvement than relationship quality, however (Trahan, 2018). More remains to be understood about how and to what degree the couple relationship affects fathers' relationships with their infants.

Mothers can also promote or inhibit father engagement. When partners are more critical of fathers' caregiving, fathers are more likely to report lower attachment to their infants (Wynter et al., 2016). Fathers are also more likely to be involved in parenting when they receive encouragement from mothers (Schoppe-Sullivan et al., 2008). Mothers can encourage or inhibit father involvement through gatekeeping behavior (McBride et al., 2005). Mothers may be involved in more inhibitory gatekeeping following the birth of their children. Mothers' attitudes toward father involvement may become less egalitarian over the transition to parenthood (Buchler et al., 2017). This may be a functional shift, with social norms and biological functionality (e.g., breastfeeding) contributing to mothers' increased share of childcare tasks, but it may also indicate mothers are more likely to consider child rearing as being more in their domain over fathers. Maternal gatekeeping is also sensitive to perceptions of father characteristics. Mothers are more likely to engage in gatekeeping behavior that reduces father access to the infant when mothers perceive fathers to have low competence (Fagan & Barnett, 2003). Father residential status is also related to maternal gatekeeping, with fathers who do not reside in the home with the mother and infant being subject to greater maternal gatekeeping behavior that restricts father involvement (Fagan & Barnett, 2003).

Father-infant relationship. Whereas spending time with the infant is most often the expected norm for mothers, gaining access to the infant is more complex for fathers. In addition

to maternal gatekeeping, time with the infant may be constrained by residential status (Knoester et al., 2019) as well as family leave and workplace flexibility (Perry-Jenkins et al., 2017). The work status of mothers has also been found to be a factor in father involvement and fathers' perceptions of their own parenting skills (Barry et al., 2011), possibly due to the increased need for fathers to engage in childcare tasks when mothers are at work. When mothers work full-time or opposite shifts from fathers, fathers are more likely to engage in equal parenting time (Meteyer & Perry-Jenkins, 2010); however, working opposite schedules may also increase stress in the couple relationship.

Personal characteristics of the infant may also influence the relationship between the father and infant. When infants are difficult to soothe, fathers are initially less involved, but tend to increase their involvement over time (Meteyer & Perry-Jenkins, 2010). Fathers with a difficult-temperament child are also more likely to have higher depressive symptoms (de Montigny et al., 2013), which may recursively affect infant behavioral problems (Gentile & Fusco, 2017). On the other hand, having a quality relationship with their infants may encourage subsequent father involvement as the child grows. When fathers had securely attached infants at 3 months, they were more likely to engage in sensitive parenting at 3 years (Brown et al., 2012), lending strength to the argument for early intervention.

Systems of support. Relationships with important others such as friends and extended family members can also provide influential interactions for the developing father. Multiple qualitative studies with perinatal fathers have pointed to support systems as important to fathers during the transition to fatherhood. Perinatal fathers have expressed interest in getting social support from other fathers (Kowlessar et al., 2015b) and having more father-centric support from formal classes and healthcare providers (Carlson et al., 2014). Support from medical

professionals during childbirth may help fathers adjust and better support their partners (Vallin et al., 2019), and when fathers perceive that obstetric providers expect them to be involved, they are more likely to express confidence in fathering, learn about the pregnancy, and engage in healthy habits (Albuja et al., 2019). Fathers who feel supported over the transition to parenthood may also experience higher levels of well-being (Garthus-Niegel et al., 2020).

Low social support, on the other hand, is associated with greater distress (Boyce et al., 2007) and lower self-efficacy (Leerkes & Burney, 2007) in perinatal fathers. Fathers may be overlooked during this period. Perinatal fathers may experience a marked lack of support compared to mothers over the same timeframe (Hambidge et al., 2021), suggesting a need for increased attention to support systems for fathers at the transition to parenthood.

Individual members of parents' social networks change over the transition to parenthood, with fluctuations in support interactions, but social network size has been found to remain generally consistent from the prenatal period to 2 years postpartum (Bost et al., 2002). In an older study, parenting group support was identified as important to father adjustment at the transition to parenthood, but not network support (Wandersman & Wandersman, 1980). More recently, instrumental and emotional support from family and friends have been identified as important correlates of psychological well-being and relationship satisfaction for prenatal fathers (Durkin & Morse, 2001), and fathers have identified family and friends as valuable supports after traumatic childbirth events (Inglis et al., 2016). Although studies on this topic are sparse, the available evidence for fathers' perceptions of the importance of their social networks around the time they have a baby may be indicative of the societal shift toward increased father involvement and related increased support needs.

Support, of course, is not only limited to local or close relationships. Online platforms may be a beneficial source of social support for parents (Doty & Dworkin, 2014), suggesting the possibility of using online or app-based interventions to increase perceptions of social support. Increased reliance on virtual interactions during the COVID-19 pandemic may allow for fathers to expand their social networks beyond their local communities.

Place-based and relational contexts provide both an important backdrop and potential support for father development. It is the interactions that occur between these contexts and the personal characteristics of the father that shape father development. Developmental interactions unfold as ongoing bidirectional processes that are influential throughout the transition to parenthood and beyond.

Transitional Processes

As Bronfenbrenner and Morris (2006) pointed out, the interactional proximal processes between individuals and their context, or in some cases between individuals and themselves, are the crux of development. Having reviewed individual and contextual factors, attention is now turned to outlining theorized processes in paternal perinatal development. These include internal processes of addressing role conflict, establishing priorities for time and energy, making meaning of the fathering identity, and internal appraisals of themselves and others. Relational processes such as direct interaction with the infant, co-parenting activities, accessing support from others, and seeking to control the balance of resources and expectations, are also occurring. I review here extant literature addressing these processes; however, significant gaps remain and are noted.

Roles, priorities, and meaning making. Social roles are in part culturally and societally defined, but they are also interpreted in the context of the relationships a father has. Little quantitative research has been done on the process of navigating role transitions in perinatal

fatherhood, a topic that is particularly salient given the changing expectations of "new fatherhood." Qualitative studies suggest that fathers may experience tension between providing and caregiving roles (Henwood & Procter, 2003) and that fathers go through an internal process of redefining themselves that involves reflection on being fathered as a child, re-evaluating values, and intentionally leaving behind the former life (Kowlessar et al., 2015b). Fathers have reported role strain as they balance time and multiple societal roles, including father, employee, and spouse (Shorey & Chan, 2020). Fathers who adhere to hegemonic masculine norms are also less likely to endorse the idea of fathers as caregivers and less likely to engage in quality parenting (Petts et al., 2018), indicating that gender roles may play a part in the experience of role conflict. Over time, fathers may find creative ways to balance conflicting roles and still be involved with their children (McGill, 2014).

Fathers have also reported difficulties in navigating conflicting values from their own parents and in-laws (Shorey & Chan, 2020), suggesting a process of evaluation to identify where parenting values may differ from those of the previous generation. As fathers begin to define their role, their expectations of themselves are predictive of involvement with their children (Trahan, 2018). Developing a father identity also partially mediates the association between father self-efficacy and involvement such that self-efficacy promotes a sense of identity with the fathering role, leading to increased involvement in fathering behaviors (Fox et al., 2015). Identification with the father role is associated with increases in caregiving and play with the child over the first few years of parenthood (Planalp & Braungart-Rieker, 2016). Developing a father identity is also a central part of father well-being, and fathers who struggle to identify with the role may engage in avoidant coping strategies, such as working longer hours, escapism, or substance use (Baldwin et al., 2018).

The meaning fathers make of their role and parenting experiences may play a part in developing an identity and making sense of new stressors in the perinatal transition. Fathers can vary considerably in the meanings they assign to their role (McLaughlin & Muldoon, 2014), but experiencing greater meaning in life may help parents experience greater happiness in the role (Nelson et al., 2014). Meaning making may be especially valuable for fathers during pregnancy. Fathers identify pregnancy as a particularly stressful time (Condon et al., 2003), but fathers who assign meaning to the fetus are more likely to report higher prenatal attachment (Vreeswijk et al., 2014). Fathers have also identified a process of connecting to the pregnancy that helped them build excitement about the baby and resolve mixed feelings and emotional dissonance about the pregnancy (Kowlessar et al., 2015b).

Appraisals. Fathers also engage in processes of appraising the people and situations they experience, including themselves, as a means of making sense of their world and assigning value. During pregnancy, fathers' feelings of closeness toward the fetus predict attachment to the infant postpartum (Condon et al., 2013), and negative feelings about the pregnancy and fear of childbirth contribute to stress (Philpott et al., 2017). Fathering attitudes become more egalitarian and positive toward involvement over the prenatal period (Buchler et al., 2017). Having positive attitudes about caregiving are associated with increased father involvement (McGill, 2014).

It should be noted, however, that social pressures stemming from hegemonic norms of masculinity that consider child rearing and infant care to be "unmanly" may undermine fathers' ability to hold positive attitudes about their involvement in child rearing. Interventions that successfully harness fathers' prenatal tendency toward thinking positively about their future involvement with their child may have a particularly beneficial effect in promoting the continuation of fathers' interest in quality caregiving postpartum. It may be that fathers are more

inclined to take advantage of support resources that encourage sensitive caregiving and involvement during the prenatal period.

Self-appraisal is also important in father development. Fathers with higher perceptions of their own competence (Coley & Hernandez, 2006) and self- efficacy (Trahan, 2018) are more likely to be involved in parenting. Some clues as to possible neurobiological pathways for this exist in the literature. Internal beliefs about the father's role as a caregiver are related to biological changes such as increased hypothalamus volume in the father's brain (Long et al., 2021). The hypothalamus helps control the endocrine system, so there may be a connection between fathers' internal beliefs or appraisals and the hormones related to caregiving behavior. Fathers exhibit declines in testosterone and estradiol during the prenatal period that predict higher involvement in childcare tasks postpartum (Edelstein et al., 2017).

More research is needed to understand the possible effects of fathers' appraisals of their co-parents in the perinatal transition. Perinatal stress can influence how parents perceive each other (Nonterah et al., 2016). Partner appraisals have been identified as an important component of couple conflict behaviors (Sanford, 2006), and fathers' perceptions of care and control by their partners are related to relationship quality (Durkin & Morse, 2001). The role of internal appraisals over and above interactions in the perinatal period needs further investigation. In one example, father perceptions of social support are important for adjustment, regardless of actual levels of support received (Bost et al., 2002).

Interaction with the infant. Developing fathers gain critical learning experiences when they spend time interacting with their babies. The more time fathers spend caring for their infants, the higher their parenting self-efficacy (Leerkes & Burney, 2007). Considering that perceptions of higher self-efficacy recursively predict involvement (Coley & Hernandez, 2006;

Trahan, 2018), there exists a feedback loop of increasingly "more complex reciprocal interactions" (Bronfenbrenner & Morris, 2006, p. 797) between the father and the infant that leads to the development of parenting behavior. Time spent interacting with the infant also activates and strengthens neural networks that are responsible for emotional sensitivity and planning caregiving tasks (Abraham et al., 2014), suggesting a biological responsiveness to the infant within the father that may contribute to feedback loops of competency and caregiving. This biological responsiveness can vary by culture, suggesting some influence of fatherhood norms (Gettler, 2016). Although recognizing the complexity of person-context interactions, Gettler (2016) theorized that fathers in cultures that provide greater opportunities for involvement in child rearing are likely to have increasing biological shifts supportive of caregiving.

Co-parenting. Co-parenting interactions are also highly influential processes for fathers, wherein fathers most often engage in parenting behaviors alongside another adult. In an example of bidirectional effects, fathers' reports of higher self-efficacy at 2 months postpartum predicted mothers' increased perceptions of father involvement at 5 months, while mothers' perceptions of higher father parenting involvement at 2 months predicted higher paternal self-efficacy and marital satisfaction at 5 months (Tremblay & Pierce, 2011). In married couples, declining relationship quality predicts more competitive coparenting behaviors and reduced father involvement (Christopher et al., 2015). Father involvement is partially dependent on mothers' encouragement or criticism (Schoppe-Sullivan et al., 2008), and maternal gatekeeping can affect fathers' feelings of attachment toward their infants (Wynter et al., 2016). Father parenting behavior can also influence maternal gatekeeping behaviors (Cannon et al., 2008). When

coparenting is supportive, father engagement is likely to increase regardless of relationship status (Fagan & Lee, 2011).

Accessing support and interacting with new contexts. Support-seeking behavior in perinatal fathers is not currently well understood. In families of older children, fathers have been found to engage in less formal and informal support-seeking behavior than do mothers (Redmond et al., 2002), although the reason for this is unclear. Perhaps stigma against male support-seeking related to masculine norms plays a role in support-seeking for fathers. Understanding how to encourage support-seeking in perinatal fathers may be necessary to bolster support for this population. Bost et al. (2002) found that although the size of social networks initially decreased for parents after the birth of a child, the frequency of contact with remaining network members increased. Fathers were more likely to experience decreases in the size and frequency of contact in their friendships after the birth of a child, suggesting a shift in relationships in response to changes related to parenting. They also found that perceptions of support availability are associated with healthy adjustment, even when support is not being accessed; however, a lack of support from family and friends was associated with higher depressive symptoms (Bost et al., 2002).

Fathers are also likely to interact with new social contexts during pregnancy and postpartum, such as prenatal and pediatric healthcare systems, childcare providers, and networks of other parents that may influence father development. Fathers may take cues for their involvement from their partner's prenatal care providers and obstetric office environments (Albuja et al., 2019). Fathers may also have new interactions with other people who are caring for their child. Nearly two-thirds of infants and toddlers are cared for by a person other than their parents (Paschall, 2019). It is not known how interactions with these care providers influence

father development. Understanding the nature and impact of paternal friendship changes around the birth of a child (Bost et al., 2002) is also an avenue for further inquiry.

Control cycles. Perinatal fathers are likely to engage in resource gathering to attempt to meet expectations of the fathering role. Fathers engage in information seeking and skill building in the perinatal period (Entsieh & Hallström, 2016). Gathering information and skills relates to cycles of control, with fathers attempting to increase their personal resources to meet the expectations of the fathering role. Fathers have reported placing high value on childbirth classes and information from healthcare professionals but identified a need for more father-focused resources (Carlson et al., 2014; Shorey & Chan, 2020). Fathers have also identified observing mothers to learn caregiving skills postpartum (Kowlessar et al., 2015a).

If fathers are not able to access sufficient resources to build their skills and knowledge around parenting, they may reduce their expectations of themselves in the fathering role as a way of regaining a sense of control and coping with cognitive dissonance. Fathers have expressed having difficulty in meeting their own parenting expectations (McLaughlin & Muldoon, 2014). Given that father-focused support resources are limited, adjusting expectations of themselves to cope may be a more common occurrence than we realize. More research is needed to identify how fathers balance resources and expectations in the perinatal period, and the types of resources that would help them to meet these expectations. Increasing resources by imparting skills and knowledge is a common emphasis of intervention programs. Expanding the availability and relevance of intervention programs for fathers would likely increase the opportunities fathers have to engage in parenting knowledge and skill-building to increase their ability to meet their parenting hopes and expectations.

These internal and relational/contextual processes foster the repeating interactions necessary for perinatal fathers to adapt to parenthood. Given that processes occur over time, a focus on longitudinal research covering the perinatal transition and the use of complex multivariate analyses are needed to further understand perinatal developmental processes involving fathers. Identifying opportunities to intervene in these processes may help support positive father development at the earliest moments of family development.

Developmental Outcomes in Fathers

Positive father development is of particular interest as a contributor to family and child well-being. Fathers who successfully develop through the perinatal period and adjust to the role may better be able to support the well-being of their children and co-parents. Father developmental outcomes include attaining personal resources, involvement in parenting, neurohormonal changes, adaptation to the role, and physical and mental well-being. These outcomes provide potential measurable variables for evaluating intervention effectiveness.

As described earlier, fathers engage in resource gathering that may help them to meet their expectations and support their involvement with their children. Attaining sufficient resources to effectively engage in the fathering role during infancy is an outcome of interest. Involvement in quality parenting is arguably the most important outcome of father development due to its potential to support positive child development. Father involvement is only related to child attachment security when fathers engage in high-quality parenting (Brown et al., 2007). Although, to my knowledge, a cost analysis of poor quality or uninvolved fathering has not been completed, the social cost of *not* supporting perinatal fathers in developing the skills and confidence to provide quality parenting to their children is likely extremely high. Successfully

identifying strategies for promoting positive father development from the beginning of fatherhood is of critical importance.

The many factors supporting father involvement and positive parenting behaviors are reviewed in detail above, but I have summarized them together in this section. Early life experiences (Gettler, 2016; McFarland-Piazza et al., 2012), personal dispositions (Wynter et al., 2016), and a well-developed fathering identity (Fox et al., 2015) influence fathers' caregiving interest and efforts. Fathers are also more likely to engage in quality caregiving when they have sufficient skills (Coley & Hernandez, 2006) and positive parenting attitudes (McGill, 2014). Fathers' involvement with their children helps develop biological pathways of caregiving that support quality parenting (Abraham et al., 2014), and their parenting efforts are reinforced by hormonal changes (Edelstein et al., 2017), having a securely attached infant (Brown et al., 2012), and plenty of time to interact with their infant (Knoester et al., 2019). Maternal support can also promote fathers' involvement in caregiving behaviors (Fagan & Lee, 2011; Schoppe-Sullivan et al., 2008). On the other hand, involvement may be constrained by cultural norms (Petts et al., 2018), social policies (Knoester et al., 2019), maternal gatekeeping (Buchler et al., 2017), and personal attitudes (Trahan, 2018).

Successful adaptation to fathering could also be characterized by fathers' physical and mental well-being. The transition to fatherhood has long-term consequences for fathers' health (Torche & Rauf, 2021), so supporting healthy development from the beginning is needed. Father well-being becomes salient early in the transition process, with pregnancy a particularly vulnerable time for experiencing psychological distress (Condon et al., 2003). Symptoms of prenatal stress, depression, and anxiety in men are likely to continue after the baby is born (Wee et al., 2015), with possible consequences for family development. Paternal prenatal depressive

and anxiety symptoms predict higher stress and more negative attitudes toward the child at 6 months postpartum (Skjothaug et al., 2018) and have been found to worsen maternal depressive symptoms (Paulson et al., 2016).

Intrapersonal, interpersonal, and community factors contribute to father depressive symptoms (Recto & Champion, 2020). Fathers are more likely to experience poor well-being, such as heightened depression and anxiety, when they have limited social support (Boyce et al., 2007), experience racism (Bamishigbin et al., 2017; Recto & Champion, 2020), have fewer financial resources (Bamishigbin et al., 2017), and think they aren't effective parents (Bamishigbin et al., 2020; de Montigny et al., 2013). Heightened parenting distress, dysfunctional interactions with their infant, having a child with a difficult temperament, and lower couple relationship quality are also associated with increases in paternal depressive symptoms (de Montigny et al., 2013). Fathers who have more positive fathering attitudes, financial resources, and support from the birth mother have reported lower levels of parenting stress (Knoester & Petts, 2017).

When men are successfully able to transition into fatherhood, it has a positive effect on families. Father involvement promotes healthy child development (Sarkadi et al., 2008), and fathers can be important attachment figures for their children (Brown et al., 2012). Father-child attachment security is protective when there is high marital conflict (Volling et al., 2006) and when the mother is depressed (Hossain et al., 1994). Father involvement in childcare is also associated with higher ratings of relationship satisfaction, quality, and stability over the first years of parenting (Schober, 2012). When fathers are involved starting in the prenatal period, mothers report higher levels of psychological well-being (Giurgescu & Templin, 2015). Father adjustment is influential in the well-being of the mother (Paulson et al., 2016), and father

depressive symptoms are related to later interparental conflict and poor child adjustment (Shelton & Harold, 2008).

Supporting perinatal fathers through intervention has the potential to positively influence children and families, including supporting the positive development of future generations. Father-inclusive intervention should therefore be a priority. The next section identifies theoretically based opportunities for intervention, briefly discusses existing intervention efforts and gaps, and makes recommendations for intervention development and assessment.

Implications for Intervention

The dynamic nature of developmental processes makes fathers potentially valuable targets for intervention. Intervening early in interactions that will become more complex over time maximizes outcome for the effort. Not all developmental processes make sense for intervention (intervening directly with neurohormonal biology would be difficult and unethical, for example), but many developmental processes can be targeted either directly or indirectly. Interventions may influence proximal processes by addressing the process itself (e.g., co-parenting interactions), or by intervening directly with the father or one of the contextual factors (e.g., maternal gatekeeping or family leave policy).

One might ask why not just provide fathers with programs and materials already existing for mothers? Although this would likely be helpful in some way, simply by virtue of increasing available resources, I argue that the difference in socially defined roles and cultural norms around masculinity must be addressed. Although there is very little biological difference in parents of different sexes, the contextual pressures can vary enormously. Indeed, simply browsing available infant parenting books makes clear that many infant parenting books use mother-centric language (e.g., *What to Expect When You're Expecting*) and that there can be a

pejorative difference in content between books directed at fathers compared to books aimed at mothers (e.g., *Dude, You're Going to Be a Dad*). Understanding how to support fathers within their specific and unique social and cultural pressures seems likely to have a greater influence on their development than simply making sure all the same resources that exist for mothers are provided for fathers.

Table 1 summarizes possible targets of intervention by person, process, and context. With such a wide field of possible intervention targets, interventions could take many forms. At a macro level, workplace support and social policy reforms that promote positive father development could serve to increase the financial resources and time available for fathers to spend with their infants, which may promote the neurohormonal changes that support sensitive caregiving. Macro-level changes tend to occur very slowly, though, begging the question of what can be done more immediately to begin helping fathers navigate the transition to parenthood within existing social and cultural conditions.

At the micro level, educational and therapeutic interventions supporting the co-parent relationship may serve to reduce conflict, promote relationship satisfaction, and reduce restrictive gatekeeping to promote relationship quality, father well-being, and quality father involvement. Educational or therapeutic interventions that reduce role conflict, support fathers' ability to prioritize family, increase fathering skills and knowledge, and support positive appraisals and meaning making may help fathers to prepare better for and adapt to parenthood. Group interventions may serve to increase fathers' access to and use of social support systems by connecting fathers to each other. Draper (2003) discussed the potential value of developing community with other perinatal fathers to help them navigate the transition together.

Table 1

Possible Targets for Perinatal Father Intervention Programs

Level	Target

Contextual Factors	• Educating mothers/co-parents on the father role
	• Reducing maternal gatekeeping
	• Increasing social support systems
	  o Other fathers
	  o Healthcare and childcare providers
	  o Availability of informal supports
	• Paternal family leave policies
	• Workplace support for father involvement

Transitional Processes	• Managing role conflict between work, family, and self • Establishing priorities for time and energy • Coparenting interactions • Father-infant interactions • Making meaning around fathering • Considering fathering roles and developing identity • Increasing support seeking • Internal appraisals – making sense of experiences
Person Factors	• Parenting and relational skills • Parenting knowledge • Self-efficacy • Parenting expectations • Coping styles

Perinatal interventions have largely targeted the mother-child dyad rather than fathers (Panter-Brick et al., 2014). Of those interventions that do target perinatal fathers, evidence for

their effectiveness is weak, primarily due to a lack of large-scale randomized controlled trials (J. Y. Lee et al., 2018). As attention increases for the importance of addressing perinatal father adjustment, one hopes that empirical evidence for existing and new father-focused perinatal intervention programs will grow. In the following sections, I explore how existing interventions fit within the developmental model of perinatal fatherhood and make recommendations for addressing gaps.

Existing Interventions

One strategy for intervening with fathers has been to add a father-focused section to traditional childbirth classes. Friedewald et al. (2005) added a 2-hour men's group discussion forum to their childbirth education program, with a focus on the experiences of perinatal fathers, including fathering aspirations, emotions, role at the birth, positive communication with their co-parent, lifestyle changes, and depression. Diemer (1997) investigated changing birthing classes from a lecture format to a discussion format and started with a father-only group discussion to facilitate male peer support and increase discussion about fathers' experiences and roles. Though not randomized into groups, fathers in this program were found to engage in more support seeking, to have a larger social network, and to be more involved with the pregnancy than those in the traditional childbirth class group (Diemer, 1997). Another intervention provided education specific to fathers at the end of each childbirth class session, with a bonus father-only class a week later (Bourget et al., 2017). Father-focused education components emphasized father role development, partner support, and infant care. Only feasibility outcomes were reported, with fathers reporting high satisfaction and perceptions of benefit to their parenting.

Identifying ways to support fathers outside of general childbirth and parenting education programs is a more recent intervention strategy with early evidence beginning to emerge. Given

that fathers have expressed interest in father-specific intervention programs (Kowlessar et al., 2015b), interventions that directly address the needs of the father may be a way to improve father interest and participation. A few feasibility studies have been published on programs specifically targeting perinatal fathers. The Becoming Fathers program is a 6-week father-only group program that combines skills-based education, mindfulness, and group support to promote parenting skills and father well-being for perinatal fathers (Rayburn et al., 2021), with fathers demonstrating reliable reductions in stress and depressive symptoms as well as reliable increases in the mindfulness constructs of nonreactivity and nonjudgment from pretest to posttest (Rayburn & Coatsworth, 2021). The SMS4dads program uses technology to engage perinatal fathers in a text-based intervention program that promotes the father's relationship with his baby, the relationship with his baby's mother, and his own self-care (Fletcher et al., 2017).

A group prenatal lifestyle-based education program focusing on healthy behaviors has been used to target paternal perinatal depression and anxiety for Iranian fathers (Charandabi et al., 2017). Fathers who participated in the program were found to have significantly lower depression and anxiety at posttest and in early postpartum compared to controls (Charandabi et al., 2017). In the postpartum timeframe, fathers who were partnered with mothers participating in a postpartum-prevention home visitation program were enrolled in a father-focused intervention called Fathers and Babies (Tandon et al., 2021). The program was delivered in person or by text, depending on the fathers' preference, and used cognitive-behavioral therapy techniques focused on mood and emotion regulation. Mothers received similar programming. Both fathers and mothers reported significant decreases in stress following the intervention (Tandon et al., 2021). Some interventions target fathers experiencing specific stressors. Fathers of preterm infants in the neonatal intensive care unit (NICU) were given a booklet and nursing support to increase

their knowledge of their baby's needs, which was found to increase fathering ability and decrease father stress (T. Lee et al., 2012).

Given the wealth of literature demonstrating a significant association of couple relationship functioning with father development, programs addressing the couple relationship may be particularly beneficial. The Family Foundations Program for couples is offered in a class-series format across prenatal and postpartum time-periods and seeks to improve co-parenting by increasing individual emotion regulation, improving couple conflict resolution and communication, and increasing co-parent support (Feinberg & Kan, 2008). Posttest effects included improved co-parental support, reduced parent distress related to the child, better maternal psychological well-being, and better infant regulation compared to controls (Feinberg & Kan, 2008). At 1-year post intervention, program participants reported better coparenting, parenting behaviors, and infant behaviors compared to controls (Feinberg et al., 2009).

The Minnesota Early Learning Design (MELD) for Young Dads focuses on the father's role and establishing coparenting expectations for adolescent fathers (Fagan, 2008). In a sample of African American and Hispanic fathers who received MELD and a childbirth class, coparenting behavior and father engagement increased compared to a control group that received only childbirth education (Fagan, 2008).

The Welcome Baby plus Marriage Moments program is part of a home-delivered intervention provided to married couples with a new baby that targets parent knowledge of infant development and couple relationship functioning (Hawkins et al., 2008). Although there were no main effects on the couple relationship, the program was associated with increases in father involvement compared to controls. Another couple-focused intervention specifically engaged fathers in providing prenatal massage to mothers, and was found to reduce symptoms of

depression, anxiety, and anger for fathers and increase relationship quality for both partners compared to controls (Field et al., 2008). The Mindful Transition to Parenthood program teaches couples mindfulness techniques to promote interpersonal attunement within the couple dyad (Gambrel & Piercy, 2015). Couples qualitatively described effects such as improved self-acceptance and emotion regulation, improvements in their relationship, preparation for the baby, and fathers' increased involvement in the pregnancy.

Addressing Gaps in Intervention Research

Although father-focused interventions are increasing, more work remains to be done in this arena. In particular, identifying intervention components based on theory and conducting rigorous studies on their effectiveness by measuring both process and outcome variables are needed. Palkovitz (2002) recommended measuring paternal development by assessing change in cognitive, personality, emotional, affective, and physical domains; however, measuring proximal intervention outcomes such as self-efficacy, couple conflict, and parenting knowledge in addition to distal developmental outcomes can provide valuable information about whether the intervention is working as intended. Additionally, expanding fathering intervention research to include related outcomes for mothers and children would provide important information about the long-term value of supporting perinatal fathers and its effect on the family system.

Mixed methods studies that combine qualitative and quantitative information would further understanding about internal processes that contribute to development, such as prioritizing, control cycles, support seeking, appraisals, and meaning making, and how they contribute to developmental outcomes. Research designs that include relational variables, use advanced modeling techniques, and assess mediators and moderators can help clarify developmental pathways and reciprocal interactions responsible for development.

With heightened attention to perinatal father support, the field of intervention and prevention science is poised to move into an era of father-supportive programming and evaluation targeting the transition to parenthood. Interventions that address fathers' dispositional traits and resources, appraisals, role adjustment, couple relationship functioning, and promote fathers' quality interactions with their infants may help fathers to step into the role in a healthy way that benefits themselves and their families. Although childbirth-related educational interventions are popular, father development continues after the birth of the child. Programs that support father development and well-being before and after the birth of their baby are needed, as well as programs that are easily accessible to fathers who may already be struggling to balance multiple roles and responsibilities. Technological advances and increasing familiarity with technology platforms may open opportunities for additional intervention strategies. In the future, emphasizing evaluations that provide evidence for the effectiveness of these programs is needed. Additionally, cost-benefit analyses are needed to identify the value of early intervention on such costly outcomes as depression, divorce, problematic child behavior and child mental health symptoms.

Review Conclusions

The transition to fatherhood can be a time of enormous personal and relational changes for men. Perinatal fathers face increased stress and the potential for experiencing difficulties stepping into the parent role, including perinatal depression and anxiety. Supporting fathers at the transition to parenthood is an underexplored opportunity for promoting healthy development for mothers and children as well. Intervention components that address the personal and contextual factors and processes that are part of perinatal father development are needed, as is longitudinal research to establishing empirical evidence for the effectiveness of perinatal

fathering intervention. The developmental model of perinatal fatherhood provides a comprehensive framework for researchers interested in understanding and promoting healthy father development at the transition to parenthood. The model clarifies opportunities for intervention and identifies potential proximal and distal outcomes. I have also reviewed the literature and made recommendations for intervention targets and research designs supporting the development of effective perinatal father support programs.

Study Overview and Research Questions

The above model and review make a case for identifying opportunities to better support perinatal fathers. How can fathers best be supported in their own development at the transition to parenthood given current sociocultural complexities? Although addressing social expectations and structures that support or constrain father engagement is needed, large-scale social changes take time to enact. Fathers also need support now to help them adjust within the current sociocultural climate.

For the purposes of this dissertation, I propose an emphasis on Elder et al.'s (2015) principle of human agency, identifying opportunities to engage fathers in the internal and relational processes that can help them adjust to the fathering role. This position requires first understanding better what perinatal fathers themselves want and think they need to be successful. I propose a series of studies using an exploratory sequential mixed methods design. Exploratory sequential designs involve an initial qualitative investigation to gain information that can be used to define a subsequent quantitative investigation seeking to confirm or increase understanding of qualitative findings (Cresswell & Plano Clark, 2018). The focus of the secondary quantitative investigation may be defined a priori or can be emergent in nature, depending on the results of the qualitative study. The studies outlined below use an emergent findings approach, with

Studies B and C developed based on findings from Study A. A flow diagram of the studies is presented in Figure 2.

Study A

The first study is a qualitative focus group needs assessment asking fathers about what support or resources they want and need around the time they have a baby. The primary aim of this study was to explore the experiences and support needs of prenatal and postpartum fathers, including identifying resources they found useful and support needs that were not met. Data collection for this study has been completed, and most analysis has been completed. Manuscript writing for this study is in progress. Additional study details are provided in Chapter 2.

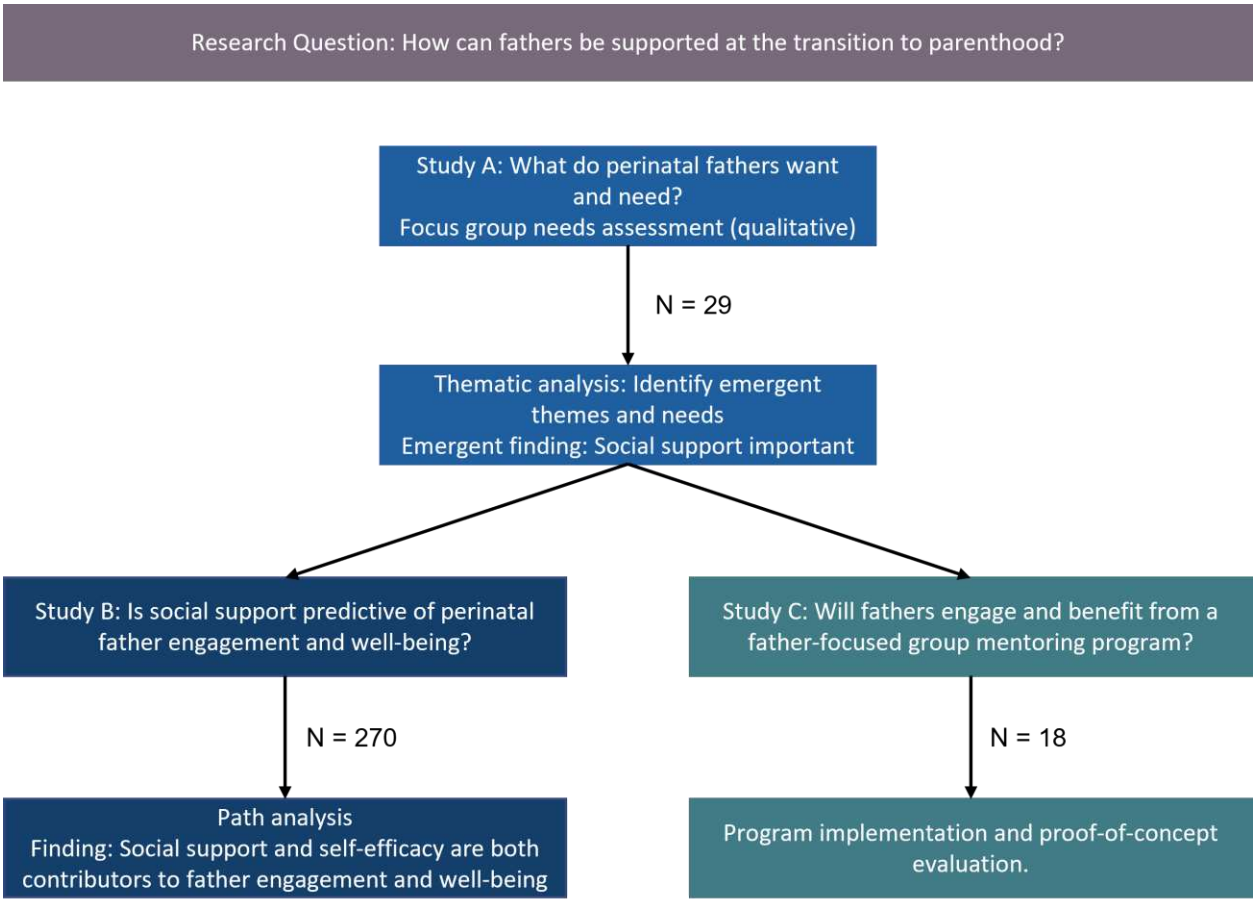

Figure 2. *Flow Diagram of Studies A, B, and C.*

Study B

Emerging findings from the focus group needs assessment were used to develop a proposed quantitative study with a larger sample size to analyze the relation between variables identified from the qualitative assessment. As is elaborated on in chapter 2, one of the primary findings of the focus group study was the importance participants placed on formal and informal social support. During the focus groups, fathers even identified finding value in the focus group itself – discussing their experiences with other fathers. Although social support for perinatal fathers is present in my theoretical model, few studies have yet investigated social support for perinatal fathers. Study B seeks to expand knowledge in this area by using path analysis to investigate the question of whether social support is predictive of father well-being and engagement in a large cross-sectional sample of postpartum fathers.

Study C

Study C seeks to understand whether fathers will engage and benefit from a mentoring program that promotes peer connections. The study entails a proof-of-concept evaluation of an intervention mentoring program called DadSpace. This program was developed based on focus group findings and extant research literature in collaboration with community partners at The Women's Clinic of Northern Colorado. A convergent (simultaneous quantitative and qualitative) mixed methods design was used to conduct an initial formative evaluation of the mentoring program in a community sample. This evaluation consisted of an implementation evaluation examining program quality and participant satisfaction and a preliminary outcome evaluation examining the reliability of pre-post participant changes. Collectively, these studies seek to increase knowledge around the question of how to feasibly support and engage fathers at the transition to parenthood and promote healthy adjustment to fatherhood.

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CHAPTER 2: A FOCUS GROUP EXPLORATION OF PERINATAL FATHERS' ROLE EXPECTATIONS, EXPERIENCES, AND SUPPORT NEEDS[1]

Summary

Although it is clear that fathers need more support around the time they have a baby, research about the types of support and resources perinatal fathers actually want is scarce. Engaging fathers in perinatal support programs is a known difficulty, in part possibly due to the perception that perinatal programs have a focus on mothers. Increasing understanding about the experiences and support needs and desires of perinatal fathers may help to inform future support resources that fathers are interested in and willing to engage with. The present study involves a qualitative focus group needs assessment with fathers who are expecting a baby and fathers who have a baby less than one year old. Six groups of fathers ($N = 29$) were asked about their perceptions of the fathering role, their experiences of expecting or having a baby, the types of resources they used, and what resources they would like to have. The focus groups were conducted during the height of the COVID-19 pandemic, and consideration is also given to the influence of pandemic protocols on fathers' experiences and adjustment. Thematic analysis was used to code the responses.

Results suggest perinatal fathers anticipate navigating a variety of overlapping roles and worry about meeting their own expectations of fatherhood, but expressed excitement about parenting and seeing their children develop. Fathers felt stressed by having a lack of needed information or trouble finding reputable information and expressed their transition to parenthood

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was a “trial by fire” that they had to figure out as they went along. Fathers also reported worrying about lifestyle and relationship changes, decision-making and practice considerations around family life and childcare, and parenting in the face of oppression and injustice. Fathers indicated a desire for both formal (e.g., educational, healthcare professionals) and informal (e.g., spouse, friends, family) resources that were reputable, inclusive of fathers, culturally relevant, and involved connecting with peers. Prenatal fathers indicated having less access to formal resources as a result of COVID, while postpartum fathers reported being able to spend more time with their infants due to stay-at-home protocols that helped them adjust to fatherhood.

Introduction

Expectations and experiences of fathering have been in flux in the United States in recent decades. Fathers are increasing their involvement in direct childcare tasks and are increasingly recognized as important contributors to child development (Schoppe-Sullivan & Fagan, 2020). Awareness is also growing about the potential for fathers to have difficulty with the transition to parenthood. Early paternal prenatal anxiety is predictive of later symptoms of stress and depression in the prenatal and postpartum periods (Wee et al., 2015). Approximately 1 in 10 fathers experience postpartum depression (Cameron et al., 2016) and rates of perinatal anxiety are similar (Leach et al., 2016). Symptoms are likely to worsen over the first few years after having a child (Garfield et al., 2014), suggesting early intervention is crucial.

Difficulty adjusting to fatherhood may have long-term consequences for child well-being. Fathers with higher rates of depression and anxiety are more likely to have negative attitudes toward their infants (Skjothaug et al., 2018) and poor father-infant attachment (Wynter et al., 2016). Father-infant relationship problems early on such as these could establish a trajectory of poor father-child relationship functioning that may be difficult to overcome later. Early

intervention supporting perinatal fathers in the transition to fatherhood may be particularly beneficial.

Fathers themselves may be especially interested in perinatal programs. The prenatal period is likely to be a time of resource gathering for fathers who want to prepare for parenthood (Entsieh & Hallström, 2016), but resources inclusive of fathers' needs and experiences are scarce (Panter-Brick et al., 2014). Although the need to provide support resources for perinatal fathers is acknowledged and some attempts have been made to do so (Lee et al., 2018), engaging fathers in intervention and support programs has been a challenge (Panter-Brick et al., 2014). A contributing factor to this challenge is the dearth of in-depth needs assessments about what might be helpful to men making the transition to fatherhood (Deave & Johnson, 2008). Identifying the types of support perinatal fathers are most interested in using may help promote engagement with programs and resources and fill a gap in existing literature. To support these efforts, we asked perinatal fathers themselves about their experiences and preferences for support resources around the time they have a baby. This qualitative approach allows for perinatal fathers to introduce multiple possible ideas and directions for intervention approaches that they may prefer.

Method

Procedures

We conducted a focus group needs assessment with prenatal and postpartum fathers in September and October of 2020. A team of researchers and community partners wrote focus group questions that explored the needs of perinatal fathers (see Appendix A), with the intention to interview both prenatal and postpartum fathers. Due to pandemic-related health restrictions in effect, focus groups were modified to be held virtually using Zoom. Participants were asked about their worries, expectations, resource use, resource needs, and adjustment to fatherhood.

One focus group was planned to be held in Spanish; however, we were unable to recruit Spanish-speaking participants into the study.

Sampling and Participants

Permission was obtained through the university's institutional review board. Participants were recruited using convenience sampling through local community organizations, flyers, and university list-servs. Although recruitment was conducted locally, the virtual format of the focus groups allowed for participants to join from other locations across the United States as well. Inclusion criteria for the study were that participants needed to identify as fathers, be at least 18 years old, and be currently expecting a baby or have a baby less than 1 year old. Participants ranged in age from 27 to 40 years (M = 33; SD = 4.48). Of the 29 participants, 14 were expecting and 15 were postpartum fathers. The sample was mostly White, college educated, and middle income or higher. Of the 28 who provided demographics, 21 participants identified as White, three as Latino, two as Black or African American, and two as both Asian and White. Participant income ranged from $30,000 to more than $150,000 annually, with 51.9% of participants earning more than $100,000 per year. Participants' highest education levels included a high school diploma (n = 1), some college (n = 3), a 4-year-degree (n = 14), and a graduate or professional degree (n = 10). Eight participants reported having at least one older child. All participants indicated being in heterosexual relationships with their baby's other parent.

Focus Group Structure

A total of six different focus groups were convened, with three to six fathers in each group. Three groups consisted of only prenatal fathers and three groups consisted of only postpartum fathers. Focus groups had a duration of 1.5 hours and were led by interested father facilitators employed by the community partner. Focus group facilitators were trained in

conducting focus groups prior to meeting with participants. An additional researcher also attended each group to go over consent documents and answer questions related to the research. That researcher remained muted the rest of the time and took process notes during the groups. Focus groups were recorded for later transcription.

Analysis Plan

The six focus group recordings were transcribed, with individuals identified by a participant ID in the transcriptions. Qualitative coding focuses on individual experiences and inherently involves researcher interpretation (i.e., the researcher is not separate from the data). As such, qualitative data analysis conducted by two or more researchers will include differences in interpretation (Braun & Clarke, 2013). To address these differences, two members of the research team worked individually and in tandem to develop a coding scheme for the data based on two of the six transcripts - one prenatal and one postpartum. The researchers independently reviewed the data and identified possible codes, then met together to compare their codes and develop a coding scheme. The researchers then used the resulting coding scheme to independently code and compare two additional transcripts to assess the effectiveness of the coding scheme and add or clarify codes as needed. Reliability for these two independently coded transcripts indicated substantial agreement (*kappa* = .78). Coding differences were discussed and resolved. One of the researchers coded the remaining two transcripts using the developed code. The researchers collaborated in identifying themes from coded data.

Results

A total of 481 excerpts were defined out of the six focus group transcripts. Each transcript was coded with one or more of 80 possible codes (see supplemental materials). Codes were categorized by type, including roles, excitement, stressors/worries, resources, and barriers.

Additional code tags were applied indicating something participants wanted, an implicit goal, something they identified as being helpful for their adjustment (postpartum participants only), something they felt unprepared for (prenatal participants only), or something occurring due to the COVID-19 pandemic response.

The Multiple Roles of Fatherhood

Participants identified multiple roles for fathers, and participants differed on the roles they defined as being important to their conceptualization of a father. Participants indicated the fathering role can differ by family:

> When you get into what is a father's role, I think I would give you kind of a question back, honestly, it's really whatever is defined within that family relationship. So it could be staying home raising the kids, watching the kids, teaching. Or it could be much more of a traditional father, you know, and this is probably the more old-school response. But, you know, making sure the kid has food and shelter and water and needs are met and everything.

They also indicated the fathering role might change over the course of a child's life:

> I think fatherhood kind of changes over time. And I think right now I'm reminded of that early phase. In the beginning, I think a big part of your job is protecting them and taking care of them and making sure they don't get hurt. A friend of mine said you're basically, for the first two years, it's like they might as well be in the womb. There's not a whole lot of interaction and a whole lot of, like, coaching or teaching going on. But after those first couple years then it becomes a lot of teaching and playing and teaching them right from wrong.

Coders identified eight distinct role codes in participant responses: mentor/teacher, co-parent, availability and support, protector/guardian, caregiving/routine care, provider, attachment figure/unconditional love, and responsibility to society. Most participants (n = 27) identified more than one role and some (n = 3) identified as many as six roles as being important for fathers. On average, participants identified three to four roles as being important to fatherhood (M = 3.55, SD = 1.53). Role frequencies by number of participants and number of mentions are listed in Table 2.

Table 2

Code Frequencies for Roles, Excitements, and Stressors

Code	*N*	Frequency
Role		
Co-parent	21	23
Mentor/Teacher	17	23
Availability and Support	16	20
Protector/Guardian	14	15
Caregiver/Routine care	13	15
Provider	13	14
Unconditional love	6	7
Responsible to society	4	5
Excited About		
Infant's development	13	17
Interacting with baby	13	15
Thinking about/imagining baby	13	14
Changing identity/role	11	14
Time with baby	11	11
Together with friends/family	5	8
Together with partner	5	6
Stressor		
Changing identity/Role adjustment	27	66
Not knowing what to expect	25	64
Anxiety about the baby's well-being	23	39
Disrupted routine/life changes/physical strain	22	44
Negative support, pressure, and contradictory advice	21	46
Finances	17	24
Partner's well-being	16	21
Unexpected events/difficulties	14	22
Childcare	9	11
Difficult or perplexing infant behavior	9	9
Isolation	8	11
Coordinating benefits (insurance, family leave, etc.)	8	8
Social inequality, racism, societal stress	6	8
Romantic relationship	6	8
Extended family relationships	5	7
Sibling adjustment	3	6

Father as Partner and Co-Parent

Most participants described their role as being one of partnership with their coparent. They described fathers as having an obligation to their partners to take on responsibilities where they could, taking into account the relatively greater involvement of mothers in breastfeeding.

> I'd say just mainly a support person and provider and doer of laundry and dishes and dinner and chores and making sure … however hard I think my job is, at least like I'm not pumping every four hours or something or breastfeeding every hour or two hours. Or, you know, sleeping like crap every night and your body is like healing while you're trying to take care of this tiny little helpless infant.

Participants described trying to fill in gaps to allow for their partners to focus on whatever they needed to do to care for their infants or taking on more infant care when their partners were returning to work. “My wife's job is actually more demanding and positionally more important than my job. So I understand that I'm gonna have a bigger role in the house, and getting ready for that.” They indicated the need to be flexible in responsibilities to best meet the needs of the household in the early months after having a baby. “Your role is to be whatever you need to be for your baby and for your partner.”

Several participants also described fathers as one member of a parenting pair, noting the importance of co-parenting to raise their child. Some participants indicated that the father’s role is not particularly different from that of a mother, emphasizing that they both work together to do whatever needs to be done. “For right now at least in my viewpoint I feel like fatherhood and motherhood is the same and you're just equal partners that are just putting love and care into raising the child.” Making decisions together was important to the co-parenting role.

> My wife and I are really deciding, you know, we have to make these decisions. It's no longer anybody else's. But her and I have to talk and have those conversations and decide, okay, what do we decide is best for our family, our child.

One father expressed concern about what would happen in the future if he and his wife had a "fundamental disagreement about how this ought to go" as they made decisions for their family, indicating cooperation in decision making is an important element of the co-parenting responsibility and valuable for managing family stress.

Father as Mentor/Teacher and Role Model

Participants described a teaching and mentoring role as particularly important to fathering. This was described as a uniquely important job related to helping children grow up with sufficient guidance to be successful. Participants indicated wanting to use their knowledge and experience to help their children navigate life's ups and downs.

> I gotta pass everything on. So that's my best description to it ... Yeah, it's just what's out in the world, rights and wrongs, how to view the world, know that he's gotta get hurt a couple times, but you know, everyone's gotta learn. And it's, there's a lot of just what I know, what my passions are, passing on to him is a big part of that, too. But I already know that it's gotta be, he's gonna have his own ideals and his own passion. And I can't just force my loves onto him.

Several participants also described wanting to show their children a good example of masculinity and healthy partnership.

> For me as a father, I teach my boys what it's like to be a man in a relationship. What is it like to have feelings and emotions. And it's okay to share those. And for my girls to affirm them and to let them know what it should be like to be in a loving relationship and how to be treated from guys.

Participants expressed hope that by being good role models, their children would have an easier time identifying and engaging in positive relationships.

> I just want to teach my daughter the life experiences I've had. Like the good ones and the bad ones. Showing her what a respectful relationship is like. Like me and my wife are really good partners together. Kind of showing her what a good partnership looks like.

In some cases, participants also described wanting to challenge societal norms of masculinity in their parenting. One participant described wanting to show his children that men "have

emotions," saying "it's important to show our kids that … their fathers can feel things." Another indicated wanting to promote a shift in the concept of masculinity and manhood.

> I'm gonna bring some semblance of what it means to walk through this life as a man. And that's a shit show, right now, as far as what's being thrown around and handed down in some really damaging ways. And I'm really really interested in how am I gonna be a part of cultivating a heart and a mind … from my vantage point of growing up and walking through this life as a man. What is specific to my experience that is man in this life, and what of that do I want to impart to my child? And what do I want to help change? What do I want to be a part of growing out of? And old ideas about how things need to be. Everything's in flux right now. People are asking for room to define their lives in really amazing ways, and I wanna take part.

Participants also had a sense of uncertainty and hopefulness around striving to be good parents, recognizing that it required effort and intention. "Being that source of guidance for somebody else who's gonna look up to you hopefully and admire you. I think being a father also means trying to develop that admiration and earn that, too, you know." This coincided with concern about their ability to meet role expectations and a desire to be a good role model.

> And so there's questions of self-doubt, like am I a good enough person to actually teach a kid these things? You know, pass along these morals or these virtues. And I think the thing that we both realized is that a lot of it is gonna be by example. And so, yeah, just worrying. Trying to make myself a better person to be the best person I can be. So that my daughter or that my future kid will see, I guess they can just learn so much by the example I set.

The Present Father

Several participants indicated being present was a key part of their role as fathers. "The guy who's actually there," and "providing their time," "caring and supporting" whether that person is the biological father or not. One participant who identified as Black described the importance of being present to challenge a stereotype of Black fathers.

> I just wanted to be present. I think the driving force for me and that has driven me as far as fatherhood is the negative depiction that a lot of Black men, or are placed on Black fathers about not being in the home and stuff. So my whole thing was just geared towards being present and doing what I'm doing.

The concept of availability indicated by participants involved intention, engagement, and support, not just physical presence. “You are there with that child through thick and thin. In a supportive role.” Another participant described the father role as a “a commitment in both good times and bad times because your kid’s gonna be having great days and have bad days … be there to support them.” One father also noted the importance of “spending time with them and interacting with them” during infancy, with the father role becoming more complex as children age. Another admonished the other fathers in the group to be thoughtful about how much time they are spending on the phone around their children because “it's real easy to just start checking emails or texts or whatever, and suddenly you're completely disconnected from your kid. You haven't even realized it's happened.”

In some cases, participants indicated worrying about balancing the need to be present with their family with the demands of work. “How do you keep your job, but also making sure that you're not somehow not being there or not doing the things you need to 100% for your child because of your work?” One participant indicated wanting to be there for his child in a different way than what he experienced from his own father growing up. “I want to have a better relationship and be more of a role model and a support than what I was given.”

Father as Protector/Guardian

About half of the participants described the father role as a protective one and expressed wanting to be a guardian to their children. Participants described wanting to protect their children from physical harm as well as from frightening world events, racism, toxic masculinity, and themselves. They acknowledged the vulnerability of their children, especially in infancy, and expressed concern for their short-term and long-term well-being. Participants described a feeling

of responsibility to make sure their children were as safe as possible, while also noting the limitations of their power to do so and the need for children to explore.

> … trying to find a happy medium between this thing that sort of intellectually I've always held as a really high value of letting her become who she's gonna become, but also feeling this sense of protectiveness and needing to make sure that she doesn't get hurt by the world and not let that get so overwhelming that she just doesn't know what to do with herself when she's on her own.

Father as Caregiver

A few fathers also described the basics of caregiving as important to their role, particularly as fathers of infants. "You know, brass tacks, don't drop this thing, and wipe and feed." Caregiving was most often mentioned in conjunction with coparenting, as something both parents do.

> Feeding's a big one. Changing diapers. Dishes. You have to do all the bottles. A lot of laundry. Bathing him. You know, those sort of things that we do right now. We don't do much else with him. [laughing.] Tummy time. Helping him get stronger.

Participants also described caregiving tasks as part of the discussion about resources – indicating they sought resources to help them with routine infant care or that they had to figure a lot of things out on their own. "Going back to the basics for lack of a better word. How to change a diaper, how to handle a baby, how to do all of it."

Father as Provider: An Implicit Role

In the previous century, the provider role was one of the most visible and expected roles for fathers to hold (Lamb, 2000). In our sample, however, fewer than half ($n = 9$) of the fathers explicitly included providing financial or household resources as being part of their role. When fathers did identify the provider role, it was often mentioned only briefly in conjunction with multiple other roles.

> Yeah, so I think what defines a father is someone who's a provider and a protector of the family as a pretty key role to what a father is. And I think, right, those can be in a lot of

> different shapes and forms. Providing their time, providing resources, providing some protection and stability for a family, I think are all key things that a father does. Acting as a leader in a family or acting as, could be a decision maker. It is a defined role. I think the biggest thing is a provider and a protector for the family.

When describing their worries, however, participants were much more likely to mention financial concerns and responsibilities as significant stressors (n = 16). “I was really freaking out about my first one, so financial resources became big. I picked up two other jobs cuz I wanted to make sure we had enough money.” Participants described experiencing stress related to their earnings, employment consistency, affording children and childcare, and maintaining availability of employment-related health insurance.

> And then also the financial fear. Like what if I lose my job and what are we gonna do. You definitely, you take on a lot more financially in your mind, I think, when you have a kid. Cuz before it's like well, if I lose my job, my wife and I can figure it out. We can, we'll figure it out. Live in a van for a while or whatever. But when it's a child that you have to support and there's daycare and there's food, you can't just really wing it anymore. So I think that's definitely a big fear is losing a job and some kind of big financial issue that comes up that it could really hurt your whole family.

Of the 16 participants who described experiencing financial stress, only three had also explicitly named the provider role as being part of fathering. This suggests that although some perinatal fathers may be shifting away from overtly identifying providing as a key part of their role, they maintain an implicit sense of responsibility for providing for their families.

Father’s Unconditional Love

Fathers have been described as potential attachment figures for their children (Bretherton, 2010), providing a loving, safe relationship for children to turn to. Some fathers in the group described this role specifically, naming “someone they can trust” and “unconditional love” as key parts of fathering. “I think a father's role in the kid’s life is just to love unconditionally. No matter what they're going through, no matter who they are, who they're becoming, what they're, you know how hard they are to love.” Participants described this love as necessary to the child’s

growth. "…to provide a loving and supporting and caring environment so that the child is able to … you meet the child's needs and also provide that environment where they can kind of learn and grow."

As well, fathers described the love they feel for their child as important to them personally, indicating a mutuality of attachment. "Someone I can love, and they'll love me back." The strength of the father's attachment was particularly notable for this experienced father:

> I was totally unprepared for how overwhelmingly proud and attached you get to this little creature. Like everyone says, "Oh, you don't know what it's like to have kids until you have kids" kind of thing. But I mean I remember when she first learned how to walk. A legitimate serious thought in my head was I'm not going to work tomorrow because I just want to walk with my kid. … But yeah it was just, it was just nuts how much you can love, you can love this little person with half your DNA. And you just don't realize how strong that attachment is, I think.

A Father's Responsibility to Society

A few participants also described a sense of obligation to society. Participants described wanting to raise children who were responsible, productive, and functional adults. In some instances, participants also indicated wanting to raise children who could help change social structures and be a "good force" in the world. "You have an obligation to bring that child up into the world to the best of ability of making them a better human being, better person, productive to society." Although similar to the mentoring role, the responsibility to society suggested fathers in part felt they must do a good job for the benefit of the wider community, rather than just focusing on the needs of the child.

The Excitement of Fathering: "Every Day is Different"

Most of the participants in this sample indicated excitement about stepping into the fathering role and getting to know their children. Participants expressed positive feelings about

the changes in their lives and their children's lives and looking forward to the next stage of their lives as parents. When asked about what was exciting for them about becoming a father, participants described seeing their babies grow and develop, interacting with their babies, thinking about or imagining their children in the future, taking on the fathering role, spending time with their baby, parenting together with friends and family, and parenting together with a partner.

Developing and Interacting

Participants indicated excitement about seeing their children reach developmental milestones and learn new skills. "Sort of the most exciting thing is obviously, when she hit some different milestones. When she started to smile and she started to laugh. She's walking. Now she's talking. So all of those things are really fun." Fathers with older children also described the joy of learning how their newest babies are different from their older children. "The whole process of bringing a baby home and kind of finding new ways, to interacting and learning a third … personality on top of everybody else that's there is really interesting."

Participants described enjoying or anticipating enjoying interacting with their children as they grow, "getting to know each other," and participating in the journey alongside them. "I generally tend to see myself getting excited over the concept of doing things with my baby for the first time." For one father, having his baby be excited to see him or hear his voice because "he knows that we're gonna have some fun or whatever we're gonna do" is a rewarding part of the experience.

Seeing their young children experience the world also provided an opportunity for postpartum fathers to see the world anew.

> You get to kind of re-experience that through their eyes, which is neat. And there's just so much of the world to see, and so many things to learn and do. And so it's just exciting to,

> like, think about all of the things that I did is as a kid with my parents that I get to, you know, do again with her.

Prenatal fathers emphasized the excitement of following the fetus's growth and development using pregnancy apps or similar materials and imagining their baby in the womb.

> Every week we read about, okay, this week the baby starts opening its eyes and starts practicing to breathe. And you see the size of it, and that part of life is just so exciting to learn about and see what's happening inside of her and feel like we're getting to know our little girl so much already. Just amazing.

Prenatal fathers also described preparing for and imagining their children after they are born as a way of feeling more connected to their babies before they are born, such as by "getting the nursery ready," and buying things for the baby.

> Oh, she'll look cute in this. Or maybe we'll have matching Laker outfits, that sort of stuff. So I would say that would probably be the most exciting, just dressing her and imagining her as she come into the world; I'm gonna be one of the first faces she sees.

Changing Identity

Participants also described feeling excited about how their own lives would change as they "become parents," while noting that the "shift … to something new" is both "exciting and challenging." One prenatal father who had not initially planned to have children described the shift from thinking about reasons not to have children to feeling excited about how his life would change in positive ways with a child on the way.

> So now I'm allowing myself to be super excited and thinking about all the positive aspects, which is funny that I didn't consider, I don't know, we decided to have a kid without really thinking about all that. So I think, yeah, I'm getting excited about all the difficult but also fun times ahead.

A postpartum father shared the sentiment from the other side, saying "then you have that child and it's like you can't imagine life without her or him. So yeah, I think just having him there helps you adjust. You're like this is my life and it's great."

Another father described experiencing a profound shift into a new social position as a result of becoming a father.

> I've also really found I enjoy the kind of role in society that you move into when you become a father. Um, there's all these relationships kind of change, and you can connect with fathers differently. I don't know, I feel like that transition has been somewhat dramatic, and I've appreciated it.

Another who was the last of his friends and family to have children expressed appreciation for being able to catch up and "feel all those things that all my friends and family felt and that we get to see all the time."

Changing Together

Experiencing parenthood alongside friends and family and with their partner is also something some of the fathers were excited about. Some participants were going through the transition to parenthood with peers, providing an opportunity for support and shared experience.

> And a few of our best friends are having kids all at once, too. So we're just like, ah, this is gonna be so freaking cool, and hard, and sometimes it'll suck, but we're doing it together. So that's just been really neat for those friendships, too.

For some parents, childbirth classes were a way to make connections with other new parents and identify a new peer group. "With other couples and other people that are going through the journey at the same time. I think that was really, really helpful. To just spend time airing our fears and our concerns and sharing excitement together."

Two participants also expressed looking forward to experiencing parenthood with their family members, to raise children alongside their own siblings and see their parents become grandparents. "I guess it's exciting because in my family this will be the first grandchild, so my parents are thrilled. And all my brothers and sister are just super excited to be aunts and uncles." A few prenatal participants also described having a special experience preparing for parenthood with their partners, "just being able to work things through with her," feeling like it brought them

closer together. “The excitement this time has been incredibly rich with my wife and I. And it's, I just feel closer to her than ever before. So that's been really freaking cool. Didn't know that was gonna happen, that's a cool bonus.”

Challenges and Worries

The difficulty of juggling multiple roles became apparent in the discussion of what participants found challenging and worrying. Participants identified a plethora of stressors (Table 2), with the most commonly cited stressors being adjustment to the role and facing the unknown. Participants also described experiencing physical strain, worry about their baby, contradictory advice, financial and benefits worries, social inequality, and relational stresses.

Role Adjustment

Nearly all fathers in our sample reported feeling stressed about the weight of responsibility in caring for and raising a child – “we’re in charge of a life.” They frequently described worrying about their ability to “do a good job” or “do this right” in their roles as fathers and wanting to not “mess up.” Low availability of resources to help them do this successfully was mentioned as a concern, including a lack of father-specific resources. They also expressed concern about maintaining a sense of self through the transition and maintaining their romantic partnership. The process of adjustment was reflected in the different ways participants described their role changes from prenatal to postpartum.

Anticipation of Change. Prenatal participants ranged in their conceptualization of how their roles might change, from just beginning to think about it to engaging in efforts to prepare themselves. They described trying to prepare themselves for what they needed to know to be ready to take care of a baby and setting expectations around how their lives might change, but noted that “it's tough to wrap your head around … until the baby's actually here.” One father

described preparation as a “battle plan,” saying “every battle plan survives up until the moment of first contact.” Other fathers agreed with his assessment that plans might fall apart once the baby has actually arrived.

Prenatal fathers expressed underlying anxiety about the transition, such as feeling “terrified of making a mistake really early” and being able to adjust priorities so “the baby is the priority.” Several prenatal fathers also recognized they “are going to make mistakes,” and trying to be in a place of “self-acceptance” for not being able to attain “that idea of perfection and keeping up that ultimate status as a parent.” They emphasized wanting to do the best they can and trying to be “good enough.”

“Trial by Fire”: Postpartum Adjustment. After their babies were born, postpartum dads described the immediate transition to parenthood as having a sense of urgency - “feeling a little bit helpless,” a “trial by fire,” having to “hit the ground running,” and recognizing they needed to “adjust or not.” Prenatal preparation was acknowledged to be inadequate to the task of adjusting.

> There's plenty of classes that teach you the information. Everything you need to know before baby comes and how to be a good father, but as far as, there's no training to prepare you mentally and emotionally to be just totally rock solid and ready to be that caregiver and support in whatever situation. You know, you might have all the information and tools, you can read all of those things, but it's like, you know, like basketball practice. Just studying plays and all that sort of thing, but you're not doing any on the court practice. So I think, I don't know. There's a little bit of a difference in, in what you . . . can learn about and then how you can actually develop as a person to be ready for it.

One participant who reported having a chaotic childhood himself said “the whole interaction is brand new to me almost” and said he was trying to embrace the change.

Participants described learning by doing and adjusting to the changes as they went along. Fathers who had older babies reported worrying initially (e.g., “Am I gonna be good at this?”)

before discovering how to adjust to the role and make it work for them. “After he was here, I realized I could do all those things. Fatherhood became pretty natural.” Self-reflection and trial-and-error were identified as important parts of the process. “The next morning, I look back on it and say well, I could have done this different. There's always the next night to try to get it right.”

The degree of changes varied by person, but most postpartum participants described significant shifts in their lives, with changes in their work-life balance and the balance between their personal needs and the needs of others. “It is more challenging, I think, than you could be prepared for.” One father who had taken on a stay-at-home parent role described his experience as

> adapting to a whole new lifestyle. I've always worked the last 15 years, just constant, full time, doing something. And now it's just full time 24 hours watching this guy. I think that's been this huge life change for me. I'm a little more stagnant than I used to be, but at the same time it's a learning experience every day.

Postpartum fathers also described having difficulty navigating the “loss of self” and the extent to which their priorities and activities changed following the birth of their children. This included missing hobbies and time they used to spend doing other things. “It's not necessarily a loss, just a movement in a different direction, but it's still hard to not feel selfish and want to do those things and ignore other priorities.” They described the sense of personal responsibility for their infants as important to their ability to focus on what they needed to do for them.

> You see this baby for the first time, you’re like … I am like emotionally, I am legally responsible for this baby. Like if anything happens, it's all bad news. So like time to get your shit together and do the best you can and run around and do everything all at once and trying to be a good dad.

Postpartum fathers described coping with the transition by “embracing it” rather than fighting it, “figuring it out” on the fly looking for role models, finding “people who will support you,” engaging in self-reflection, “trying to be the best person you can,” and giving it time.

Changing Again. Fathers who had older children and had already established their fathering role were less likely to express concerns about adjusting, but they reported some worry about how things might be different with their newest baby based on individual differences. “The first couple of months I imagine will be very similar. But then moving forward, just interacting with a little baby girl versus a little boy.” Fathers who had more time between children worried about remembering specifically how to care for an infant. “I think I forgot it. I forgot a lot of stuff. Yeah, so a little nervous about handling a baby again.”

“You Don’t Know What You Don’t Know”

Most participants reported feeling challenged by a lack of knowledge about things related to infant care, fathering, and what was coming for them. They described entering the transition to fatherhood with a lack of prior knowledge or skills. “I was like, I know nothing about babies.” Many participants described not knowing where to start or how best to direct their efforts. Prenatal dads particularly described preparing for parenthood as something nebulous and difficult to conceptualize. “I'll feel a little bit disconnected just because I don't have a physical, tangible baby yet. It still sort of feels like this strange concept that's floating outside of my understanding.” One father reported having difficulty making “decision after decision” without being sufficiently informed. Fathers worried about the potential future impact of their decisions on their children.

Some participants approached their lack of knowledge by trying to learn what they could do before their babies arrived (“I asked as many questions as I could to my friends.”), while others described intending to learn along the way (“Information can't replace experience all the time”). Participants expressed uncertainty about the quality of the information they had available to help them prepare, especially due to lack of in-person contact with health professionals (e.g.,

doctors, childbirth and infant care educators) due to the COVID-19 pandemic. “I think really what I've been struggling with in regards to that is making sure that I'm asking the right questions or having the right thoughts and looking for the right things.” Learning a lot in a short period of time was difficult. “You can only absorb so much information.” When encountering a situation that they weren’t prepared for, participants had to learn quickly.

> … as soon as we realized, man, I wish that was something we had learned, I think one of the big lessons we took was away was, okay, I wish we had learned that, so now we need to turn around and learn as much about it as we can.

Navigating Change: Contradictory Advice, Unexpected Events, Infant Well-being, and Routines

Uncertainty and lack of knowledge were closely tied to many of the other stressors fathers mentioned, including receiving contradictory advice, navigating unexpected events, worry about the baby’s well-being, and perplexing infant behavior. A lack of personal resources or prior knowledge increased the stress fathers experienced in these areas.

Contradictory Advice. Participants frequently described frustration about sifting through conflicting information and advice from informational (e.g., search engines, books) and social (e.g., medical professionals, family, acquaintances) resources.

> I feel like you get a lot of unwarranted advice and unwanted advice and sometimes confusing advice, as well as really good advice. So I feel like a challenge as a parent and as a dad is to be able to basically synthesize all that information and be effective and be a good parent to your child.

Disagreement in the opinions of medical professionals created confusion and uncertainty for fathers. Fathers also described having difficulty knowing when they could assert themselves or advocate for a different approach when interacting with medical professionals. One participant also described repeated experiences of being dismissed and ignored by pediatric health professionals who preferred to talk to his wife. “If I'm the one reaching out for information, I'm

not the one who gets responded to. So that's been a really frustrating thing and a thing that's made it very difficult to fulfill that role."

Navigating contradictory advice required participants to take an active role in choosing who they wanted to listen to and what people and resources they deemed trustworthy. They identified people and resources who were aligned with their values to help them determine what advice to focus on.

> Learning to say, "Oh, I didn't know that, thank you," to all the other people out there with unsolicited advice. "I didn't know that. Thank you. I'm gonna put that piece of information on the side table and ignore it." And really getting selective about who we listen to.

Unexpected events. When events happened that were outside of the typical range of topics covered in most resources, participants reported having to learn and manage the logistics of taking care of unexpected events very quickly with limited information or resources. Particularly stressful was not having clear guidance on what will happen or how to respond when things don't go as planned.

> We read plenty of books that said come up with a with a Plan B when your birth doesn't go according to plan, which we did ... but nothing really around what to expect if baby is early and then how to navigate that, right? We got transferred to [another city] … So it's like you've got to figure out where you're staying. All of these other things that are not even specific to the care of baby. Which we managed, but that sort of stuff that gets thrown at you … And then … there are all of these other things that come up or that are unique to premature babies. It's like … "We can't tell you anything about what to do or how to deal with it, just eventually it will change." Which is really not comforting.

Participants who reported being affected by unexpected events such as infertility, prior pregnancy loss, breastfeeding difficulties, infant health challenges, job losses, and world events indicated feeling more anxious about things in general. "… there's still just a lot of underlying anxiety about it going well and that everything is going the way it should be."

Worry About the Baby. Fathers in our sample acknowledged the helplessness of their infants and described worrying about their babies' well-being. Prenatal fathers reported wondering if they would have a healthy baby. Postpartum fathers reported worrying about environmental hazards or hurting their children by mistake. "It was just constant just fear. Is he gonna fall? Is he gonna roll over? Blankets too close to him? It's definitely a constant, are you gonna survive?" Some worries were more event specific, such as the effect of the COVID-19 virus and pandemic isolation on their babies' health and development, or having feeding difficulties. Participants also expressed worrying about the impact of their decisions and parenting on their children's long-term outcomes. Postpartum fathers were sometimes stressed by their infant's behavior. Inconsolable crying or unpredictable needs could be confusing and distressing. "Feeling a little bit helpless when you can't get your child to stop crying and those fits is hard and irritating and stressful. You just want to be able to calm them down or figure out what's wrong at least."

Changing Routines. The transition to fatherhood was accompanied by (or anticipated to be accompanied by) sweeping life changes for many participants. Changes in routines (e.g., sleep, daily responsibilities) and relationships were commonly described. Some participants also reported experiencing changes in housing and employment in direct connection to having a child. In many cases, participants described these changes as temporary but stressful disruptions. Postpartum fathers emphasized the need to put effort into establishing new routines and working together with their partners to manage stressors.

Additional Stressors: Practical Considerations, Relationships, Societal Stressors

Practical considerations. Some participants additionally reported feeling stressed by practical considerations, such as finances, coordinating employee benefits (e.g., insurance,

family leave), and finding childcare. Participants reported not always knowing where to turn for advice on these kinds of practical details.

> I think it is, it was mostly the financial stuff. Like the whole insurance, like what am I supposed to do? Like whose insurance does she go on? I had a lot of questions … I felt like I was trapped at times, like who do I ask? What do I do?

Relationships. Maintaining relationships was also a concern for some participants. They described worrying about supporting their partner's well-being in postpartum and maintaining their relationship with their partner. "We don't get nearly as much time just to just to hang out and spend time together as we used to." Participants also described needing to navigate changing relationships with extended family members as roles changed, and participants with multiple children also discussed wondering how their older children would adjust to having a new sibling.

Social Strife. Participants also expressed concern about the state of the world and social strife. Systemic racism and violence against racial minorities was a frequent topic in the news at the time of this focus group, and both of the Black fathers and one of the Latino fathers expressed concern about how racism would affect their children. "I feel like everything that's happening now, just people of color, what has been happening … So bringing a daughter, I am a Latino … so you start thinking about all the things that could happen. Of course, you gotta think about that." Trying to provide reassurance and support their children in navigating complex and potentially harmful social environments was a priority for these fathers.

> The one that worries me the most, quite honestly, especially in this day and age, is I don't know how broken my kids' mindset of society is … So my kids say, "Are you gonna be killed running around? Are you, you know, what happens when you get pulled over? Should we trust the police?" Or you know, these kinda things … And so every time these things pop up on TV, people who are unfortunately affected by this, it affects their kids, too. So that's something that worries me is that I don't want my kids not trusting police or being worried that people are gonna try to provide harm for them just because of how they look or what they do or what they wear. And so it's hard to kinda navigate that of, I'm gonna be okay, but you still need to trust authority. And not everybody's like that and da da da da da. But at the same time help them overcome their fears because that's the

> society we live in. And so with it happening so frequently, at some point they're like, "How do you protect me?" And that's a tough conversation.

These participants noted that their concerns weren't something all fathers had to face, emphasizing that parenting in an atmosphere of social injustice is something these families are having to figure out on their own.

Resources

Participants described using a mix of formal (i.e., educational, professional) and informal (i.e., social) resources to help them prepare for and adjust to parenthood (Table 3). Discussion of resources also included frequent mentions of the difficulties in accessing desired or trustworthy resources. They also reflected on resources they wish they had or what they felt was missing that might have helped them better prepare for the transition.

Accessed

Formal. Participants described using a variety of formal resources but most often mentioned talking with healthcare professionals, attending classes, and reading books. Participants varied in their preferences for these types of resources, with some fathers saying they had little interest in reading or going to classes. Overall, fathers expressed the greatest preference for connecting with healthcare professionals to ask them questions on the spot, but some reported not being able to attend prenatal appointments because of pandemic restrictions. Several fathers also indicated a desire for in-person classes that were not available because of the pandemic. Some participants had accessed virtual classes instead. The usefulness of virtual classes varied for participants, with most stating they would have preferred in-person classes.

Various other resource types also were mentioned, including prenatal and baby-care monitoring apps, medical websites, parenting-related podcasts, medical websites, and blogs.

Table 3

Code Frequencies for Resources Participants Used and Desired

Code	*N*	Frequency
Resources Utilized		
Formal		
Books/Reading materials	19	29
Healthcare professionals	18	25
Classes	17	20
Web resources	10	13
App	8	8
Paternity leave	7	8
Dad-specific	3	4
Podcast	2	3
Group/Peer support/Mentoring	2	2
Social		
Family	19	31
Friends	18	27
Partner/Significant Other	15	24
Social websites	6	6
Strangers/Community Members	2	2
God/Faith	1	2
Resources Missing/Desired		
Formal		
Group/Peer support/Mentoring	14	19
Healthcare professionals	13	13
Classes	10	17
Books/Reading materials	9	11
Web resources	7	13
Dad-specific	7	11
Paternity leave	5	6
App	1	1

Additionally, participants described using employee benefits for family leave and welfare programs (e.g., WIC) to access needed supplies.

Social. All but two of the participants listed social support resources as being important to them. They commonly listed their partners as being important to their preparation. Participants

described relying on their partners to teach them what they needed to know, to point them in the direction of helpful resources, and to connect them with a wider parenting support system. “She helped me a lot. She's very resourceful. So she pretty much, she would help look for things that I might be interested in. Like tips for fathers and stuff.”

Most participants described looking to friends and family for support and examples of child rearing. “Your friends and family know who you are and know your values and the things that you want, so that's why I felt for us it was probably our best resource.” Trusted others provided examples of child-rearing that helped participants determine ways they would like to parent their own children and sometimes how they would like to do things differently.

> I grew up in a really big family … I really took in the type of things that they would do. Like when my dad was raising us or how my brothers have raised their children. And there's some things I have not agreed with at times also. So I kind of look at that and think how can I maybe do better in a situation like that. But yeah, I would probably say my family is probably my biggest resource.

Black, Latino, and Asian participants particularly listed family as an important resource.

Participants were selective about friends and acquaintances from whom they took advice, preferring to go to people they perceived to be good parents for suggestions and support. “There are good resources among friends and family, but we kind of had to just pick and choose from the start - this is who we're gonna listen to - and allow the rest of the noise to fall to the side.” For some participants, prior hands-on experience around their nieces and nephews was helpful in preparing them for parenting. “A lot of times like with my sister, cuz she has two kids of her own, and I have pretty much, I helped raise them. And I grew up around her most. So I got to pretty much get that hands-on experience a lot watching those kids grow up since day one.”

Social websites and strangers or acquaintances in the community were also helpful for some participants. A few fathers reported that their partners were members of parenting groups

on social media from whom they had gotten information. Two dads also mentioned receiving good advice from men who had come to their house to do unrelated work – a "cable guy" and a plumber – suggesting that in some cases unsolicited suggestions from community members can be memorable and useful. One participant also described the importance of his faith in helping him become a father.

> Most appreciated resource is, like I said, my faith in God. And you know I was just thinking, how did people do it before there was books written? Like you just have to rely on instinct and whatever your belief system was to know what you're doing. And that took humanity pretty far. So I was like let me rely on my faith.

Barriers

Participants described a variety of barriers to their ability to access resources. The most frequently mentioned barrier was resource format not aligning with participant preferences. Format preferences differed for individuals, with some expressing a preference for in-person support, and others having preferences for more flexible asynchronous resources. Time was also a commonly mentioned barrier, with participants noting the difficulty of juggling multiple demands on their time between work and parenting. Additional barriers mentioned by participants included not trusting the quality or relevance of resources for their specific needs, a lack of awareness about resources, a lack of overall interest in resource seeking, a lack of father-specific information, financial limitations, location (e.g., living far away from in-person resources), and not having access to childcare.

Needed

Reputable information. When asked about what was missing and what they wanted in resources, participants emphasized the importance of being able to find information that is "reputable," nonjudgmental, flexible to individual needs rather than "absolute," and "vetted" by experts. They described needing a resource that could help them sift through the contradictory

information and advice they have received. Several participants also shared that there were a lot of minor details about infant behavior, caregiving, and partner support they wish they had known more about. They mentioned needing access to informational resources that could help them answer their questions.

In-person and hands-on. Many participants reported wanting in-person resources (noting their absence during COVID) that could help them develop hands-on skills and allow them to ask questions of healthcare professionals. In-home helpers and regular check-ins after baby's birth were also mentioned.

Personally relevant. One participant described feeling distrustful of resources because they might not be relevant to his identities.

> I feel like this, with my identity, if you can't speak from the multiple intersectionalities that I come with, and we say all the time that every child is different. And I might need to raise my child different than how you raise your child. So you know, I could take tips, but I also don't trust a lot of people.

Personal relationships with people who could understand individual and cultural differences were identified as important for building trust for several fathers.

"Dad-specific." Several participants reported wanting resources that were specific to their experiences as dads. This included wanting support around their personal development as fathers, such as "how to be the person you want to be." They also reported wanting support "mentally and emotionally" through the ups and downs of fathering.

Group support. Many participants said they enjoyed the focus group itself and reported interest in being able to access a resource that brought dads together. Participants had different ideas about what such a group could look like, including an online forum, a guided support group, an informal community meet-up, or as part of other activities dads might enjoy doing together. Participants expressed preferences for having a mentor or group moderator who could

keep conversation flowing and have focused topics. One participant said anonymity was helpful for him to open up. Others expressed a preference for building supportive connections over time and having other dads or couples they could check in with repeatedly.

Despite not being the goal of the focus group, several examples of real-time support occurred during the focus groups themselves. Participants occasionally gave each other advice, experienced dads offered reassurance to newer dads, and participants reported having learned things from others in their group. Such examples indicate that bringing fathers together in a supportive environment may spontaneously foster valuable peer relationships.

Impact of the Response to the COVID-19 Pandemic

Results of the COVID-specific coding produced three additional themes related to participants' concerns and experiences of having a baby during the COVID-19 pandemic. Worries about the impact of health protocols and the possibility of their partners and babies getting sick were common. The response to COVID-19 was not all negative for participants, however. Postpartum fathers who had been able to work from home due to the pandemic reported that being home more had been very helpful for their adjustment.

A Cloudy Future

Prenatal fathers expressed more worry about the impact of pandemic health protocols on their ability to prepare for fatherhood. Participants frequently described concerns about not being able to attend obstetric appointments and having reduced access to doctors and nurses. Uncertainty about how protocols might change, including what health protocols in the birth unit at the hospital might look like, increased stress for some fathers. "I haven't been able to go and take any in-person, you know, classes or sessions or anything. I'm doing a lot of looking around for information on what to do and how to do it on my own."

Will They be Okay?

Both prenatal and postpartum fathers expressed worry about the possibility of their partners or infants becoming infected with SARS-COV-2. At the time, information about the possible effect on pregnant women and infants was limited. Participants also described worrying about how isolation would affect the development of their children, from lack of exposure to typical viruses to lack of time spent in the presence of family and friends. “There's just not a lot of good science out there about how the coronavirus affects pregnant people and babies and what that's like and what it's gonna be like in December and January. Can people see the baby?”

Silver Linings

Fathers did not universally report the pandemic as having a negative impact on them, though. Several postpartum fathers reported that COVID lockdowns and working from home had allowed them to be home more with their infants and that it had helped them adjust to fatherhood. These fathers said that being home more when their infants were small was helpful for them to connect with their babies and reduced role conflict between work and family.

> I … got put on permanent telework since then for COVID … I've been home more for the first year of her life than I was combined for the first year of my first two. And for once, I had a baby whose first word was “Dad” instead of “Hi.” That's a huge difference in terms of how much you've been around in order to make that happen.

Discussion

The prenatal and postpartum fathers we interviewed indicated they were transitioning into new roles as parents or becoming parents again to a new baby. Participants differed in the fathering roles they emphasized but, overall, they described the fathering role as being multifaceted and changing over time. Participants emphasized the salience of caregiving, supporting their partner, and coparenting during infancy, then taking on more of a mentoring role as children aged. Participants also defined fathers as being present and supportive, protecting

their children, providing financial resources, and having a responsibility to raise a productive member of society. Contrary to historical representations of fatherhood from the mid-20th century (Lamb, 2000), many participants in our sample did not overtly identify the provider role as central to fatherhood; however, they more commonly indicated worrying about providing financially during later discussion about challenges and worries. This suggests that the provider role is one that fathers may implicitly feel responsible for, but which they might not actively define as central to their parenting role.

The demands of engaging in multiple roles may be particularly stressful for fathers, with time demands of different roles potentially causing a conflict in priorities. Fathers who highly value both breadwinning and involvement with their children have reported lower quality of life than fathers with less role conflict (Whelan & Lally, 2002). This is consistent with prior qualitative research in which fathers expressed having difficulty living up to the role expectations they hold for themselves (McLaughlin & Muldoon, 2014). Our results support this, with role adjustment being the most frequently cited stressor that participants experienced.

A lack of knowledge about what to expect during this role transition was a major contributing stressor for fathers. Participants described having to figure things out as they went through the transition and having a lack of preparation for the experience of new parenthood. Figuring things out was sometimes made difficult by negative social support or conflicting advice. Participants also described initially having difficulty adapting to lifestyle and relationship changes and the physical strain of caring for an infant, although this was acknowledged to be a temporary problem. Additional stressors fathers mentioned included worrying about the well-being of their children and partners; the pragmatics of childcare, family leave and benefits; and

navigating changing family relationships. Minority fathers reported additional stress related to parenting their children in an atmosphere of societal bias and injustice.

Although worries were many, fathers in our sample looked to the future with excitement. Participants had positive feelings about their changing role, with many describing anticipation of the joys of fatherhood. Participants also commonly described feeling excited about interacting with their infants and seeing their children develop and grow. Some participants also mentioned enjoying going through the experience of becoming a parent alongside their partners, friends, and family members, having a sense of community and camaraderie through the process.

Resource Use

Participants described relying on a mix of formal and informal (social) resources. Those who were deemed to have specific research-based knowledge, such as educators and healthcare professionals, were more trusted than internet resources, although many participants described having difficulty accessing professional resources due to COVID-19 health protocols or lack of inclusion for fathers. Valuing educational and healthcare supports is consistent with prior qualitative research with perinatal fathers (Carlson et al., 2014). It is important for perinatal healthcare professionals to include fathers in prenatal and pediatric care appointments to build support for father involvement and adjustment. Fathers who perceive that prenatal medical professionals expect them to be involved are more likely to express intentions to be involved in the role (Albuja et al., 2019), which suggests that healthcare providers have significant influence on fathers. Our results suggest a need for more perinatal healthcare providers to be proactive in including fathers throughout the process.

Some participants relied on books and other reading or audio materials. Perceived value for these types of resources was mixed. Prenatal fathers in the sample were more likely to list

engaging with informational resources, suggesting the prenatal period is a time of anticipatory resource-gathering to prepare for the transition. Postpartum fathers reported being less likely to read another book, expressing a preference for informal social support after having a baby.

Social support was important to many of the fathers. Several participants described looking to their partners for resources, ideas, skills, and community connections. This is consistent with prior research showing that maternal support for fathering can be important in father engagement (Schoppe-Sullivan et al., 2008) and that fathers may look to mothers to learn caregiving skills (Kowlessar et al., 2015). Postpartum fathers also described relying more heavily on supportive relationships (i.e., friends and family) and good role models of fathers to help guide their own parenting rather than engaging with informational resources. Participants who identified as a race other than White placed a high value on family support, consistent with previous findings on parent social networks (MacPhee et al., 1996).

Participants overwhelmingly used family as an important resource for instrumental support, goods (e.g., hand-me-downs), advice, hands-on experience (such as with nieces and nephews), and examples of parenting. Some participants described family advice giving as intrusive or unhelpful. Fathers reported being selective about who they looked to for advice, wanting to get advice from people they trusted who could understand their identities and needs. Some participants also noted the value of the examples set by others to determine how they would like to parent similarly or differently, suggesting that even an example of unsatisfactory parenting can be valuable in helping new fathers choose a different direction for themselves.

Barriers

Fathers described having difficulty engaging with formal resources due to limited time or financial ability. Participants also cited limiting factors of having a lack of awareness of resource

availability as well as a lack of accessibility due to health protocols. Format preferences varied, with most participants preferring in-person resources. Some fathers also reported having little interest in formal resources partly due to a lack of inclusive and culturally relevant resources. These fathers strongly preferred trusted social support resources that were more nuanced and relevant to their lived experience.

COVID Considerations

Given that these focus groups convened relatively early in the pandemic, many of the participants' responses were understandably influenced by their experiences of COVID caution and health protocols. At the time, little information was yet available about how COVID might affect pregnant mothers and infants, which exacerbated many participants' concerns about the well-being of their partners and babies. Participants also reported worrying about the impact of isolation protocols on their child's development and the difficulty of connecting with extended family. Expectant fathers in particular reported that inconsistent and uncertain health protocols caused stress as they prepared for birth, with some fathers being unable to attend prenatal appointments or access classes and some worrying about how hospital policies would affect the birth experience.

Many postpartum fathers, on the other hand, listed COVID as something that was *beneficial* for their adjustment to fatherhood. These fathers said that lockdown protocols allowed them to be home for much longer after their babies were born than they otherwise would have been, and that the ability to be present at home had helped them adjust to the role and fostered a closer relationship with their infants. Such positive appraisal of the impact of being home strengthens the argument for extended family leave to be more widely available to fathers (Saxbe et al., 2018). Longer leave times are positively associated with trajectories of increased father

engagement and responsibility (Knoester et al., 2019). Our findings suggest that COVID protocols may have increased father awareness of the personal benefits of family leave. Whether this increases public support for longer leave times over the long-term remains to be seen.

Implications for Practice

Participant views expressed in our sample make clear that no one perinatal support option is likely to be best for all fathers. As participant preferences vary for type of support and format of information, having a variety of accessible support options and formats available may be best for meeting the needs and preferences of various fathers. Even so, there were a few consistently identified needs and desires for support.

Participants in our sample described a need for evidence-based reputable resources that could help them sort through contradictory advice. They also requested resources that were more specific to their experience as fathers. Reliable access to knowledgeable healthcare professionals was important to many fathers in the group, and it should be noted that it would be helpful for healthcare professionals to be sure to include and communicate with fathers in addition to mothers.

Additionally, encouraging and harnessing social support opportunities and wider social networks may be particularly valuable for fathers. Participants expressed a preference for support from people they knew as well as peers. Group support may be a particularly valuable intervention option. Several participants indicated they enjoyed the focus group itself and having the opportunity to hear about and learn from the experiences of other fathers who were going through the same thing. It should be noted the focus group format likely encouraged this perspective. It may be that fathers who haven't had the opportunity to talk with peers about their experiences would not report wanting group support as strongly as our sample did. Even so, the

strong recommendation from our participants for guided group support suggests that given the opportunity, perinatal fathers may find peer support beneficial.

Limitations

The qualitative nature of the present study and nonrepresentative sample characteristics allows for greater depth of exploration of fathers' experiences but prevents generalizability. Although it raises some important possibilities for supporting perinatal fathers, follow-up quantitative studies should be conducted to confirm findings with a larger sample. Additionally, few participants in this sample identified as a racial identity other than White or had incomes below 300% of the federal poverty line. The qualitative format allows for greater understanding of individual experiences, including minority experiences; however, some aspects of the experiences of minority fathers may have been unspoken or de-emphasized in the group setting. Conducting similar studies with selectively sampled minority groups would deepen understanding of their potential needs.

Conclusion

We explored the needs and resource use of prenatal and postpartum fathers through in-depth qualitative focus groups interviews. Our results indicate that perinatal fathers are juggling multiple role expectations. They described feeling a mix of excitement and worry about how life was changing for them. Participants reported using a mix of formal and informal resources, with variation in preference. Generally, participants expressed a preference for interacting with trusted healthcare professionals and receiving support and advice from friends, family, and their partners. Fathers described wanting more father-specific resources that were trustworthy, culturally competent, and vetted by professionals and desired connecting with other fathers.

These groups were held in the fall of 2020, and responses were noticeably affected by the COVID-19 pandemic and related health protocols. Fathers reflected on what they felt they missed out on because of COVID-related health protocols (such as in-person classes), and what they felt they had gained by having children during the pandemic (extended time at home with their infants). Many fathers expressed a desire for in-person resources, and several postpartum fathers listed extended time at home due to the pandemic as being helpful for their adjustment to fatherhood. The present study provides clues to the support needs and possible intervention targets for perinatal fathers.

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CHAPTER 3: SOCIAL SUPPORT AND SELF-EFFICACY PREDICT WELL-BEING IN POSTPARTUM FATHERS[2]

Summary

Identifying ways to effectively support fathers at the transition to parenthood is an important issue. Fathers are at risk for reduced well-being around the time they have a baby and have expressed a need for support from important people in their lives. The present study seeks to build on existing qualitative evidence that fathers want more social support to quantitatively investigate social support as a predictor of father engagement, well-being, and self-efficacy.

A cross-sectional online survey was given to 270 postpartum fathers asking them about their perceptions of social support, engagement in parenting of their infants, work-home role conflict, work-home role balance satisfaction, parenting stress, depression, anxiety, and self-efficacy. Path analysis was used to identify associations between variables.

Social support was not significantly predictive of or even correlated with self-efficacy, so the final model was changed to explore both social support and self-efficacy as predictors of the other variables. Both higher social support and higher self-efficacy significantly predicted increased parenting engagement and reduced parenting stress, depression, and anxiety. Higher self-efficacy predicted reduced work-home role conflict, while higher social support predicted increased work-home role balance satisfaction. Both interpersonal and intrapersonal factors support postpartum father adjustment and are potentially valuable targets for father-focused intervention.

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Introduction

As attention to the importance of paternal involvement in child rearing has grown, so has attention to paternal well-being and its effect on family life. Involved fathers support child development in a multitude of ways, including their social, cognitive, and emotional growth (Sarkadi et al., 2008). Fathers report the roles of caregiver and mentor to their children are important to them (Rayburn et al., 2022), and fathers are increasingly involved in childcare from the earliest moments of family life (Bakermans-Kranenburg et al., 2019). Fathers may have difficulty adjusting after having a baby (Baldwin et al., 2018), however. They are likely to experience postpartum depression at rates similar to mothers (Cameron et al., 2016), and are also at risk for perinatal anxiety (Leach et al., 2016). Low postpartum paternal well-being is likely to have far-reaching consequences, predicting higher stress and more negative perceptions of the child (Skjothaug et al., 2018) as well as increasing maternal depressive symptoms (Paulson et al., 2016).

Multiple research teams have begun working to tackle the issue of how best to support healthy adjustment for prenatal and postpartum fathers. Researchers have proposed or explored interventions that are father-focused (Panter-Brick et al., 2014), discussion-based (e.g., Diemer, 1997), education-based (e.g., Bourget et al., 2017), or as part of routine medical visits (e.g., Walsh, 2020). As efforts to improve paternal support systems around the transition to fatherhood continue, identifying aspects of paternal support that promote well-being and engagement may help refine intervention components aimed at improving adjustment.

Background

In a number of qualitative studies, fathers have indicated a desire for increased support around the transition to fatherhood, including connecting with other fathers (Kowlessar et al.,

2015) and receiving father-focused information from perinatal educators and healthcare providers (Carlson et al, 2014). Postpartum fathers have also described feeling overlooked by existing mental health support systems (Hambidge et al., 2021). In a recent focus group needs assessment with prenatal and postpartum fathers, participants repeatedly emphasized the value of support from friends and family and identified a desire for connecting more with other fathers who are having the same experience (Rayburn et al., 2022). They also identified a need to be included by healthcare providers in routine prenatal and pediatric healthcare appointments.

The importance of social support in the perinatal transition is consistent with developmental theory. The bioecological model of development emphasizes the importance of repeating interactions in relational contexts for developmental change (Bronfenbrenner, 1977; Bronfenbrenner & Morris, 2006). Interactions with important others (e.g., spouse, friends, family, and community systems) are likely to provide guidance to men who are navigating the complexities of adjusting to fatherhood. A lack of needed support may increase the stress and mental health symptoms fathers experience as they adapt to life after having a child.

Quantitative evidence suggests that support from family and friends is associated with paternal well-being in the prenatal period (Durkin & Morse, 2001), but evidence for the value of social support in postpartum fathers is limited. A lack of support from family and friends has been associated with higher depressive symptoms in postpartum fathers (Bost et al., 2002), and Wang and colleagues (2021) found in a recent meta-analysis that low social support significantly predicts paternal depressive symptoms. Mothers also play a role in father support and can engage in gatekeeping behavior that encourages or discourages father involvement (Schoppe-Sullivan et al., 2008). Evidence from studies of maternal postpartum well-being suggests that social support

may also increase self-efficacy (Haslam et al., 2006) and decrease stress and anxiety symptoms (Racine et al., 2019) for mothers. It is not known whether similar associations exist for fathers.

Fathers of older children typically engage in less support-seeking behavior than mothers (Redmond et al., 2002), but it is not clear if this pattern holds in the immediate transition to fatherhood when fathers are trying to adapt to changing circumstances. Bost et al. (2002) found an increase in the frequency of contact between fathers and their support network following the birth of a child, but a decline in social network size. Their findings suggest that the transition may be accompanied by an early shift in availability of support. Even if perinatal fathers are interested in seeking support, the availability of support contacts may be limited in the immediate perinatal transition.

The Current Study

The current study builds on existing research regarding the importance fathers place on receiving social support during the transition to parenthood. We used quantitative measures to evaluate social support as a predictor of indicators of father well-being and parenting engagement in a cross-sectional sample of postpartum fathers. Specifically, we hypothesized that social support predicts increases in parenting engagement, self-efficacy, and work-home role balance satisfaction and that social support also predicts decreases in parenting stress, work-home role conflict, depressive symptoms, and anxiety symptoms. We further hypothesized that the predictive significance of these pathways holds after controlling for demographic variables. As researchers in the field seek to develop effective support programs for perinatal fathers, a greater understanding of the role of social support in postpartum father well-being may help to inform the focus or format of interventions.

Methods

This study was approved by the university institutional review board. Participants completed an online anonymous survey with the option to provide an email address to receive gift card compensation appropriate to the length of the survey.

Sampling and Participants

We recruited a cross-sectional convenience sample of postpartum fathers through social media (e.g., Reddit, Facebook). To be included, participants must have identified as fathers, been at least 18 years of age, had an infant less than 1 year old at the time of the study, and been fluent in English. Responses were screened for bots and multiple submissions using a combination of embedded Qualtrics identifiers (e.g., CAPTCHA) and standard bot-detection methods including attention check questions, text string responses, and time-stamp checks (Simone, 2019). Duplicate or likely bot responses were removed from the sample.

Participants in the final sample (N = 270*)* were primarily heterosexual (95.6%), cisgendered (84.8%), White (79.3%), not Hispanic (68.1%), and married (96.3%). Participants also identified as Black or African American (9.3%), mixed race (4.1%), Latino (3.7%), Native Hawaiian/Pacific Islander (1.9%), Asian (1.5%), Indigenous/Native American (1.5%), or another race (0.4%). Participant education ranged from less than high school (1.5%) to post-graduate education (0.7%) with a median education level of a 4-year degree. Annual household income ranged from less than $20,000 (0.7%) to greater than $85,000 (11.9%) with a median household income of $40,000 – $59,999. Participants ranged in age from 19 to 43 (M = 29.42; SD = 4.15) Most participants indicated being the biological parent of their infant (97.3%). Among all participants, 98.1% (n = 265) reported living in the same home with their baby, 27.8% (n = 75) reported also having older children, and 77% (n = 208) reported having had at least some prior

experience caring for an infant. 12.6% (n = 34) of respondents indicating being transgender. Of those respondents, 24 described their gender as male and 10 declined to describe their gender.

Measures

Collected demographic information included age, gender identity, sexual identity, income, education, race, residential status, relationship status, and the ages of all children. Measured constructs included perceived social support, parental engagement, self-efficacy, role satisfaction, role conflict, parenting stress, depression symptoms, and anxiety symptoms. We also asked participants whether they thought the COVID-19 pandemic had affected their parenting experience (*yes, no*) and used this as a covariate in the analyses.

Social support. The 12-item Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) scale assesses respondents' subjective perceptions of the adequacy of social support received from informal support sources. Subscales split support by significant other, family, and friends. Example items include "I get the emotional help and support I need from my family," and "I have friends with whom I can share my joy and sorrows." Items are scored on a seven-point Likert scale from 1 (*very strongly disagree*) to 7 (*very strongly agree*), with higher scores indicating higher perceptions of support. The measure has been validated with both women and men with subscales found to be valid as distinct measures of varying support sources (Zimet et al., 1988). We modified the original MSPSS to include four questions aimed at measuring formal support (e.g., support from professionals such as healthcare providers and educators). Example questions include "If I have a question, there is a professional I can ask" and "There is a professional or organization in the community I can go to for support." Reliabilities in our sample were very good (α = .93).

Parental engagement. The Father Engagement Scale (FES) for infants from 1 month to 1 year old (Dyer et al., 2018) is an 11-item scale assessing father involvement in caregiving activities. Respondents report on how often they have engaged in various activities over the past month, including items such as "How often have you praised your child?" and "How often have you put your child to sleep?" Five scaled response categories range from *Never* to *Every day or almost every day* and include middle options such as *3 or 4 days per month*. Higher scores indicate more engagement. The measure has demonstrated good convergent validity and good maximal reliability for the two factors – caregiving play (*MR* = .94) and cognitive stimulation (*MR* = .86; Dyer et al., 2018). The FES demonstrated good reliability in our sample (α = .90).

Self-efficacy. Consistent with the definition of self-efficacy as one's belief in their capacity to respond to a situation, mastery is an assessment of self-efficacy (Bandura, 1997), which we assessed with the Pearlin Mastery Scale (PM; Pearlin & Schooler, 1978). The 7-item scale measures perceptions of personal control over life events with items such as "I can do anything I really set my mind to" and "I often feel helpless in dealing with the problems of life." Items are rated on a six-point Likert scale from 1 (*strongly disagree*) to 6 (*strongly agree*), with higher scores indicating greater levels of mastery (Pearlin & Schooler, 1978). The scale has good construct validity (Marshall & Lang, 1990). Reliability in our sample was borderline adequate (α = .60).

Role satisfaction and conflict. A five-item role satisfaction measure developed by Valcour (2007) was used to determine satisfaction with the balance between work and family roles. Questions include "How satisfied are you with the way you divide your attention between work and home?" These items are rated from 1 (*very dissatisfied*) to 5 (*very satisfied*). Reliability for role balance satisfaction in our sample was adequate (α = .73).

Role conflict was measured using a work-family conflict measure developed by Gutek and colleagues (1991). Four items each assess two constructs, work interference with family and family interference with work, with items such as "My work takes up time that I'd like to spend with family/friends" and "I'm often too tired at work because of the things I have to do at home." Items are scored on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*), with higher scores indicating more conflict (Gutek et al., 1991). Our sample had good reliability (α = .85).

Parenting stress and depression. The 18-item Parental Stress Scale (ParentSS; Berry & Jones, 1995) is a measure of parent appraisals of positive and negative aspects of parenting. The scale includes items such as "I enjoy spending time with my child(ren)" and "The behavior of my child(ren) is often embarrassing or stressful to me." Items are scored from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating higher parental stress. The Parental Stress Scale has previously demonstrated good convergent validity and reliability (α = 0.83-0.84; Berry & Jones, 1995). Reliability in our sample was adequate (α = .72).

The 10-item Edinburgh Postnatal Depression Scale (EPDS) assesses symptoms of postpartum depression (Cox et al., 1987). Participants are asked to rate themselves on how they have been feeling over the past week with questions such as "I have looked forward with enjoyment to things" and "I have been so unhappy that I have been crying." Participants are asked to rank how often they have been feeling a certain way from 0 to 3, with higher scores indicating more depression symptoms (Cox et al., 1987) The EPDS has previously been validated for men (Matthey et al., 2001). Reliability in our sample was adequate (α = .77).

Anxiety symptoms. The 6-item Spielberger State Anxiety Scale – Short Form (SSAS-SF; Marteau & Bekker, 1992) is an abbreviated version of the State Scale of the State-Trait Anxiety Inventory (STAI; Spielberger et al., 1983). Respondents are asked to rate to what extent

they feel certain emotions, such as “I am calm” and “I am tense” on a 4-point Likert scale from 1 (*Not at all*) to 4 (*Very much so*). The short form scale is comparable to the 20-item scale in its ability to measure fluctuations in present-moment anxiety (Marteau & Bekker, 1992) and had adequate internal consistency in our sample ($\alpha = .75$).

Results

Data Preparation

We used IBM SPSS v. 28.0.1.1 to examine survey data for missingness and outliers. Responses with greater than 10% missingness were removed from the final analysis. No univariate outliers at three interquartile ranges above the mean were found. Little’s (1998) Missing Completely at Random test was conducted on missing data. The test was significant, indicating data were not missing completely at random. Data were inspected and five cases were found to be completely missing all items on a scale (the missing scales varied between cases). Examining the individual items for each scale, it was determined that missingness was a very small percentage of items. Missing data in the primary path variables (excluding demographic covariates) was imputed using expectation maximization at the item level before reverse coding and calculating scale-level totals. In the five cases where all items of a scale were missing, those scale items were left as missing. We then calculated mahalanobis distances of the primary path variables at the scale level for each case to identify probable multivariate outliers. Sixteen responses were identified as likely being multivariate outliers at the $p < .001$ level and were removed from the sample. The remaining data met standard linear regression assumptions.

Analysis

We conducted a multivariate path analysis using Mplus v.8.7 (Muthén & Muthén, 1998-2021) to test the study hypothesis that paternal social support significantly predicts parenting

engagement, self-efficacy, role conflict, role satisfaction, parenting stress, depressive symptoms, and anxiety symptoms. Standardized regression coefficients (β) indicate effect size, with .1 indicating a small effect, .3 a medium effect, and .5 a large effect. Given that the resulting model was just identified, model fit criteria were not available.

Model 1 Results

In our initial test, social support significantly predicted father engagement (b = .21, SE = .05, p < .001) such that a one-unit increase in social support was associated with a .43 unit increase in father engagement, a medium-large effect (β = .43). Social support also significantly predicted work-life role satisfaction (b = .13, SE = .01, p < .001) such that a one-unit increase in social support was associated with a .12 unit increase in role satisfaction, a large effect (β = .65). Social support was also a significant predictor of parenting stress (b = −.10, .03, p = .001), depressive symptoms (b = −.11, SE = .02, p < .001), and anxiety symptoms (b = −.10, SE = .01, p < .001) with effect sizes ranging from small to moderately large respectively (parenting stress β = −.20; depressive symptoms β = −.42; anxiety β = −.46). A one-unit increase in social support was associated with a .1 unit decrease each in parenting stress, depression, and anxiety.

Social support was not a significant predictor of self-efficacy or role conflict. Due to the very low correlation between social support and self-efficacy in our initial model and the high correlations between self-efficacy and the other variables (see Table 4 for correlations), we decided to make a post hoc adjustment to the model to include self-efficacy as a second predictor. This is consistent with existing literature linking self-efficacy to indicators of well-being in postpartum fathers (de Montigny et al., 2006).

Model 2 Results

Including both social support and self-efficacy as predictors of parenting engagement, work-home role satisfaction, role conflict, parenting stress, depressive symptoms, and anxiety symptoms yielded some variation in results. We first tested this model without covariates, and then computed it again with demographic covariates included. With self-efficacy in the model, social support became a significant predictor of role conflict; however, this effect became nonnsignificant after the addition of covariates. Due to missingness in some of the demographic variables, the sample size with covariates was reduced to $N = 251$. Standardized and unstandardized regression coefficients for the final model with and without covariates are presented in Table 5. The final path model is presented in Figure 3.

Social support. Social support significantly predicted father engagement with a medium effect, such that a one-unit increase in social support was associated with a .19 unit increase in engagement. Social support also significantly predicted work-home role balance satisfaction, depression, and anxiety with a large effect size and predicted parenting stress with a medium effect size. A one-unit increase in social support was associated with a .12 unit increase in role balance satisfaction, a .13 unit decrease in parenting stress, a .14 unit decrease in depression, and a .11 unit decrease in anxiety. Social support did not significantly predict role conflict in any of the models.

Self-efficacy. Self-efficacy significantly predicted parenting engagement, work-home role conflict, parenting stress, depressive symptoms, and anxiety symptoms with effect sizes ranging from small (parenting engagement) to moderate (role conflict, depression, and anxiety)

Tables

Table 4

Variable Correlations.

	Social Sup.	Self-Eff.	Par. Eng.	Role Sat.	Role Conf.	Par. Stress	Depress.	Anxiety
Social Support	1.00							
Self-Efficacy	−.08	1.00						
Par. Engagement	.43**	.17**	1.00					
Role Satisfaction	.65**	−.02	.32**	1.00				
Role Conflict	.21**	−.40**	.03	.27**	1.00			
Parenting Stress	−.20**	−.49**	−.35**	−.20**	.28**	1.00		
Depression	−.42**	−.30**	−.21**	−.40**	.24**	.49**	1.00	
Anxiety	−.46**	−.37**	−.25	−.44**	.18**	.47**	.67**	1.00

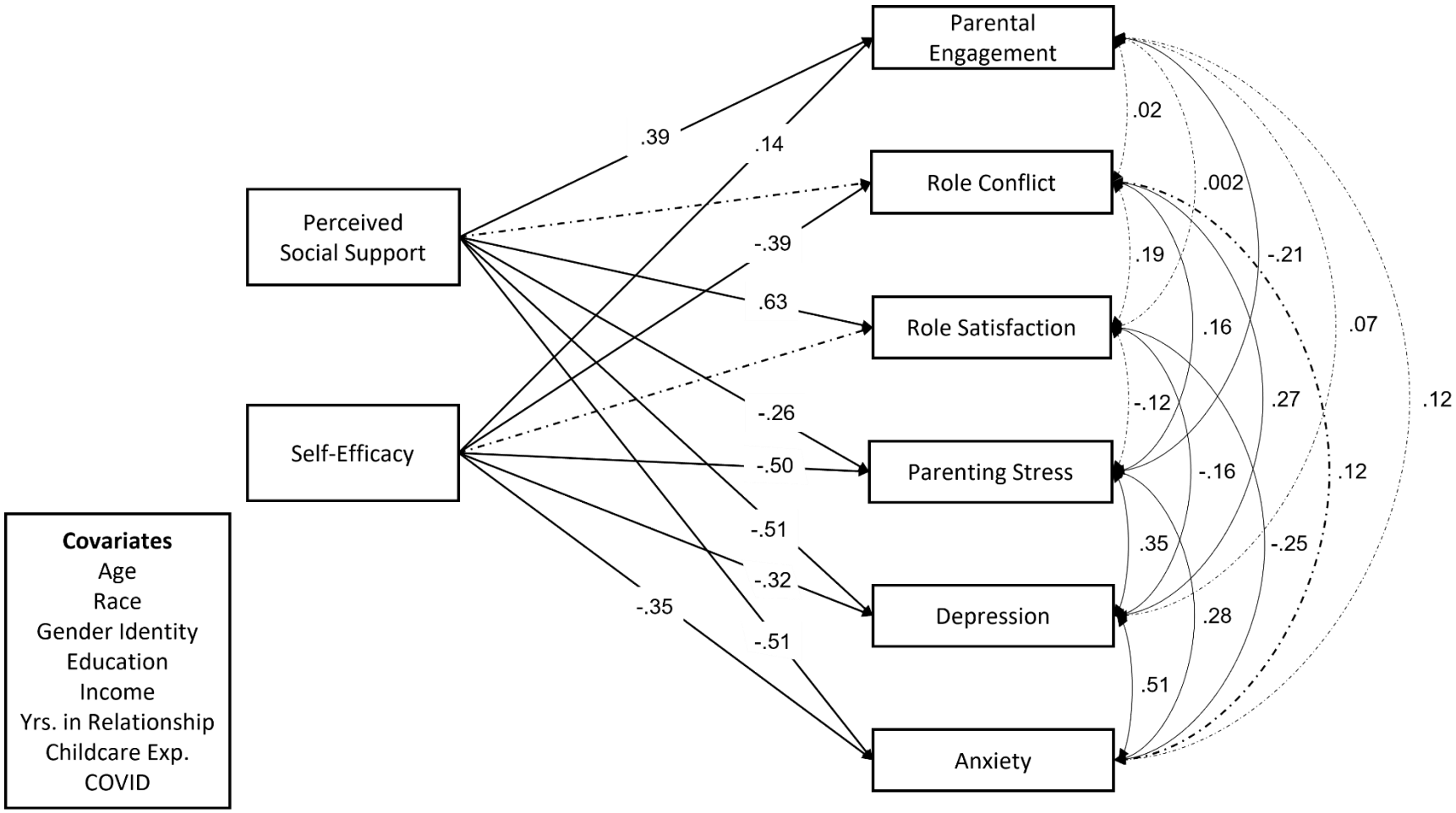
Note. Significance levels are indicated as ** $p < .01$,

Table 5

Descriptive Statistics and Regression Coefficients for Model 2 Path Variables with and without Covariates

		Without Covariates				With Covariates			
	M (SD)	***B***	***SE***	**β**	***p***	***B***	***SE***	**β**	***p***
Social Support	81.36 (16.37)								
Par. Engagement	44.99 (7.99)	.22	.03	.45	**< .001**	.19	.03	.39	**< .001**
Role Satisfaction	18.14 (3.21)	.13	.01	.65	**< .001**	.12	.01	.63	**< .001**
Role Conflict	32.13 (6.97)	.07	.02	.17	**.002**	.03	.03	.08	.205
Parenting Stress	50.35 (7.98)	−.13	.02	−.24	**<.001**	−.13	.03	−.26	**<.001**
Depression	10.60 (4.38)	−.12	.01	−.45	**< .001**	−.14	.02	−.51	**< .001**
Anxiety	13.08 (3.53)	−.11	.01	−.49	**< .001**	−.11	.01	−.51	**< .001**
Self-Efficacy	24.67 (4.89)								
Par. Engagement		.34	.09	.21	**< .001**	.23	.09	.14	**.008**
Role Satisfaction		.02	.03	.03	.491	.01	.03	.02	.672
Role Conflict		−.54	.08	−.38	**< .001**	−.55	.08	−.39	**< .001**
Parenting Stress		−.87	.08	−.54	**< .001**	−.82	.09	−.50	**< .001**
Depression		−.30	.05	−.33	**< .001**	−.28	.05	−.32	**< .001**
Anxiety		−.30	.04	−.40	**< .001**	−.26	.04	−.35	**< .001**

Note. Without covariates $N = 269$, with covariates $N = 251$ due to missingness. Covariates control for age, transgender identity, race, education, household income, years in relationship, and previous experience with childcare. Standardized β-values indicate effect size, with .1 = small, .3 = medium, and .5 = large effects.



Note. Solid lines indicate path is significant at $p < .05$.

Figure 3. *Path Model with Standardized Regression Coefficients and Covariances of Postpartum Paternal Perceived Social Support and Self-Efficacy as Predictors of Engagement and Well-being.*

to large (parenting stress). A one-unit increase in self-efficacy was associated with a .23 unit increase in engagement, a .55 unit decrease in role conflict, a .82 unit decrease in parenting stress, a .28 unit decrease in depressive symptoms, and a .26 unit decrease in anxiety symptoms. Self-efficacy did not significantly predict role satisfaction in any of the models. The combined predictors in the final model explained 36.3% of the variance in parenting engagement, 29.3% of the variance in work-home role conflict, 51.7% of the variance in work-home role balance satisfaction, 38.8% of the variance in parenting stress, 34.6% of the variance in depressive symptoms, and 46.6% of the variance in anxiety symptoms.

Notable covariates. A few covariates are notable for their significance as predictors in the model. Their values are presented here to encourage awareness of the potential importance of these covariates in perinatal father research. Paternal age, gender identity, race, education, household income, years in relationship, and prior parenting experience were all significant predictors of various dependent variables, presented here.

Paternal age. Age significantly predicted parenting engagement (b = .54, SE = .12, p < .001), work-home role conflict (b = .23, SE = .11, p = .036), and work-home role balance satisfaction (b = .11, SE = .04, p = .009) with effect sizes ranging from small (role conflict β = .14; role balance satisfaction β = .16) to moderately small (parenting engagement β = .27). A 1-year increase in age was associated with a .54 unit increase in parenting engagement, a .23 unit increase in role conflict, and a .11 unit increase in role balance satisfaction.

Gender identity. Identifying as transgender significantly predicted parenting engagement (b = 2.68, SE = 1.24, p = .030) with a small effect (β = .11). Identifying as transgender was associated with a 2.68 unit increase in parenting engagement.

Race. Race was a significant predictor of depression ($b = -1.57$, $SE = .61$, $p = .01$) and anxiety ($b = -1.58$, $SE = .44$, $p < .001$), both small effects (depression $\beta = -.15$, anxiety $\beta = -.19$). Identifying as a race other than White was associated with a 1.58 unit increase in anxiety and a 1.57 unit increase in depression.

Socioeconomic Indicators. Socioeconomic status (SES) indicators of education level and household income were important to work-home role variables and mental health. Education level significantly predicted work-home role balance satisfaction ($b = .44$, $SE = .19$, $p = .02$), such that a one-level increase in education was associated with a .44 unit increase in work-home role balance satisfaction with a small effect ($\beta = .12$). Household income significantly predicted both work-home role conflict ($b = 1.17$, $SE = .50$, $p = .02$) and role balance satisfaction ($b = -.62$, $SE = .19$, $p = .001$), such that a one-level increase in income level was associated with a 1.17 unit increase in role conflict and a .62 unit decrease in role balance satisfaction. These were both small to medium effects (role conflict $\beta = .17$; role balance satisfaction $\beta = -.22$).

For mental health, education level predicted anxiety ($b = -.62$, $SE = .22$, $p = .005$), such that a one-unit increase in education level predicted a .62 unit decrease in anxiety. Income level predicted both depression ($b = .78$, $SE = .29$, $p = .008$) and anxiety ($b = .48$, $SE = .21$, $p = .02$), such that a one-unit increase in income level predicted a .78 unit increase in depression and a .48 unit increase in anxiety. These were all small effects (education-anxiety $\beta = -.15$; income-depression $\beta = .16$; income-anxiety $\beta = .13$). Income level had a ceiling effect in this data set, so these findings should be interpreted with caution.

Years in Relationship. The number of years in the partner relationship significantly predicted parenting stress ($b = -.58$, $SE = .17$, $p = .001$) with a small effect ($\beta = -.19$). Relationship length also significantly predicted role balance satisfaction ($b = .13$, $SE = .06$, $p =$

.04) with a small effect (β = −.11). A 1-year increase in the length of the partnership was associated with a .58 unit decrease in parenting stress and a .13 unit decrease in role balance satisfaction.

Prior childcare experience. Prior experience providing care for an infant was a significant predictor of anxiety symptoms (b = .31, SE = .13, p = .02) with a small effect (β = .11). A one-unit increase in rated history of prior experience caring for a child was associated with a .31 unit increase in anxiety symptoms.

***COVID-19 Pandemic Effects*.** Most (51.5%) of participants indicated that the COVID-19 pandemic had changed their experience of being the parent of an infant from what it otherwise would have been. Perceived parenting changes due to COVID were significantly associated with reduced parenting engagement (b = −3.89, SE = .85, p < .001), increasing parenting stress (b = 1.68, SE = .84, p = .04), increased role conflict (b = 2.63, SE = .78, p = .001), increased role balance satisfaction (b = .73, SE = .30, p = .015), and increased anxiety (b = .72, SE = .35, p = .04). These were all small to moderately small effects (engagement β = −.24; role conflict β = .19; role balance satisfaction β = .11; stress β = .11; anxiety β = .10).

Discussion

Based on existing qualitative evidence indicating perinatal fathers place a high importance on social support and informed by Bronfenbrenner's bioecological model emphasizing the importance of relational processes for development, we examined postpartum fathers' perceived social support as a predictor of various indicators of their well-being and adjustment to the role. In our initial model, social support significantly predicted father-reported parenting engagement, work-home role balance satisfaction, depressive symptoms, and anxiety symptoms such that higher social support was associated with increased engagement and

satisfaction and decreased depression and anxiety. Contrary to our initial hypothesis, social support did not significantly predict work-home role conflict or self-efficacy. Given the lack of correlation between social support and self-efficacy in our data and known associations between self-efficacy and indicators of well-being, we made a post-hoc adjustment to the model to add self-efficacy as a second predictor variable alongside social support.

Social Support and Self-Efficacy: Contextual vs. Personal Factors

Our finding that social support was not predictive of or even correlated with self-efficacy is counter to prior evidence that social support is associated with parenting efficacy in perinatal fathers (Leerkes & Burney, 2007). The measures used in this study and the Leerkes and Burney (2007) study were different, and there may be a difference between general self-efficacy and efficacy specific to parenting. It may also be that general support is not as helpful for perceptions of self-efficacy as is parenting-specific support (as was measured in Leerkes & Barney, 2007).

The lack of correlation between perceived social support and self-efficacy in our study suggests a difference between how internal (self-efficacy) and relational (social support) processes relate to perinatal father well-being and engagement. This is consistent with Bronfenbrenner's (1977) model differentiating person-factors and contextual factors but leaves open the question of whether social support and paternal self-efficacy affect each other during this developmental period. Although relational processes seem likely to influence internal processes during development (and vice versa), there may be more salient relational processes for self-efficacy development in this period than perceived social support, such as support quality, prior parenting experience (Salonen et al., 2009), infant interaction (Leerkes & Barney), and couple relationship and co-parenting behavior (Merrifield & Gamble, 2013).

Associations with Father Engagement and Mental Health

Despite not being associated with each other, perceived social support and self-efficacy overlapped as predictors for several variables. Both variables significantly predicted reported father engagement, parenting stress, depression, and anxiety. It is notable that these outcomes also reflect a combination of interpersonal (engagement) and intrapersonal (mental health) processes. Fathers' perceptions of their social environment and of themselves were significant contributors to their reports of parenting engagement with their infants and their own mental health. Our findings support existing evidence that higher self-efficacy is associated with higher father involvement (Trahan, 2018) and lower depressive symptoms (de Montigny et al., 2006), and that social support is related to lower depressive and anxiety symptoms (Boyce et al., 2007). Perceived social support has also been identified as an important contributor to father adjustment at the transition to parenthood (Bost et al., 2002).

Several covariates were also related to parenting engagement. Transgender fathers reported higher engagement. The differences between paternal transgender and cisgender engagement may have something to do with childhood gender role socialization such that a parent who was assigned female at birth may have received more caregiving socialization earlier in life than a parent who was assigned male at birth. Gendered parenting practices tend to restrict types of toys based on gender (MacPhee & Prendergast, 2019; Morawka, 2020). Fathers who were assigned female at birth may have experienced more socialization to play in a parenting role than fathers who were assigned male at birth. The literature on parenting experiences and practices of transgender parents remains sparse, however, and more work remains to understand similarities and differences in the experiences of cisgender and transgender parents.

Older fathers were also more likely to report increased parenting engagement, perhaps due to relative differences in career stability and/or flexibility later in the life course; however, fathers who had been in a relationship longer had *less* parenting engagement and decreased parenting stress. A longer relationship predicted decreased parenting, stress, however.

Despite an expected high correlation between depression and anxiety, covariates affected these two variables in slightly different ways. Identifying as a race other than White was associated with an increase in both depression and anxiety, while more education was associated with a decrease in anxiety. These are consistent with mental health outcomes of marginalization and resource availability. Fathers who experience racism are more likely to experience mental health difficulties, including depression and anxiety (Recto & Champion, 2020). Fathers with low education and low income are also at higher risk for depression symptoms in the postpartum period (Bergström, 2013).

Associations with Work-Home Role Conflict and Balance Satisfaction

Our hypothesis that social support significantly predicts work-home role conflict and role balance satisfaction was partially supported. Social support was not a significant predictor of work-home role conflict; however, it did significantly predict work-home role balance satisfaction in a positive direction. Once self-efficacy was added to the model, it behaved differently from social support in this area. Self-efficacy significantly predicted work-home role conflict in a negative direction but did not significantly predict work-home role balance satisfaction.

The differences between interpersonal and intrapersonal processes in predicting these two dimensions of perceptions of work-home roles are curious. Co-worker support has been found to be an important factor in father parenting involvement (Barcala-Delgado & Perry-Jenkins, 2022).

Previously, Zhang et al. (2022) found that work-related social support improved parents' perceptions of their ability to facilitate interfacing between work and family but did not reduce role conflict, and that work-family facilitation improved job satisfaction. Although social support does not appear to change role conflict, it may provide a potential opportunity for adjusting to the work-home conflict that exists by improving fathers' perceptions of their ability to juggle multiple roles. Our measure of social support assessed primarily nonwork-related dimensions of support (although it is possible that coworkers could be friends), suggesting that work-home role balance may be supported by relationships both within (as found by Zhang et al., 2022) and outside of work contexts.

On the other hand, fathers' general self-efficacy was a contributor to reduced perceptions of role conflict. Self-efficacy has been identified as an important antecedent of job crafting (Kanten, 2014), which may support fathers in pursuing more flexible work conditions to better balance family responsibilities. This may also work in the opposite direction, with self-efficacy supporting fathers' ability to more clearly define family responsibilities to increase their ability to focus on work. Gender socialization likely plays an important role in how fathers navigate work-family conflict compared to mothers. In the past, young adult working fathers have anticipated less role conflict and higher efficacy to manage role conflict than a similar sample of mothers (Cinamon, 2006). As expectations for fathers continue to shift toward increased time in caregiving, role conflict for fathers may be likely to increase. The ways fathers negotiate changing work and family responsibilities in the perinatal period needs further study to better understand the possible effects of internal and relational processes.

Several demographic covariates were related to work-home role conflict and balance satisfaction. Older participant age and higher income were both associated with increased role

conflict and reduced role balance, as might be expected later in one's career. SES indicators of income and education were also associated with reduced role balance satisfaction. A higher number of years in relationship with their coparent, however, was associated with higher role balance satisfaction, suggesting a possible protective effect of a stable partner relationship on paternal role conflict. This association may be better explained by marital quality (Matthews et al., 1996), however, which we did not measure in this study.

Possible Effects of COVID

All outcome variables except depression were significantly associated with fathers having said the COVID pandemic had affected their experience of parenting their infants. Fathers who reported COVID having an effect on their experience reported less engagement, increased parenting stress and anxiety, and increased role conflict. On the other hand, they also reported increased role balance satisfaction suggesting pandemic protocols and lifestyle changes may have supported the work-family balancing act. Postpartum fathers have previously indicated being home with their infants more during the pandemic helped them to adjust to parenthood (Rayburn et al., 2022). We did not ask about the nature or extent of the COVID changes participants experienced, but earlier focus group qualitative findings (Rayburn et al., 2022) have indicated postpartum fathers who worked from home because of the pandemic felt that being around their infants more had helped them adjust to fatherhood.

Implications for Practice

Fathers of older children have been found to engage in less support-seeking behavior than mothers (Redmond et al., 2002), but it is not clear if this pattern holds in the immediate transition to fatherhood when fathers are trying to adapt to changing circumstances. Bost et al. (2002) found an increase in the frequency of contact between fathers and their support network

following the birth of a child, but an overall decrease in social network size early in the transition. Their findings suggest that the transition may be accompanied by an early shift in availability of support and a tendency to retain contacts who can provide meaningful support. Even if perinatal fathers are interested in seeking support, the availability of support contacts may be limited in the immediate perinatal transition. Furthermore, quality of social support is more important to well-being than quantity of support (e.g., Kneavel, 2021). Identifying ways to increase potential formal or informal support contacts who can provide quality support around the transition to parenthood may promote adaptive father adjustment and engagement in the postpartum period.

Additionally, this study lends support to the importance of increasing paternal self-efficacy around the transition to parenthood. Masculine norms that restrict caregiving behavior for boys underprepare them for the transition to fatherhood and may reduce their sense of self-efficacy in early parenthood. Adherence to hegemonic masculine norms that minimize involvement in caregiving have been found to reduce the quality of caregiving behavior in fathers (Petts et al., 2018). Participation in early parenting interventions has been found to increase paternal self-efficacy (Amin et al., 2018), suggesting that increasing caregiving knowledge in new fathers may help to address gaps in gender socialization and improve self-efficacy over the transition to parenthood.

Strengths and Limitations

A strength of the current study is the addition of quantitative support to existing qualitative evidence suggesting social support is important to postpartum fathers. Our findings suggest that, indeed, paternal perinatal social support is important. Study findings also illustrate that both intrapersonal and interpersonal processes are important to postpartum father well-being

and engagement, but not in precisely the same ways. Our findings point to directions for future research to tease apart how these processes work together and differently in paternal postpartum development.

This study also controlled for several important demographic variables, including transgender identity. Our sample included 13% transgender fathers, higher than the average population, which allowed for some additional understanding of the experiences of transgender fathers. Controlling for this variable allowed for the overall sample to be evaluated for fathers while also providing clues for possible directions into transgender postpartum fathering research.

Although this study examined social support, it measured father perceptions of support. Previously it has been found that perceived social support does not necessarily indicate actual support for fathers (Bost, 2002). Although father perceptions may differ from actual support received, it may be argued that father perceptions are better indicators of their experiences within environments and internal felt support is more important than support that could be provided but is not accepted or felt by the father.

A limitation of the current study is its cross-sectional design. It is not known whether the predictive structure of the current study would hold in a longitudinal design. Social networks and support change for fathers over the perinatal period (Bost, 2002). Future research should employ longitudinal designs to evaluate social network changes and their associations with later paternal outcomes for perinatal fathers. Evaluating these variables through randomized controlled trials of interventions would also be an effective way to tease out the direction of effects and whether intervention can promote health father adjustment through the development of social support and/or self-efficacy. The adjustment period from prenatal to postpartum could be a particularly valuable time frame to investigate social support, being sure to include short-term support

systems fathers may encounter over the transitional period such as obstetric and pediatric clinics and childbirth or parenting education programs.

Finally, this sample of fathers became parents in the second year of the COVID-19 pandemic. It is unclear whether or how social support and self-efficacy might differ in their associations with father well-being beyond this critical historical shift in family dynamics. Work-family role conflict may particularly have been affected for these fathers at a time of widespread reductions in childcare availability and routine closures of childcare facilities due to COVID-19 exposure risk (Lee & Parolin, 2021). Although we could not account for objective effects of COVID, we asked fathers whether they believed that the COVID-19 pandemic changed their experience of postpartum fatherhood or not and used that variable to control for possible COVID effects. It is not clear yet how fathering will change post-COVID, but by attempting to control for those effects, we expect many of the findings would hold. Replicating or expanding the current study after work and family systems following the COVID-19 pandemic have reached a new normal will be important to better understand the findings of this study.

Conclusion

Results from this study suggest that both internal beliefs in ability to respond to environment (self-efficacy) and relational support are important for perinatal father engagement and well-being. Internal and relational processes may work together to support father engagement and father emotional well-being but may not completely overlap. Both support and self-efficacy predict increased fathering engagement and reduced parenting stress, depressive and anxiety symptoms. Self-efficacy and social support seem to function in different ways to assist fathers in responding to the strain of juggling work and home responsibilities. Self-efficacy predicts reduced work-home role conflict while social support predicts improved role balance

satisfaction. Future research should continue to explore the overlap and differences between internal and relational processes in promoting healthy father development at the transition to parenthood. Additionally, identifying ways to increase both father self-efficacy and support-seeking behavior around the transition to fatherhood may be valuable targets for family prevention programming. Within the parent dyad, Feinberg et al. (2009) have demonstrated that intervention to increase supportive coparenting (the Family Foundations program) has a positive impact on parenting behaviors and child outcomes. It may be valuable to explore additional opportunities to increase the quality and availability of additional types of support relationships for postpartum fathers, such as family and peer support.

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CHAPTER 4: PROOF-OF-CONCEPT EVALUATION OF A COMMUNITY-BASED GROUP MENTORING PROGRAM FOR PERINATAL FATHERS[3]

Summary

Fathers are becoming more involved in childcare early in their children's lives and can be important caregivers for their children; however, resources supporting the transition to fatherhood remain scarce. Fathers may struggle to adjust to parenthood and are at risk for experiencing perinatal mood and anxiety disorders that can have consequences on family well-being. Prior research has indicated that fathers are interested in father-focused information and peer support around the time they have a baby, and such programs have been suggested as potentially helpful for engaging fathers in early intervention programs.

The present study entails a proof-of-concept pilot evaluation of an 8-week educational mentoring program for prenatal and postpartum fathers called DadSpace. The program is delivered in a community setting and involves facilitated group discussions on topics relevant to perinatal fathers. The study includes an evaluation of program implementation and father satisfaction, as well as exploration of potential program outcomes using reliable change indices.

Overall participants expressed a high level of satisfaction with the program and that they found the program to be useful. Participants also indicated making connections with other fathers was a highlight of the program. Several participants demonstrated reliable increases in parenting confidence over the course of the program. Participant well-being indicators (stress, depression, and anxiety) were stable during the course of the program but varied more after program completion.

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Introduction and Background

Life course theory (Elder, 1975; Elder et al., 2015) postulates that life transitions are periods of developmental change and adjustment that are influenced by internal characteristics (e.g., knowledge, self-efficacy) and external contexts (e.g., societal expectations, social relationships, and community and work environments). The transition to parenthood is a time for developmental change during which fathers are navigating multiple internal and external pressures (Rayburn, 2022). Cultural expectations for fathers are also undergoing changes, shifting toward increased father involvement (Gregory & Milner, 2011). Coinciding with these changing expectations, fathers are spending more time involved in care for their infants than in the past (Bakermans-Kranenburg et al., 2019); however, perinatal fathers have few resources available to support their healthy adjustment to the role (Panter-Brick et al., 2014).

A lack of support resources may contribute to adjustment difficulties. Fathers experience many of the same stressors that mothers do and are at risk of postpartum mood and anxiety disorders at rates similar to mothers. Approximately 13% of perinatal fathers in the U.S. experience depression (Cameron et al., 2016) and 10% experience anxiety (Leiferman et al., 2021). Psychological distress is more likely in fathers who are underinformed and who lack a supportive network (Boyce et al., 2007), and distress may reduce father engagement with the child (Halme et al., 2006). On the other hand, when perinatal fathers have more social support and a higher belief in their own efficacy, they are likely to report more parenting engagement and improved well-being (Rayburn et al., 2023).

When fathers are involved, children benefit. Father involvement contributes to a variety of positive cognitive and socioemotional outcomes for their children (Sarkadi et al., 2008). Addressing support disparities at the beginning of fatherhood may serve to help fathers and their

families have a healthy beginning and contribute to positive long-term outcomes for children. The perinatal timeframe may also be ideal for capturing father interest and establishing peer support. Fathers have expressed interest in connecting with their peers around the time they have a baby (Rayburn et al., 2022), and father-focused interventions have been encouraged to increase father engagement in perinatal support programs (Panter-Brock et al., 2014).

The present study is a proof-of-concept pilot evaluation of a community-based group educational mentoring program for perinatal fathers called DadSpace. The pilot was tested with four cohorts of fathers who were expecting a baby or had a baby less than 12 months of age. We aimed to gain an understanding of participant engagement and participant perceptions of the program and its utility for them. Additionally, we aimed to evaluate initial evidence for participant changes from pretest to posttest in outcomes of interest, including fathers' mental health, work-home role conflict and role balance satisfaction, parenting confidence, and general self-efficacy. Self-efficacy and social support have been found to predict paternal mental-health and parenting engagement as well as role conflict (predicted by self-efficacy) and role balance satisfaction (predicted by social support) in postpartum fathers (Rayburn et al., 2023).

Methods

Curriculum

The DadSpace intervention program applies research evidence and best practices to address the disparity in socioemotional community support and education programs serving perinatal fathers. The program was developed through a university-community partnership and is currently being implemented as part of the prenatal and postpartum educational offerings in a community-based obstetric clinic in a small city. The DadSpace program utilizes a group discussion format led by a trained father facilitator. Program participants meet for 8 weeks for a

total of 12 hours and discuss topics relevant to new fathers using a manualized curriculum to guide discussions. Curriculum topics include the developing father identity, coping with stress, infant attachment and soothing, co-parenting, masculinity and caregiving, healthy communication, and juggling multiple roles (e.g., work and family). Topics were chosen based on focus group input from prenatal and postpartum fathers in which they identified stressors and concerns such as adjusting to changing role expectations, successfully caring for their infants, supporting their co-parents, being good role models for their children, and navigating work and family expectations while trying to maintain their own identities (Rayburn et al., 2022). DadSpace program facilitators, who were experienced fathers, also contributed to the curriculum design. Curriculum topics are also supported by the Developmental Model of Perinatal Fatherhood as relevant to father adjustment at the transition to parenthood (Chapter 1, this dissertation).

The curriculum also includes brief structured mindfulness activities (e.g., mindful breathing, self-compassion) and education aimed at increasing the personal resources fathers have to adjust to fatherhood and interact with their co-parent and child in healthy ways. Brief mindfulness activities have previously been found to be acceptable to perinatal fathers (Rayburn et al., 2021), and brief structured mindfulness activities incorporated into a larger parenting intervention program have been found to increase parenting engagement, satisfaction, and self-efficacy and reduce daily hassles in fathers over and above the program by itself (Coatsworth et al., 2015).

Participants

DadSpace was advertised through flyers available at community obstetric and pediatric clinics. Professionals who serve perinatal families (e.g., doulas, therapists, childbirth educators,

chiropractors) were also informed of the program to share with their clients and provided with flyers upon request. Posts about the program were made on social media, including a local subreddit. Reddit users skew male (Barthel et al., 2016), making this a useful platform for accessing the population of interest.

Between August 2021 to November 2022, four cohorts of DadSpace were offered to a total of 24 fathers. Of fathers who participated in the program, 19 met inclusion criteria and consented to participate in the research study. Study participants were required to be at least 18 years old, identify as fathers, and currently expecting a baby or have a baby less than 1 year old. One participant only attended one week of the program and was excluded from analyses for low participation as part of proof-of-concept testing. The remaining participants were primarily White (89.9%), married (94.4%), and educated (94.4% have a four-year degree or higher). Participant ages ranged from 28 to 44 years with a median of 34.5. Annual household income ranged from $20,000 to more than $85,000 with a median of $85,000 and higher. At baseline, 12 participants were prenatal and seven were postpartum. Of those who already had a baby, one did not live in the same home as his baby. One participant also had an older child.

Surveys

Participants completed a total of four online surveys, one every 4 weeks – a baseline survey at pretest, one at midintervention, one at posttest following the last week of the class, and then a follow-up survey 4 weeks later. All survey questions and procedures were approved by the university's institutional review board. Surveys included demographics and measures of perceptions of parenting confidence, general self-efficacy, support satisfaction, work-home role conflict, work-home role balance satisfaction, perceived stress, postpartum depressive symptoms, and state anxiety. Participants also completed quantitative and qualitative posttest

questions assessing program satisfaction, utility, the workshop environment, and supportive group dynamics. All measures have demonstrated good reliability and validity. See references for details.

Parenting confidence. The Self-Perceptions of the Parental Role scale (SPPR; MacPhee et al., 1986) assesses self-perceptions of parental competence and satisfaction as indicators of parenting confidence. Questions ask parents to choose between two statements about other parents (e.g., "Some parents often worry about how they are doing as parents" vs. "Other parents feel confident about their parenting abilities.") and the degree to which that statement is true for them (*sort of true for me* or *really true for me*).

General self-efficacy. The 7-item Pearlin Mastery Scale (PM; Pearlin & Schooler, 1978) was used to assess general self-efficacy and includes items such as "I can do anything I really set my mind to" and "I often feel helpless in dealing with the problems of life." Items are rated on a six-point Likert scale from 1 (*strongly disagree*) to 6 (*strongly agree*), with higher scores indicating greater self-efficacy (Pearlin & Schooler, 1978).

Support satisfaction. The Support Satisfaction subscale of the Social Network Questionnaire (Antonucci, 1987) is a 7-item measure assessing perceived satisfaction with the social network. Respondents rate each item as *yes* or *no* indicating their agreement or disagreement with the statement (e.g., "Do you wish you had more people on whom you could depend?"), with higher overall scores indicating greater satisfaction with support received from their social network.

Work-home role conflict. Role conflict was measured using an 8-item work-family conflict measure (Gutek et al., 1991). Perceptions of work interference with family (e.g., "My work takes up time that I'd like to spend with family/friends") and family interference with work

("I'm often too tired at work because of the things I have to do at home") are each assessed with four items and combined into an overall scale. Items are scored on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*), with higher scores indicating more conflict.

Role balance satisfaction. A five-item role balance satisfaction measure (Valcour, 2007) includes questions such as "How satisfied are you with the way you divide your attention between work and home?" Items are rated from 1 (*very dissatisfied*) to 5 (*very satisfied*) with higher ratings indicating more satisfaction.

Perceived stress. The 10-item Perceived Stress Scale (PSS; Cohen, 1994) measures general life stress with items such as "In the last month, how often have you felt that things were going your way?" Scores range from 0 (*never*) to 4 (*very often*) with higher scores indicating higher overall perceived stress.

Depressive symptoms. The 10-item Edinburgh Postnatal Depression Scale (EPDS) assesses symptoms of postpartum depression (Cox et al., 1987) and has been validated for men (Matthey et al., 2001). Participants rate how they have been feeling over the past week (e.g., "I have been so unhappy that I have been crying,") on a scale from 0 to 3, with higher scores indicating more depression symptoms (Cox et al., 1987).

Anxiety symptoms. The 6-item Spielberger State Anxiety Scale – Short Form (SSAS-SF; Marteau & Bekker, 1992) is an abbreviated version of the State Scale of the State-Trait Anxiety Inventory (STAI; Spielberger et al., 1983). Respondents rate the extent to which they feel various emotions at the moment (e.g., calm, tense) on a 4-point Likert scale from 1 (*Not at all*) to 4 (*Very much so*). The short form scale is comparable to the 20-item scale in its ability to measure fluctuations in present-moment anxiety (Marteau & Bekker, 1992).

Program satisfaction. The Workshop Environment Scale (Moos & Trickett, 1987) provided at posttest provides a measure of group dynamics and facilitator alliance. Items were adapted to fit the specific program and reduced to 10 questions scaled from 1 (*strongly disagree*) to 4 (*strongly agree*), with higher scores indicating more positive perceptions of the workshop environment. The 27-item Support Group Social Exchange Scale (SGSES; Brown et al., 2014) assesses various types of social exchanges that can occur in support group dynamics, including experiential knowledge, emotional support, humor, and unwanted behavior. We removed three of the five items asking about humor, reducing the number of items to 24. Items statements (e.g., "I shared my personal problems with group members") are rated from 0 (*never*) to 6 (*always*). Our sample had good internal consistency for both scales (WES $\alpha = .89$; SGSES $\alpha = .87$).

Ancillary measures. The Knowledge of Infant Development Inventory (MacPhee, 1981/2002) and Coparenting Relationship Scale – Brief (Feinberg et al., 2012) were also given to participants to measure related constructs to our outcomes of interest; however, internal consistency for these measures was low in our sample ($\alpha < .40$ for both). Given the low reliability of these measures in our sample, they were not included in our analysis.

Analysis

Data for all time-points were examined for missingness using Little's (1998) Missing Completely at Random Test, which was nonsignificant indicating that missing data were random. We used expectation maximization in IBM SPSS to impute values for missing scale items so that total scale scores could be calculated.

Implementation Evaluation

Analysis Plan

We evaluated program implementation and utility using a comparative mixed methods approach. Descriptive statistics of implementation measures and qualitative feedback from participants and facilitators are combined to provide an overview of participant perceptions of the utility and environment in the program.

Results

Recruitment and attendance. Recruitment for the program was lower than anticipated with only half (n = 24) of the 56 planned participants joining the program and less than that (n = 19) agreeing to participate in the research. Recruitment stabilized as the program became established and word spread in the community, generating enough interest to support one class every 3-4 months. Fathers who did sign up for the class attended most of the class sessions. Median participant attendance was 7 weeks (M = 6.56, SD = 1.72) out of 8 possible. Three-quarters of participants attended at least 6 weeks (75%) of the program, and six participants attended all 8 weeks of the program. One participant stopped attending the class after the first session, stating that the class time did not work for him and was excluded from the remainder of analyses to focus the evaluation per protocol.

Workshop environment and social exchange. Total workshop environment ratings ranged from 10 to 40 out of 40 possible with a mean of 34.88 (SD = 4.11). The percentage of each type of response for individual questions is presented in Figure 4. Participants also completed items about positive and negative support from the group. Negative support items were reverse-coded and combined with positive support items to create a total support score.

Ratings ranged from 80 to 142 out of 147 possible with a mean of 117.29 (*SD* = 14.11). Scores for individual positive support items are presented in Figure 5.

Program utility and satisfaction. Participants rated average utility for each week of the program they attended on a scale from 1-10 with higher numbers indicating they found the week

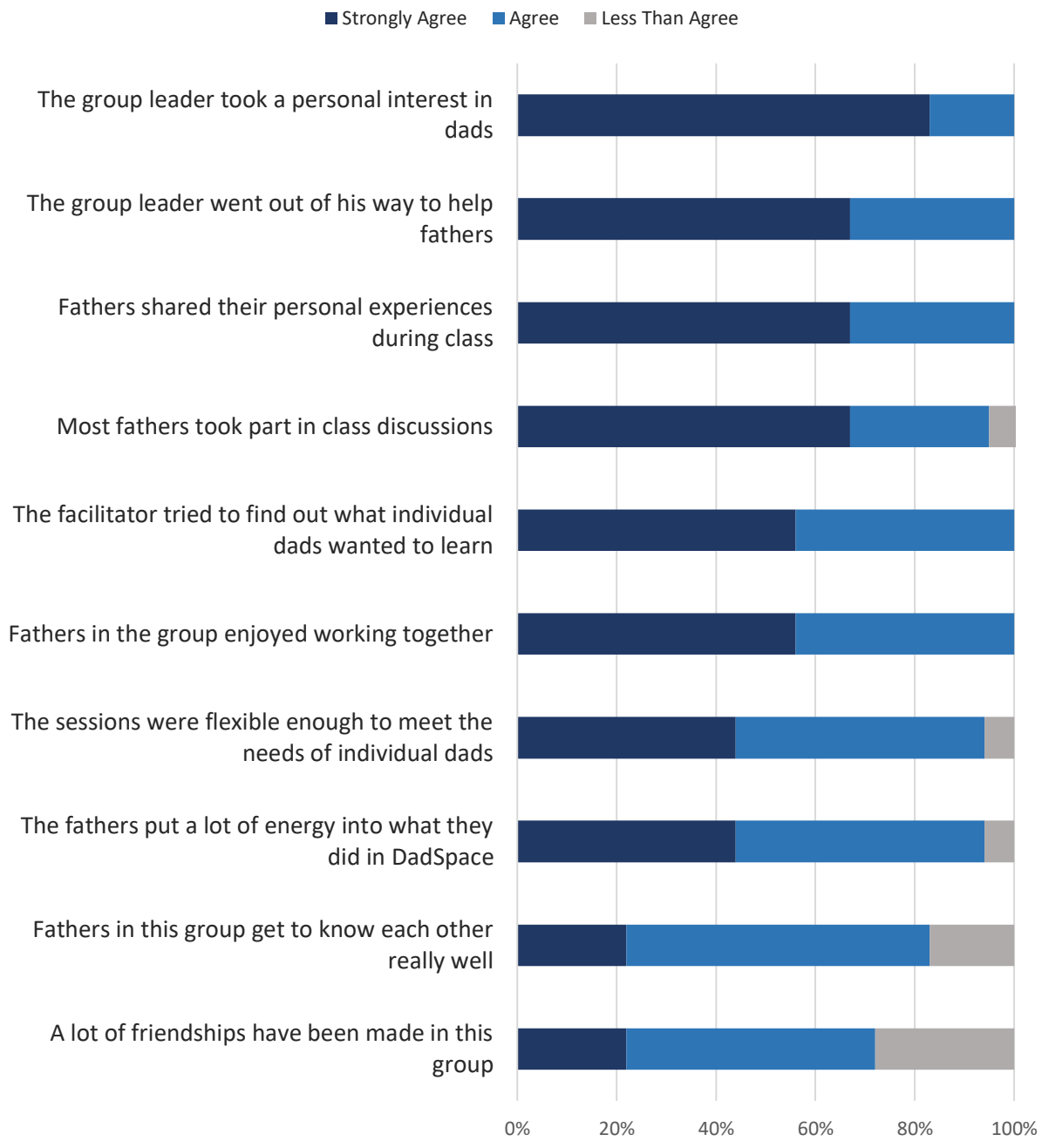


Figure 4. *Ratings of Workshop Environment Items.*

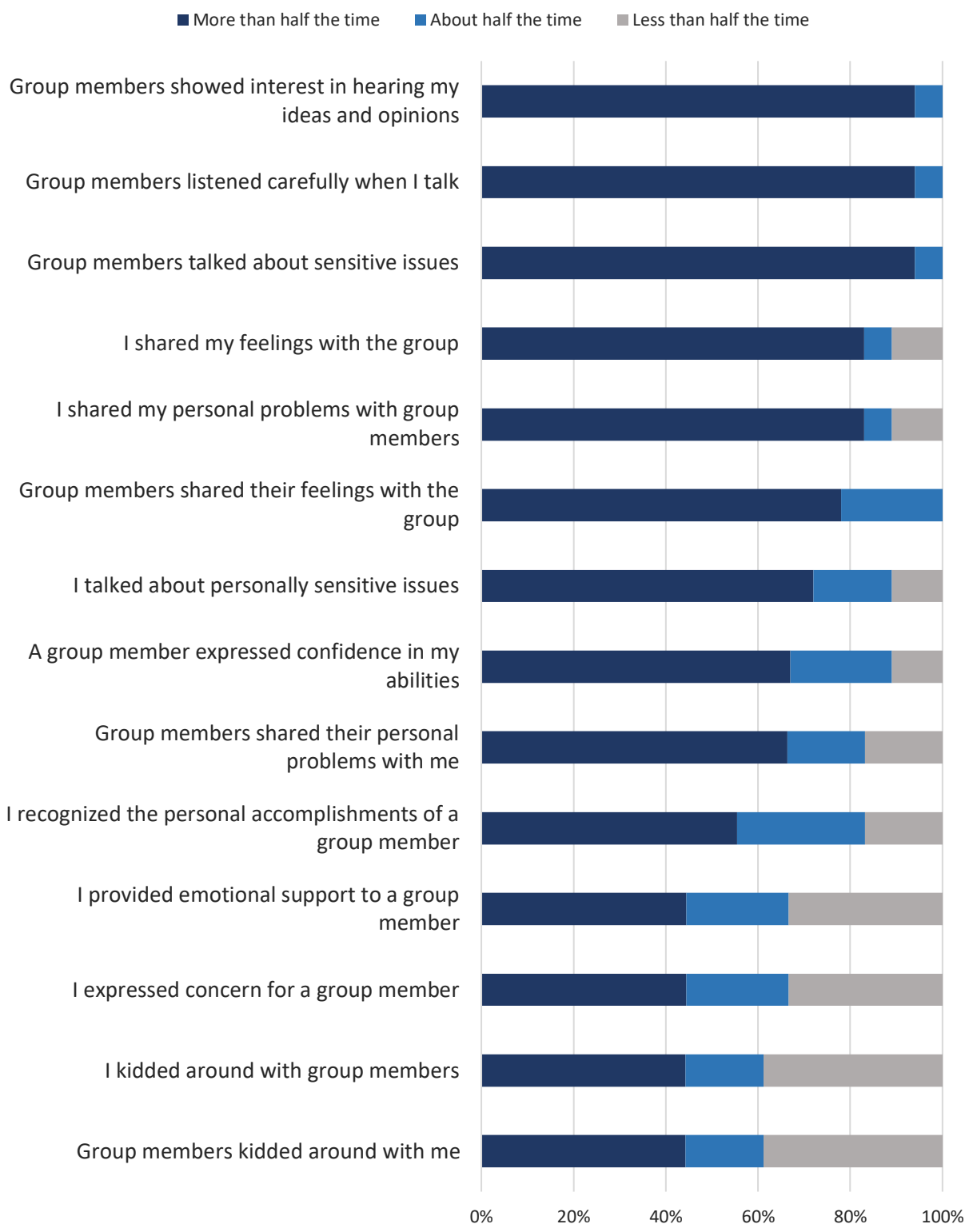


Figure 5. *Participant Ratings of Positive Support Group Social Exchange Items.*

more useful. Average rated utility for each week is presented in Figure 6. An average utility score was calculated for each participant (M = 8.10, SD = 2.03). Participants were also asked general questions about their satisfaction with the program on a scale from 1 to 4. On average, participants indicated liking the sessions (M = 3.53, SD = 0.62), having learned useful information (M = 3.53, SD = 0.51), and that they would recommend DadSpace to other fathers. (M = 3.65, SD = 0.61).

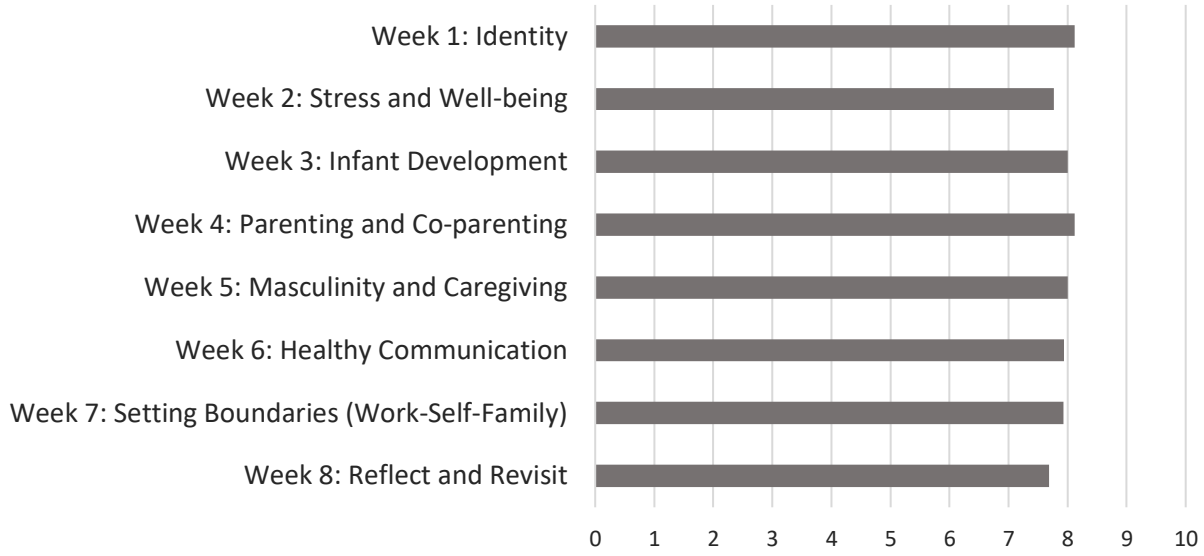


Figure 6. *Participant-Rated Utility of Each Program Week.*

Qualitative responses. In their open-ended responses to what participants liked best about the program, participants emphasized the importance of connecting with their peers in the program. When asked to describe the best part of DadSpace, 14 participants mentioned connecting with other fathers in the same stage as they were. Participants described "building a community," having "fellowship with other dads," and "connections made between dads." Five participants also reported liking the support they received from other fathers and four expressed liking the ability to have emotionally vulnerable conversations with the group.

> I really enjoyed being with other men in a space that allowed for vulnerable conversations about hopes and fears to occur. I felt seen and validated by the fact that

> many other men are feeling the same positive and negative emotions around fatherhood that I was.

Participants additionally noted the value of the facilitator in creating a safe space to connect. "[He] created a great atmosphere for us to learn from and support each other." They also reported liking the opportunity to learn from each other – "learning new parenting techniques and hearing stories from other fathers in similar situations."

When asked how they would change DadSpace, participants suggested wanting to make sure they had opportunities to get to know every father in the group by mixing up small-group and dyadic discussion pairings, wanting more sharing, and making the program longer or having ongoing monthly meetups. Some participants suggested changes to the physical space or timing of the group to better emphasize privacy (some classes were offered in a lounge area in the clinic) and a better fit for their schedules. One participant also noted a need to create better access for lower income and minority fathers. Three participants said they would not change anything – "Not much, it is so groundbreaking that every future father should have access to DadSpace."

Outcome Evaluation

Analysis Plan

Given that this is a pilot study with limited sample size, we evaluated program outcomes of interest using reliable change plots. Pretest and posttest estimates of statistically reliable change at the individual level were investigated using the method described by Jacobson and Truax (1991). Reliable change indexes (RCI) can identify change over time in individuals beyond what would be expected to occur from measurement error. This method has been recommended for identifying meaningful or clinically significant change in psychotherapy research (Bauer et al., 2004). RCI is determined by plotting individual posttest scores against

pretest scores to determine a change index for each case. A no-change line is plotted based on the standard error of the measurement, and a 95% confidence interval plotted around that line to determine the cut-off point for statistically reliable change. Any scores that fall outside of the cut-off point represent statistically reliable change beyond what would be expected to occur by measurement error.

We examined reliable changes from pretest (survey one) to posttest (survey three) for each outcome variable of interest. We were also interested in whether there were noticeable differences in participant change at midintervention (survey two) while they were actively receiving support from the group, compared to the posttest that was taken after the group ended. To compare, we graphed reliable change scatterplots of pretest and midintervention scores for each variable.

Results

Outcome variable correlations are available in Table 6. Participants varied in whether and how much they changed for each of the variables. Variables also differed in their test-retest stability, likely indicating differences in measure sensitivity to change (i.e., state-like vs. trait-like indicators). We tested test-retest stability for each variable over the four time-points, with higher correlations indicating greater resistance to change. Stress (r = .45–.92), role conflict (r = .67–.96), role balance satisfaction (r = .66–.88), anxiety symptoms (r = .71–.92), and support satisfaction (r = .71–.96) demonstrated higher sensitivity to change, while depressive symptoms (r = .82–.91), parenting confidence (r = .88–.93), and general self-efficacy (r = .86–.97) were more stable over time.

In general, there were not many differences between the pretest to midintervention scatterplots and the pretest to posttest scatterplots. Where noted, these differences are descriptive

Table 6

Pretest Variable Correlations

	Parenting Confidence	Self-efficacy	Support Satisfaction	Role Conflict	Role Balance Satisfaction	Perceived Stress	Depressive Symptoms	Anxiety Symptoms
Parenting Confidence	1							
Self-efficacy	.36	1						
Support Satisfaction	−.21	−.39	1					
Role Conflict	.28	−.45	.22	1				
Role Balance Sat.	−.24	−.52*	−.21	−.80**	1			
Perceived Stress	−.14	−.53*	.43	.58*	−.54*	1		
Depressive Symptoms	−.48	−.57*	.47	.37	−.30	.78**	1	
Anxiety Symptoms	−.57*	−.72**	.57*	.29	−.20	.74**	.92**	1

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

in nature and not suggestive of statistical significance. A few scatterplots of interest have been included here, but reliable change scatterplots for all variables are available in Appendix B. Descriptive statistics, alphas, and RCI values for each variable are available in Table 7. Given that Cronbach's alphas for each time point varied slightly, causing variation in the calculated RCI for each scatterplot, RCI values were averaged between the two timepoints.

Parenting confidence (Figure 7) had the largest number of participants who showed statistically reliable change from pretest to posttest with five participants showing reliable increases in confidence. Another five had marginal increases at the index line below the level of statistical significance. One participant showed a significant decrease in parenting confidence.

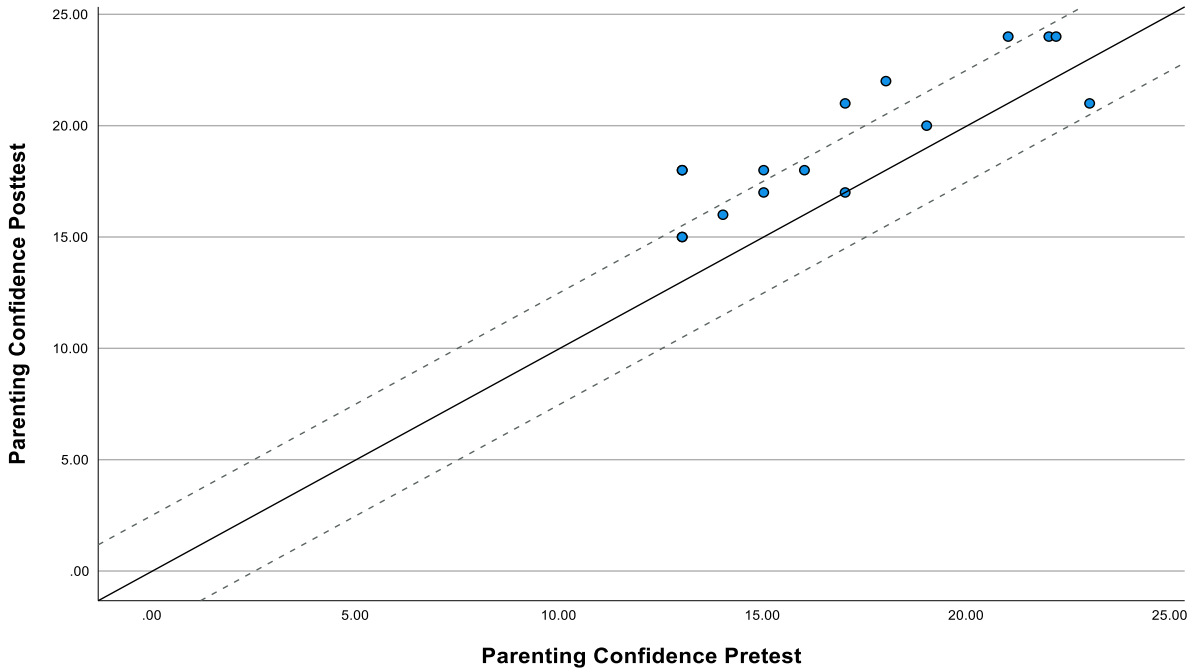
Interestingly, several participants showed decreases in general self-efficacy at the posttest survey (Figure 8) but not at midintervention. Self-efficacy and confidence are related constructs, so they would be expected to move together; however, the Pearlin Mastery Scale (Pearlin & Schooler, 1978) focuses on general self-efficacy rather than parenting-specific efficacy. Although there were individual differences, there was no discernable pattern in change for support satisfaction, work-home role conflict, work-home role balance satisfaction, perceived stress, depressive symptoms, or anxiety from pretest to posttest. When considering the midintervention scatterplots, however, six participants were at or below the reliable change line for stress (Figure 9A). Stress change values were more evenly distributed at posttest (Figure 9B).

A similar pattern emerged for depressive symptoms, with most participants showing no change in depressive symptoms and three showing reductions in symptoms at midintervention. By posttest, depressive symptoms were more scattered, with three showing significant decreases, three with significant increases, and the rest within the band of no change. Scatterplots for these are available as supplementary materials.

Table 7

Alphas, Reliability Indexes, and Reliable Change Outcomes.

Variable	***M (SD)***				**α**			**95% RCI ±**	
	Pre	Mid	Post	Foll. Up	Pre	Mid	Post	Pre-Mid	Pre-Post
Parenting Confidence	16.89 (3.46)	18.47 (3.32)	19.12 (3.06)	19.71 (3.52)	.86	.88	.83	2.41	2.51
Self-Efficacy	33.65 (6.09)	32.77 (6.76)	32.00 (7.95)	30.79 (8.29)	.90	.90	.93	4.04	3.91
Support Satisfaction	4.59 (2.29)	4.94 (2.19)	4.53 (2.38)	4.71 (2.43)	.85	.84	.84	1.74	1.80
Role Conflict	22.29 (6.58)	21.77 (7.51)	22.00 (7.64)	21.71 (8.37)	.84	.89	.84	4.99	5.67
Role Balance Satisfaction	16.65 (5.10)	16.47 (5.67)	16.82 (5.45)	16.14 (4.94)	.93	.95	.96	2.63	2.47
Perceived Stress	16.87 (5.57)	16.00 (6.07)	16.29 (7.38)	16.36 (5.49)	.80	.83	.89	4.92	4.82
Depressive Symptoms	7.47 (6.24)	6.77 (5.37)	6.82 (5.74)	7.36 (5.11)	.94	.90	.91	3.14	3.16
Anxiety Symptoms	11.65 (4.46)	11.18 (4.41)	11.88 (4.11)	11.36 (4.34)	.93	.90	.88	2.43	2.55



Note. Each point indicates a single participant. Points that fall above the top dotted line indicate significantly reliable increases in confidence at the 95% level.

Figure 7. *Individual Reliable Change in Parenting Confidence from Pretest to Posttest.*

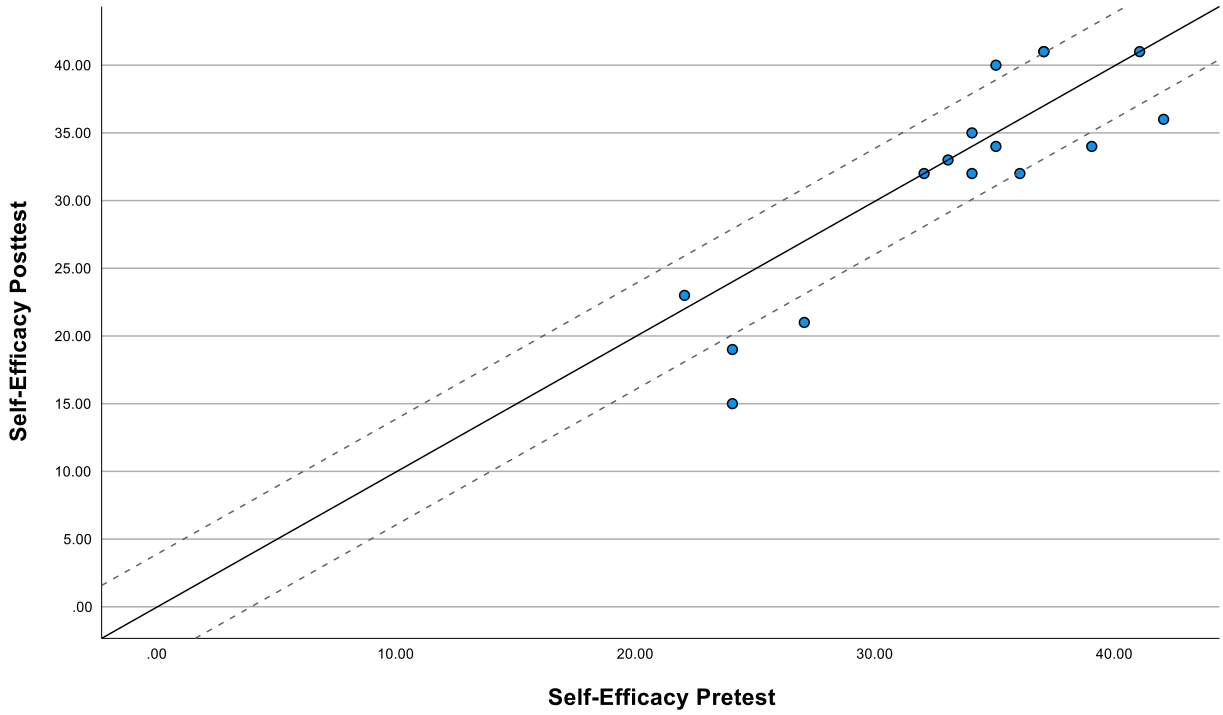


Figure 8. *Individual Reliable Change in Self-Efficacy from Pretest to Posttest.*

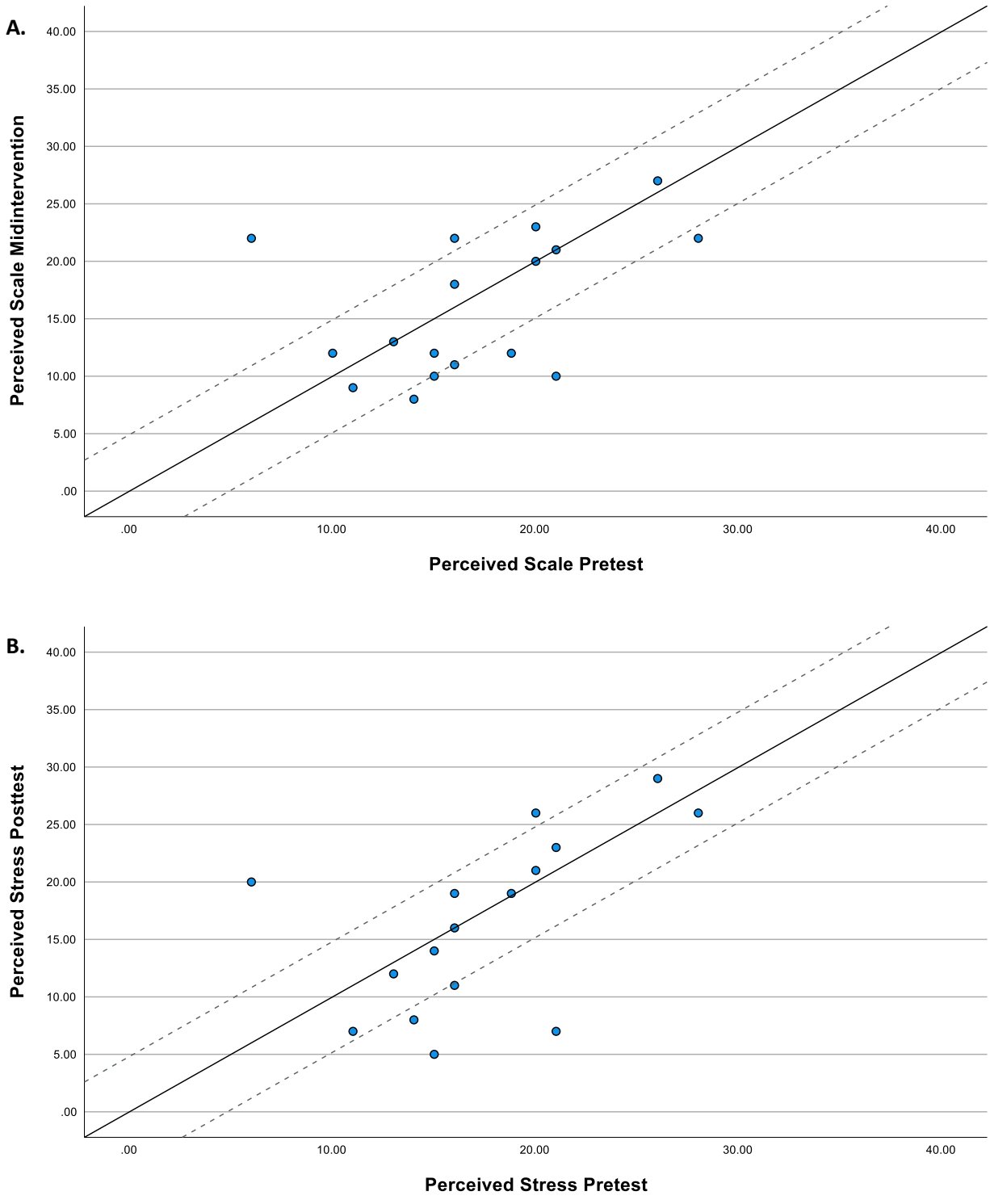


Figure 9. *Individual Reliable Change in Perceived Stress from Pretest to Midintervention (A) and Pretest to Posttest (B).*

Discussion

Identifying strategies for community support of perinatal fathers with which *fathers are willing to engage* is a necessary part of intervention development. Although initial recruitment was challenging, participants who signed up for the class tended to be highly engaged in the program, with most participants attending at least 75% of the weekly sessions. Recruiting fathers to intervention programs is a known difficulty in the field. Designing perinatal intervention programs that specifically focus on fathers' needs (as opposed to simply including them in programs that are otherwise targeted at mothers) has been suggested as one way to increase father engagement in support programs (Panter-Brick et al., 2014). However, it remains difficult to build father awareness of such programs. As multiple cohorts of the DadSpace program were offered over the course of the study, recruitment improved, suggesting increased awareness of the program in the community. Recruitment efforts that increase father and community awareness of program offerings over time will likely be valuable.

Despite the challenge of recruiting fathers to sign up initially, once they were in the door most fathers stayed invested in the program. Participants gave the program high satisfaction ratings and indicated through both quantitative and qualitative feedback that they found the program valuable, that it provided an emotionally safe space for exploring their experiences, and that they were able to establish supportive connections with others in the group. Survey questions that asked about the formation of long-term friendships scored slightly lower (though still most participants agreed). This suggests participants may feel some doubt about whether the connections made in the group could be sustained outside of the program and may account for the lack of change in overall support satisfaction from the outcome evaluation.

Outcomes of Interest

Although it is not possible in this pilot sample to make firm inferences about group change or to what degree participation in the program contributed to any change, there are some notable patterns in individual change. Several participants in the program demonstrated reliable increases in their parenting confidence during the program. Increases in parenting confidence may promote father engagement because fathers with a higher sense of parental competence are more likely to be involved with their children (Coley & Hernandez, 2006). Conversely, some participants experienced a reliable decrease in general self-efficacy. The construct of confidence in parenting competence is related to parental self-efficacy and would be expected to have a relationship with global self-efficacy, so it is somewhat perplexing that we would see these move in opposite directions.

Although we would expect participation in a course that includes infant parenting education to increase confidence in parenting, such benefits do not seem to extend to participants' overall belief in their ability to control or respond to their environments. Bandura (2006) has cautioned that it is impossible to have high self-efficacy in all areas of one's life and that domain-specific measures of self-efficacy (such as parenting confidence) are better suited to understanding the development of mastery.

Indeed, parenting in early infancy also requires adapting to circumstances that are outside of a parent's control (e.g., difficult infant behavior, sleep disruptions, work-family conflict, etc.). In males, self-efficacy has been linked to adherence to masculine norms (Levant & Wimer, 2014), which have not traditionally involved caretaking of infants. It may be that men who are transitioning into a caretaking role find themselves in unfamiliar territory where reliance on traditional masculine norms is a less helpful guide. Men who adhere more closely to masculine

norms have been found to be less involved in caregiving and less likely to embrace the father-as-caregiver role (Petts et al., 2018). The reduction in self-efficacy may indicate a re-norming of participants' beliefs in their abilities to control their experiences. The process of reflecting on the transition to fatherhood among peers may facilitate a pragmatic adjustment in self-expectations, even if that means a lower perception of their own overall efficacy. Such re-alignment may encourage growth and learning (important factors in adjusting to change) rather than the false confidence of personal overestimation.

Follow-up qualitative interviews with fathers would help to increase understanding about how their perceptions of self-efficacy changed during the study. To identify whether self-efficacy was trending downward, dipped during the intervention, or had been recalibrated and restabilized, we also looked at the plot of pretest scores to follow-up scores at survey time 4. The scatterplot for pretest to follow-up was indistinguishable from the pretest to posttest scatterplot, suggesting self-efficacy stabilized after a possible recalibration.

Another notable pattern in the scatterplots was the consistent difference in mental well-being variables between change at midintervention and change at posttest. At midintervention, more participant scores declined for stress and anxiety, but scores were more scattered between increase, decrease, or no change at posttest. Similarly, depressive symptom scores clustered tightly around the line of no change with some decreases at midintervention but had spread out in both directions at posttest. The posttest survey was given the week after the DadSpace program ended. It may be that the ongoing group support at midintervention had a protective effect on well-being compared to posttest when the structured group support was no longer available. Given that participants also showed little change in a consistent direction for support satisfaction and their relatively lower endorsement of developing friendships in the program, a short-term

program may not be sufficient for bolstering support networks and related well-being among perinatal fathers. Participants may *not* be inclined to maintain ongoing supportive relationships with each other beyond the structure of the group. These findings suggest the need to investigate and compare long-term on-going support programs (e.g., a drop-in group) compared to time-limited programs. Indeed, this suggestion to have ongoing meetups was made by one participant in the open-ended responses. Keeping fathers engaged in open-ended peer-support groups, however, has been found to be challenging (Lanier et al., 2019). Virtual delivery is one option that may reduce barriers to participation and increase father engagement in support programs (Van Leuven et al., 2022).

Neither work-home role conflict nor work-home role balance satisfaction had clear patterns in change, but both showed variability between individuals. Work-home role balance satisfaction was particularly variable, with multiple participants showing increases and multiple participants showing decreases in satisfaction at midintervention and at posttest, regardless of prenatal or postpartum status. Such variability may be indicative of the transitional processes occurring for these fathers as they attempt to prepare for and adjust to changing role expectations. Despite fathers' increased interest in childcare (an interest that is likely overrepresented in DadSpace participants), masculine and workplace norms continue to emphasize the importance of breadwinning and devotion to career for fathers (Atkinson, 2022). Expectant and new fathers are likely encountering the strains of trying to juggle their changing family identity and needs with workplace policies that may discourage flexibility (Castillo et al., 2013)

Strengths and Limitations

This study uses life course theory and existing evidence to begin testing emerging concepts of father support in an applied setting. Although a pilot study with a small nonrandomized sample cannot provide sufficient evidence for a causal intervention effect, it can provide information helpful for intervention refinement. Pilot studies can also establish a basis for feasibility of the study design (e.g., measures, recruitment, attrition rates) necessary for developing a larger trial (Leon et al., 2011). Testing the intervention in a community setting limits the ability to control intervention delivery, but also increases the ability to test the intervention in a real-world setting (i.e., effectiveness). Interventions that work in a well-controlled environment may not always translate well into community settings (Kim, 2019). Community implementation during the pilot allows for intervention feasibility to be tested right away with the variability inherent in community facilitation and marketing/recruitment.

Slow recruitment prevented establishing a wait-list control group that would have allowed for comparison in father outcomes. In the future, a control group would allow for a greater understanding of possible protective factors and exploration of causal effects of the intervention. It is notable that in many cases, qualitative interviews with participants would help to increase understanding of outcome trajectories. Future studies should consider incorporating participant interviews into the study design.

Conclusion

The DadSpace program seeks to build on previous research with perinatal fathers while also emphasizing peer support and reflective discussion to help perinatal fathers adjust to new roles, responsibilities, and stresses and engage with their co-parent and children in healthy ways. Although recruiting into the program was slow, program participants expressed high satisfaction

with the program and emphasized the importance of having an open and safe space to connect with each other. Initial program outcomes are variable but show promise in increasing parenting confidence and improving paternal well-being. Differences between midintervention and posttest well-being indicators suggest perinatal fathers may benefit more from ongoing group support rather than a time-limited program.

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CHAPTER 5:

Revisiting the Problem

The perinatal period is a vulnerable transition for parents, including fathers, who are at risk for poor mental health and suffer from a lack of resources aimed at their positive adjustment. When fathers struggle to adjust to the role, the consequences for fathers can be long lasting and extend to their co-parents and children. Awareness of the need to support perinatal fathers has been growing in the field, but father-inclusive resources remain scarce. Additionally, it remains challenging to recruit and engage fathers in perinatal programming. The question this dissertation sought to answer in part is how interventionists can feasibly support and engage fathers at the transition to parenthood in a way that promotes their healthy adjustment.

In Chapter 1, a synthesis of predominant relational-developmental theories in the field of family science points to the importance of the interplay between fathers' personal characteristics and their social contexts for guiding father development and involvement in early parenting. The developmental model of perinatal fatherhood identifies the multiple personal and contextual factors influencing perinatal father development and the processes occurring between them.

A review of the literature based on this model reveals many possible avenues for promoting healthy father adjustment, including constructing a personal fathering identity, increasing knowledge and skills related to parenting, promoting positive parenting attitudes, supporting a healthy couple relationship, increasing cultural and social support for father engagement, and increasing the opportunities for fathers to spend quality time with their infants. Identifying strategies to build and expand early intervention programs that are inclusive of perinatal fathers may contribute to positive family development from the beginning, but a

challenge in the field remains how best to target and engage fathers in perinatal programming. Three studies were conducted using an exploratory sequential mixed methods design to increase awareness of the kinds of support fathers want, investigate whether those types of support are actually predictive of father engagement and well-being, and conduct a proof-of-concept evaluation of a piloted intervention program for perinatal fathers.

An Overview of Findings

Prenatal and postpartum fathers participating in focus groups (Study A, Chapter 2) described fathering as being made up of several overlapping roles, including co-parent, mentor/teacher, availability and support, protector/guardian, caregiver/routine care, provider, expressing unconditional love, and having a responsibility to raise a productive member of society. Fathers expressed worry about their ability to live up to role expectations and encountering a host of other stressors and worries, including adjusting to their changing role and the accompanying life strains, uncertainty about what to expect, anxiety about their baby's and partner's welfare, coping with unhelpful or contradictory advice, managing the practicalities of having a child (e.g., childcare, finances, insurance), and maintaining important relationships. Despite these worries, fathers expressed feeling excited about spending time interacting with their children, seeing them learn and develop, imagining who their children will be, engaging with their changing identity, and going through the transition to parenthood alongside their partners, friends, and families.

When asked about resources they used or wanted, prenatal fathers emphasized the value of vetted, quality informational resources to help them prepare for fatherhood, including classes and written or auditory (e.g., podcast) resources. Postpartum fathers, on the other hand, expressed less interest in educational resources and a greater desire for meaningful support from

friends and family. Both prenatal and postpartum fathers expressed a high interest in father-focused resources, inclusion in access to healthcare professionals, and connecting with other fathers in a similar life stage.

The commonly cited strain of adjusting to the role fits with developmental theories suggesting the transition to parenthood is a major developmental shift, with accompanying changes in self and relationships. Worries about their infants, partners, and extended relationships support the salience of relational contexts to father development. The relatively higher importance placed on father involvement also suggests fathers are aware of the shifts toward "new fatherhood" that are supportive of father involvement and engagement with their children.

The high priority fathers in the focus groups placed on social support was an emergent finding from the study and informed the development of a quantitative follow-up study (Study B). A separate, larger sample of postpartum fathers was recruited to answer survey questions about their perceptions of social support from their spouse, friends, family, and healthcare professionals as well as a variety of variables related to father engagement, self-efficacy, and well-being. The association between these variables was examined using path analysis multiple regression. This study confirmed the qualitative focus group findings that social support is indeed predictive of father well-being and engagement. A surprising finding was that perceived social support and self-efficacy were not related.

Given the likely relevance of self-efficacy to the other outcomes, the analytical model was adjusted to include self-efficacy as a second predictor. This change is consistent with the developmental model of perinatal fatherhood that also emphasizes the salience of personal characteristics to father development. Results supported the importance of both relational and

personal characteristics in father engagement and well-being. Both higher social support and higher self-efficacy significantly predicted increased engagement in parenting and reduced parenting stress, depression, and anxiety. Social support and self-efficacy had different associations with work-home role conflict and work-home role balance satisfaction. Higher self-efficacy predicted reduced role conflict, but higher social support predicted higher role balance satisfaction. This suggests fathers may rely on different support characteristics and processes to cope with juggling conflicting roles after having a baby.

Using a combination of existing evidence and findings from Study A, the DadSpace educational mentoring program was developed in conjunction with community partners at The Women's Clinic of Northern Colorado. This 8-week father-facilitated program was implemented in the community with four cohorts of prenatal and postpartum fathers from August 2021 to December of 2022. Despite the high interest from fathers in the focus groups in connecting with peers, the DadSpace program struggled to recruit fathers. Recruitment picked up over time, however, suggesting the need for time to build awareness of such a program.

Of the 24 fathers who participated in the program, 19 agreed to participate in surveys evaluating the implementation of the program. Surveys were given at pretest, midintervention, posttest, and 1-month follow-up. This was a proof-of-concept evaluation that included fathers who had completed most of the classes to determine the actual potential value of the program.

Even though recruitment was slower than expected, fathers who participated in the program expressed high satisfaction with the program and its utility for them. Both quantitative and qualitative data supported the importance to participants of having a safe space to be vulnerable and connect with other fathers who were going through the same experiences. Reliable change indices were used to evaluate individual fathers for change in outcomes of

interest. Many fathers demonstrated reliable increases in parenting confidence over the course of the intervention. General self-efficacy went down for some fathers, which suggests a difference in the program's effects on parenting-specific and general self-efficacy. Parenting also involves coping with things that are out of parents' control, so it may be that fathers experienced a re-norming of their expectations to affect their environment during the perinatal timeframe. Well-being indicators (stress, depression, and anxiety) showed little change while the program was ongoing but were much more variable after the program ended. Although it is unclear from this study, it may be that ongoing social support is protective of well-being and that the decrease in support following the end of the program removed this protective effect. As a proof-of-concept the DadSpace program shows promise in promoting father adjustment; however, more work is needed to determine its effectiveness.

Directions for the Field: A Call to Action

Taken as a whole, the findings of this dissertation offer clear evidence for the importance of social support in perinatal father development. Fathers across these studies expressed wanting more support, were found to have more positive outcomes when they had more support, and responded positively to receiving support from a group of peers. Despite this, men seem to be largely unaware of their needs for more direct support around the transition to parenthood. Fathers in the focus groups expressed being surprised by how much they enjoyed participating in the focus groups alongside other fathers, and fathers in the DadSpace program described it as "groundbreaking" and expressed a desire to have even more time to connect with each other than the class time provided.

Dads are not the only ones who seem to be unaware of the need for father social support. Even though awareness among academics and medical professionals is increasing regarding the

risks of poor father adjustment at the transition to parenthood (Walsh et al., 2020), awareness is still low in the general population. Most commonly available perinatal resources tend to minimally address fathers if at all, and fathers are not routinely screened for postpartum depression and anxiety. (There is no 6-week postpartum checkup for fathers, although postpartum mental health symptoms can show up far later than this.) Pediatric health professionals are starting to sound the alarm for screening fathers (Walsh et al., 2020), which means fathers first must be invited and encouraged to attend pediatric well-child appointments. Father mental health symptoms frequently begin showing up in the prenatal period (Cameron et al., 2016), however, so calls to include, engage, and screen fathers must also be extended to obstetric professionals who may encounter fathers during routine prenatal appointments.

With social norms continuing to shift toward increased father engagement in child rearing (a valuable change for children and families), norms must also shift to normalize and encourage support seeking for new fathers. Men are known to engage in less support-seeking behavior than women do (Galdas et al., 2005) and face stigma and societal barriers that reduce help-seeking behavior (Pedersen et al., 2021). Normalizing support seeking as part of masculinity and increasing both availability and awareness of resources that are supportive of fathers is crucial.

As a field, we are still learning how to engage fathers. The studies in this dissertation have made strides to further awareness of the types of support perinatal fathers may be interested in and begun to examine the value of such supports, but there is a great need for ongoing work in this area. Given the variability in the types of resources fathers described wanting, it is likely that a multi-pronged approach to supporting perinatal fathers would be most successful – increasing father inclusion across reference, clinical, educational, and social resources. We must continue building, testing, and distributing interpersonal and intrapersonal resources that are promotive of

perinatal father well-being while also making it clear that such resources are, indeed, *for* them and available to them. Men deserve to be supported in their adjustment to fatherhood, and such support is likely to have long-term benefits for their families. Perhaps in coming generations, the children of fathers who see the value in engaging in support at the transition to parenthood will be more likely to look for such support themselves.

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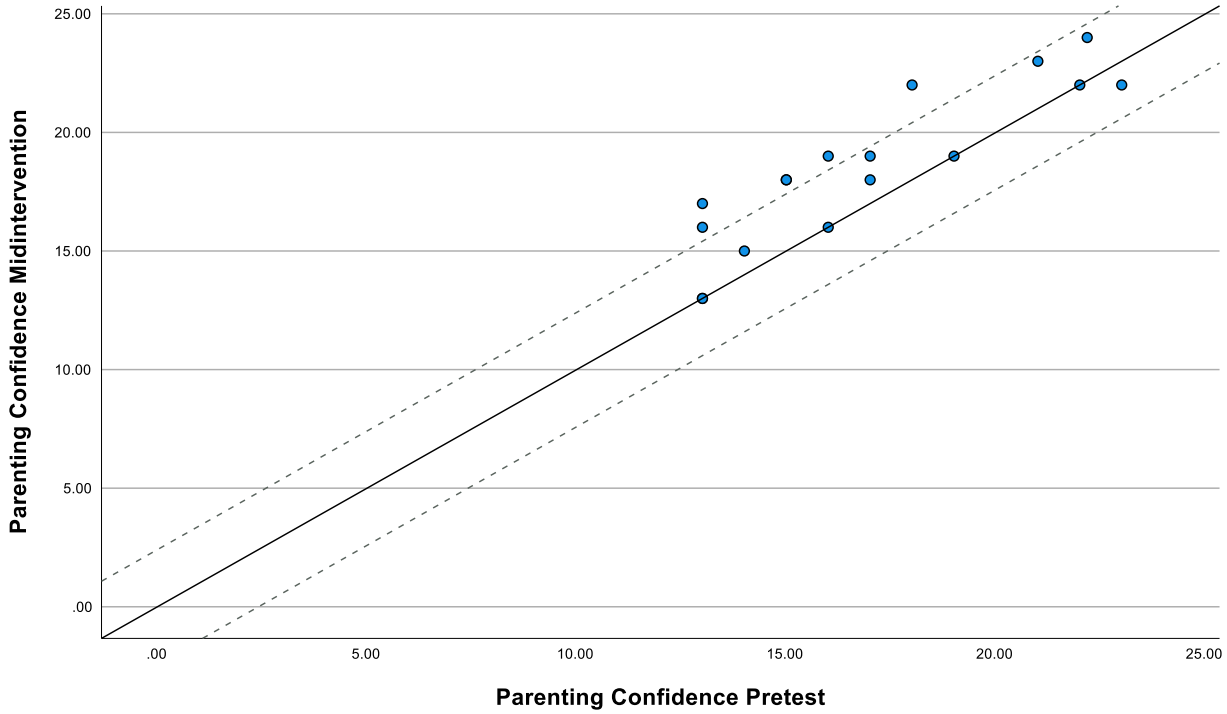
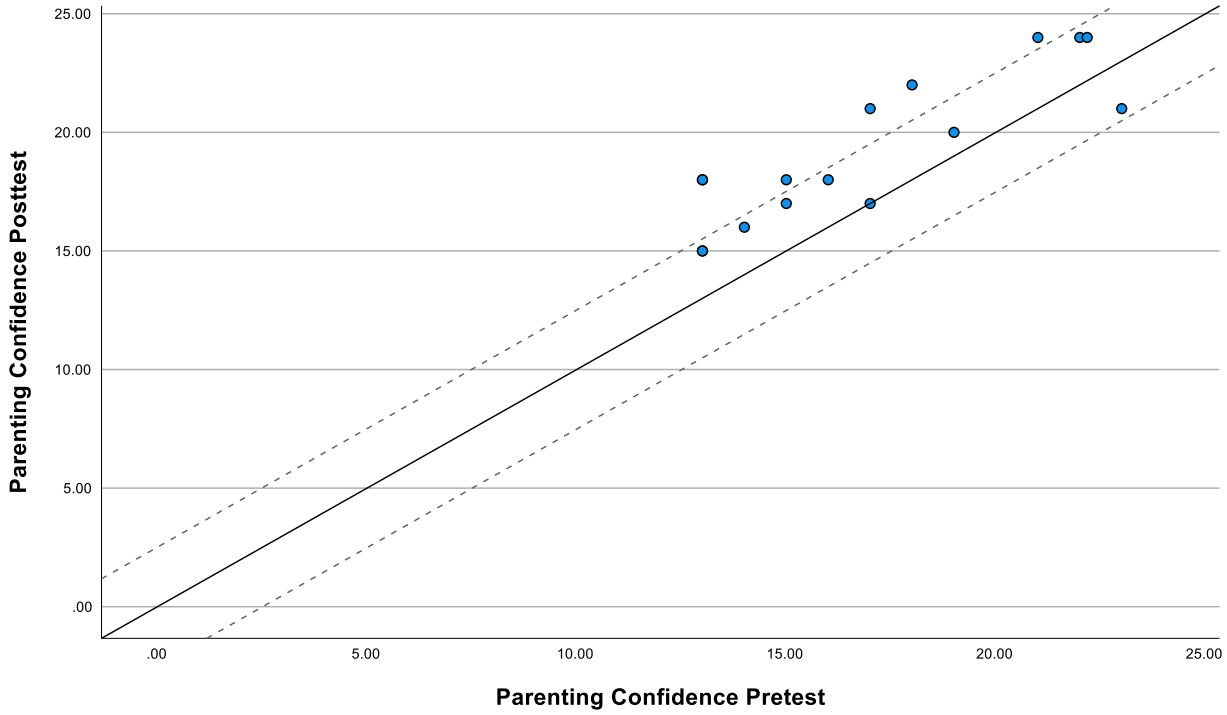
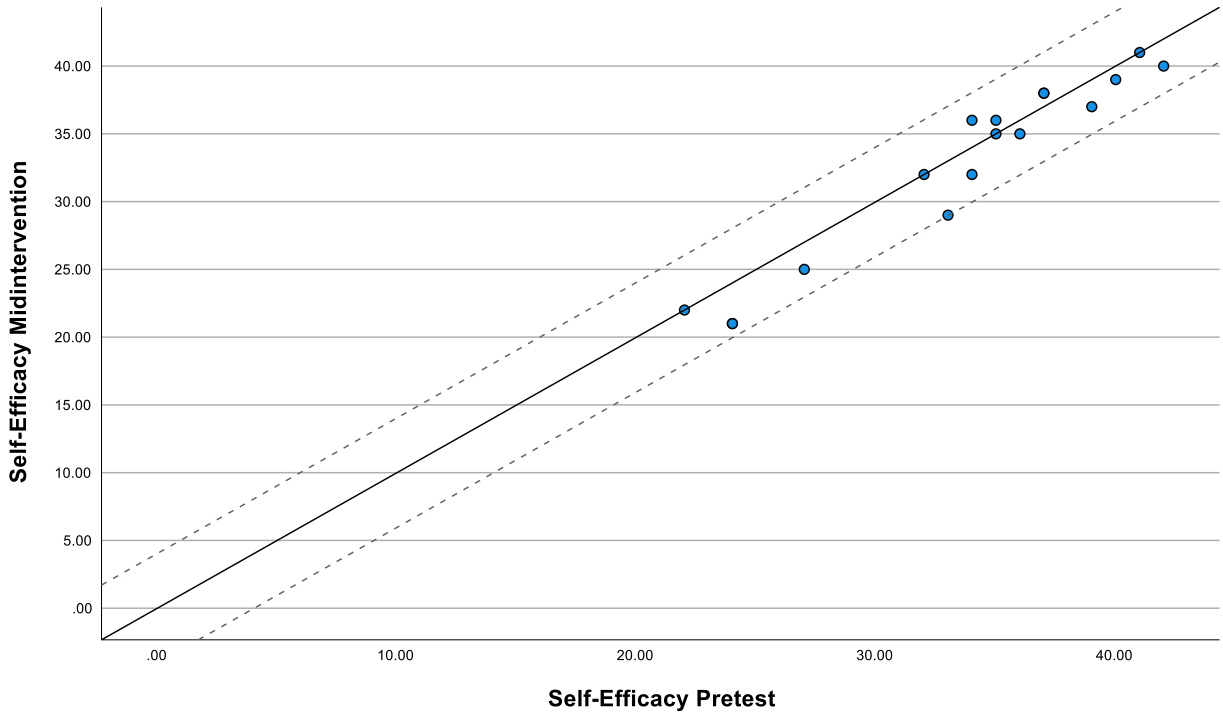
APPENDIX A: FOCUS GROUP INTERVIEW QUESTIONS

1. What is a father's role?
2. What has been exciting or challenging about getting ready for/having your baby?
3. Are there things you worry about or are stressed or concerned about as you become a father?
4. Resources
    a. What kinds of resources, if any, have you used?
    b. What was appealing about ____ resource that made you want to use it?
    c. Did you find the resource helpful? Why or why not?
    d. What do you think was left out of the resources you used?
5. Are there resources you tried to find or wanted to access but couldn't?
    a. What was it about that resource option you thought would have been helpful if you had been able to access it?
6. In thinking about parenting your baby for the first year, what, if anything do you feel unprepared for right now? (Prenatal only)
7. What would you say helped you adjust to being a father? (Postpartum only)
8. Imagine you are planning to or had planned to seek additional resources around fathering.
    a. What format of resources would you be most interested in? (Provide examples)
    b. What barriers might exist that would prevent you from participating in a program? (Provide examples)
9. If a friend or family member was preparing to become a father, what advice would you give him to help him get ready?

APPENDIX B: RELIABLE CHANGE SCATTERPLOTS FOR DADSPACE OUTCOME VARIABLES



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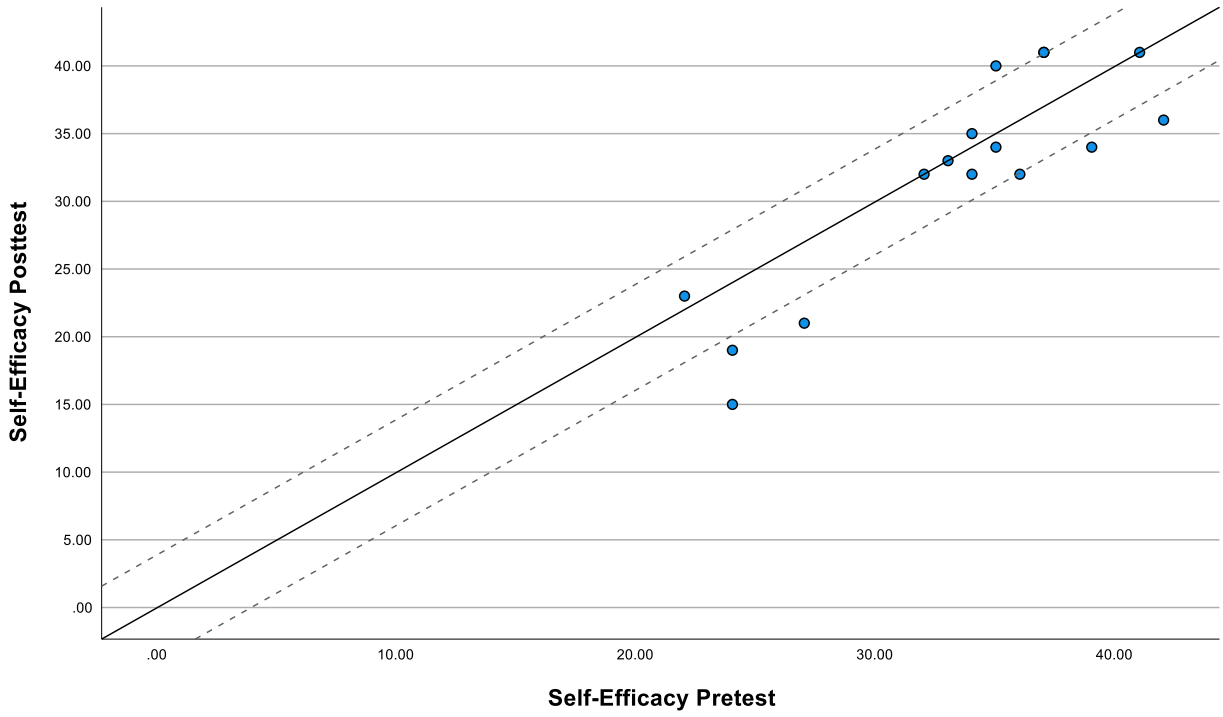
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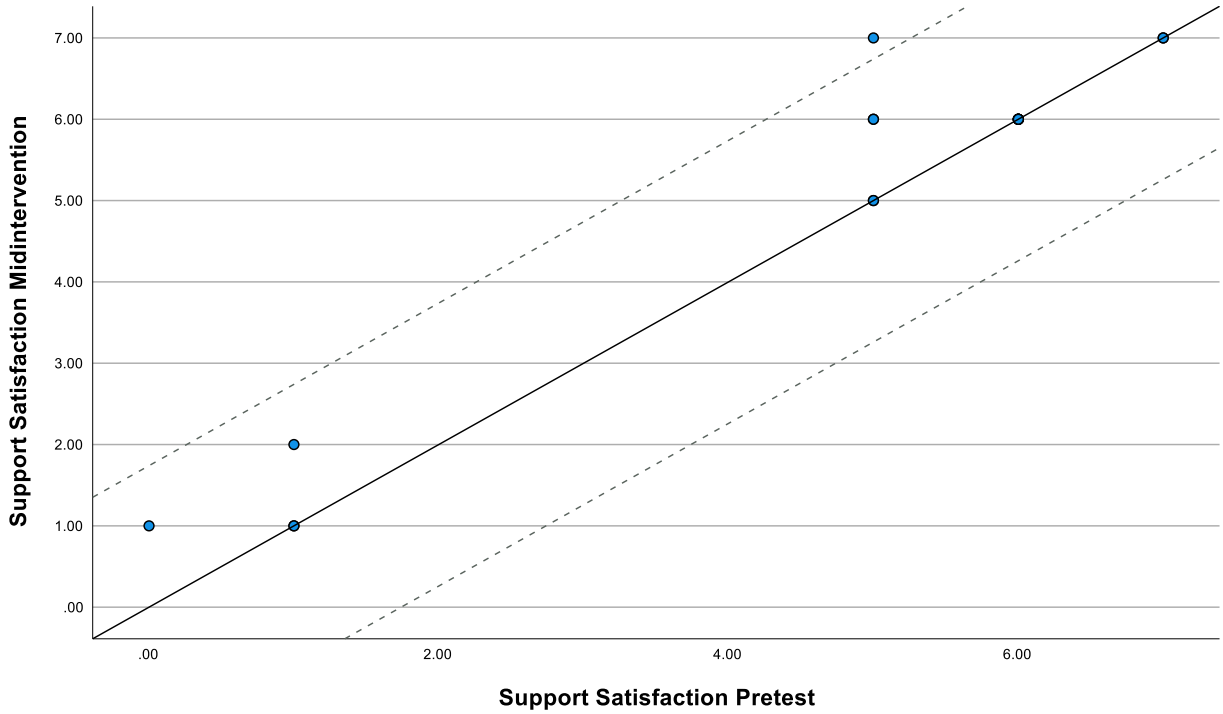
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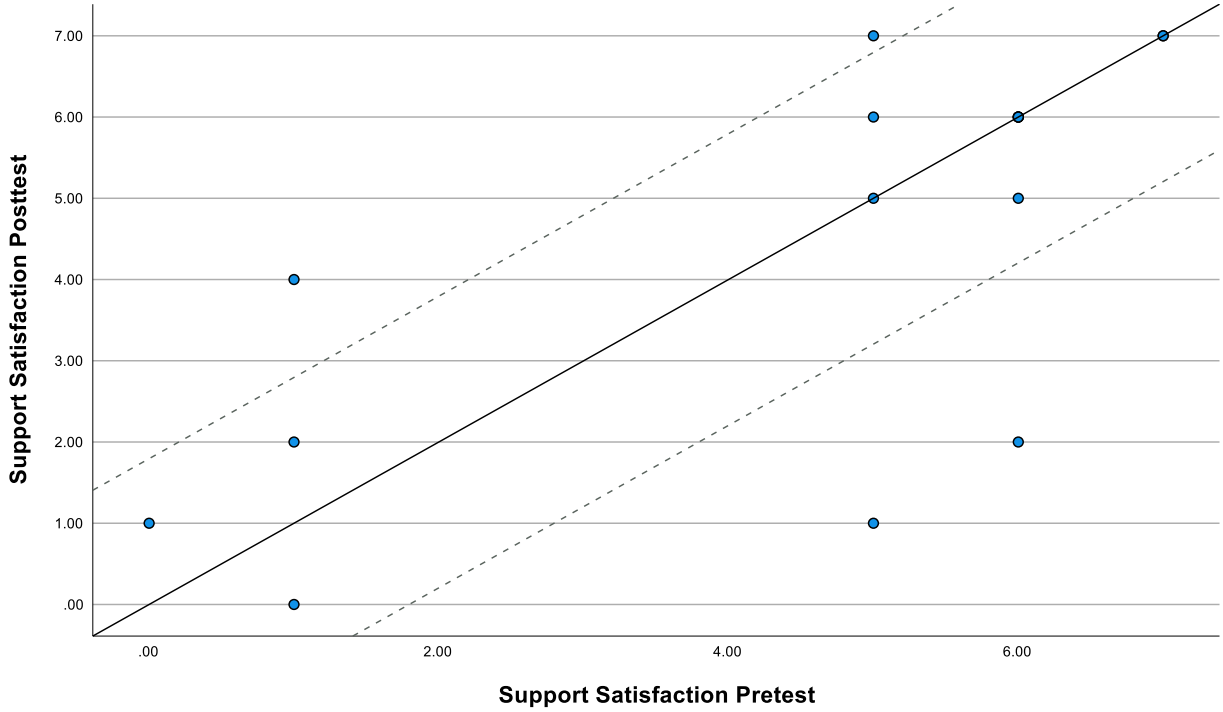
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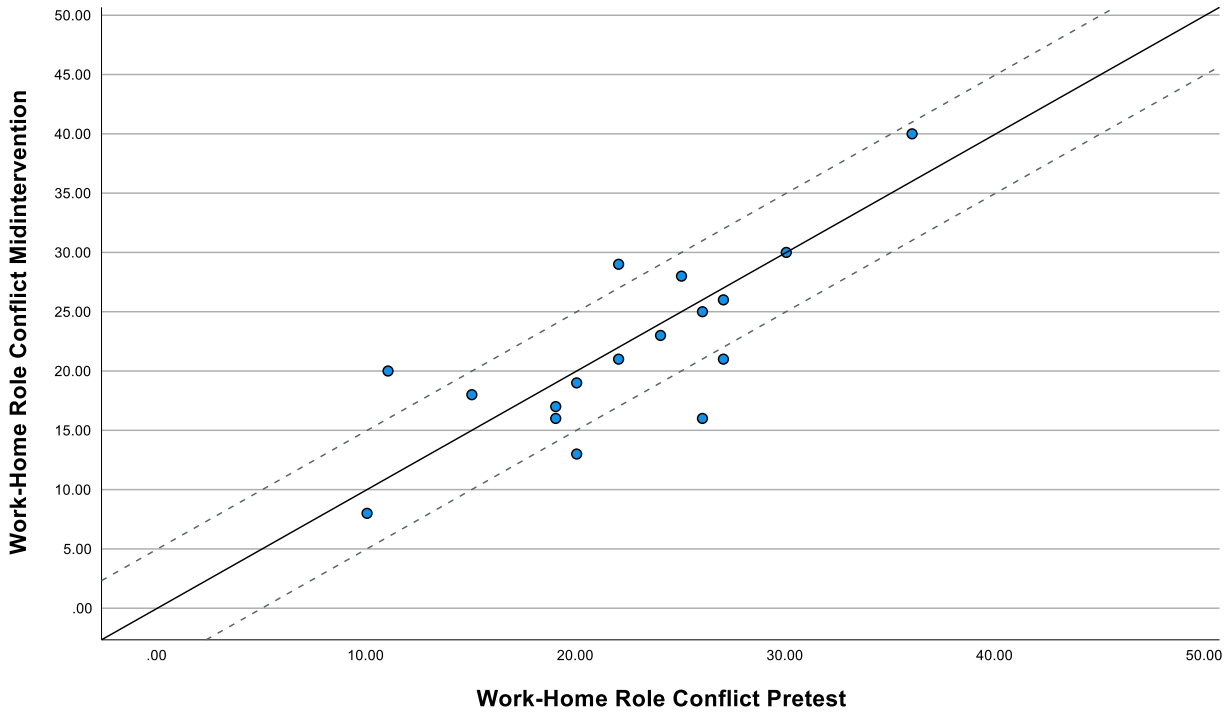
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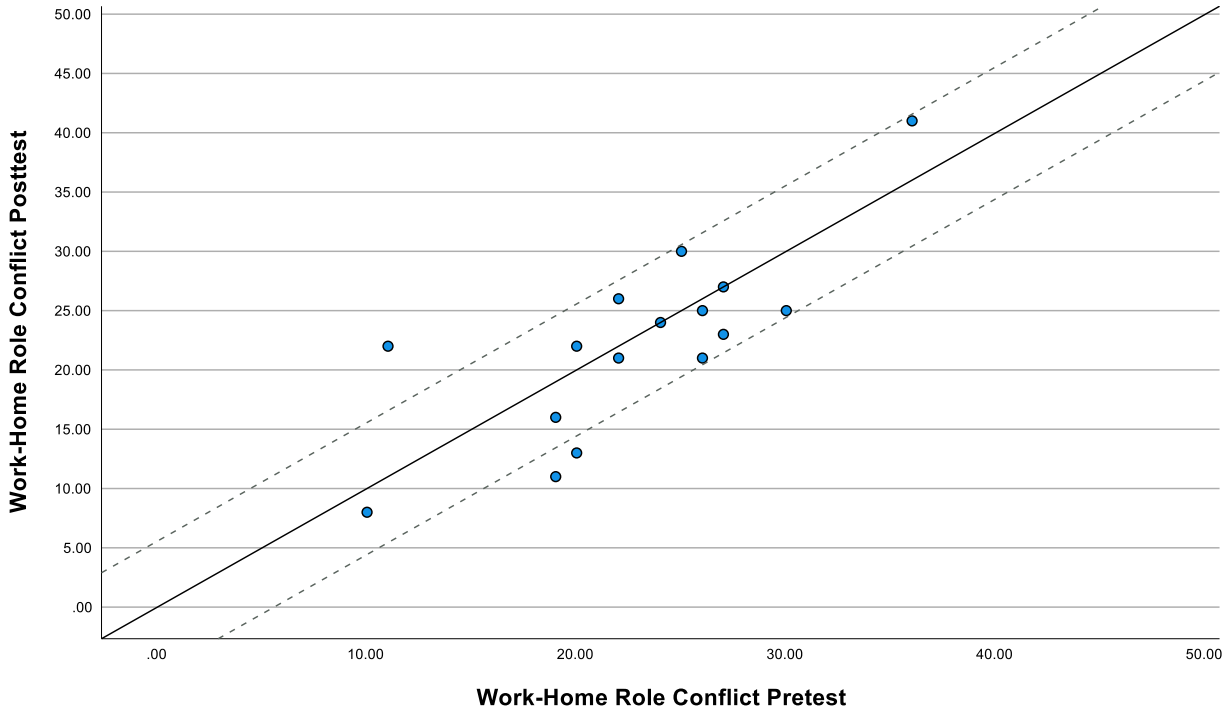
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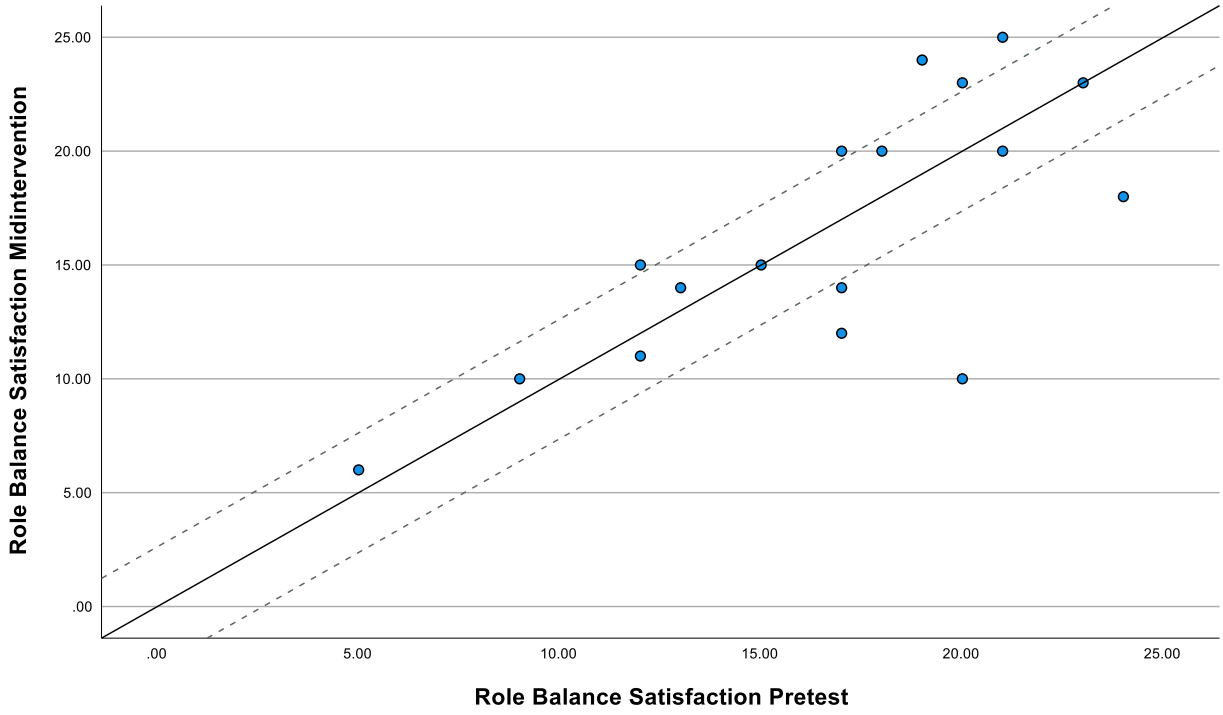
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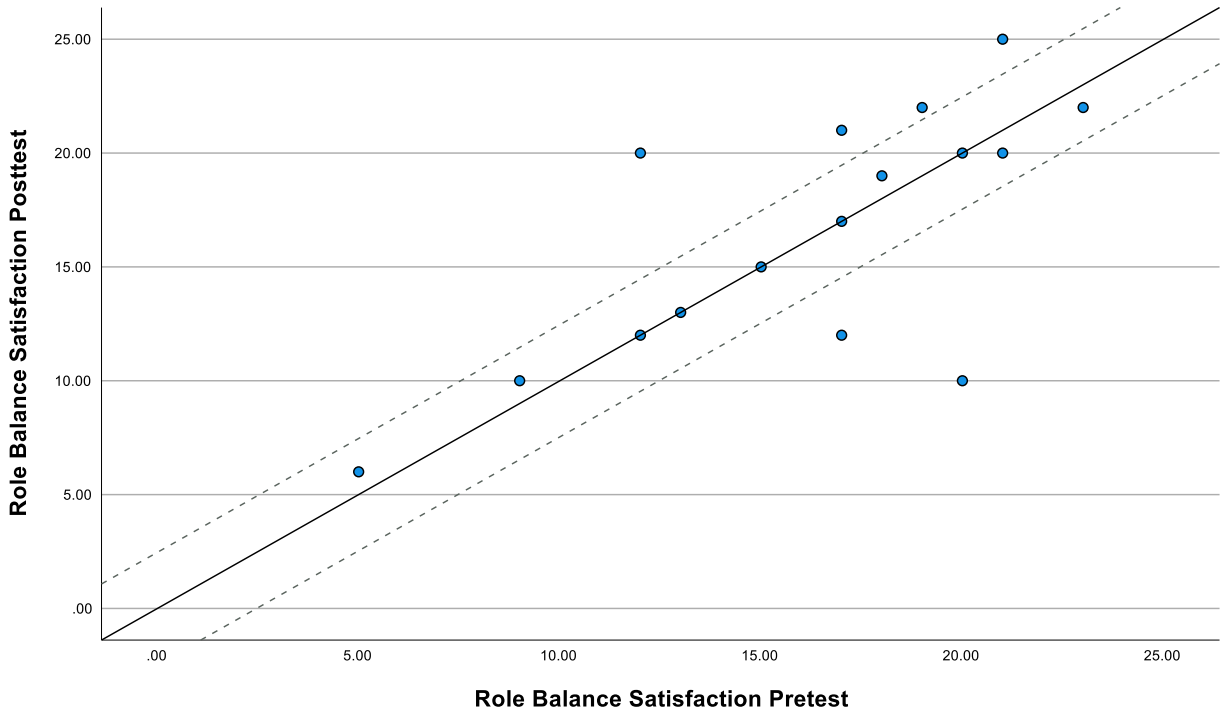
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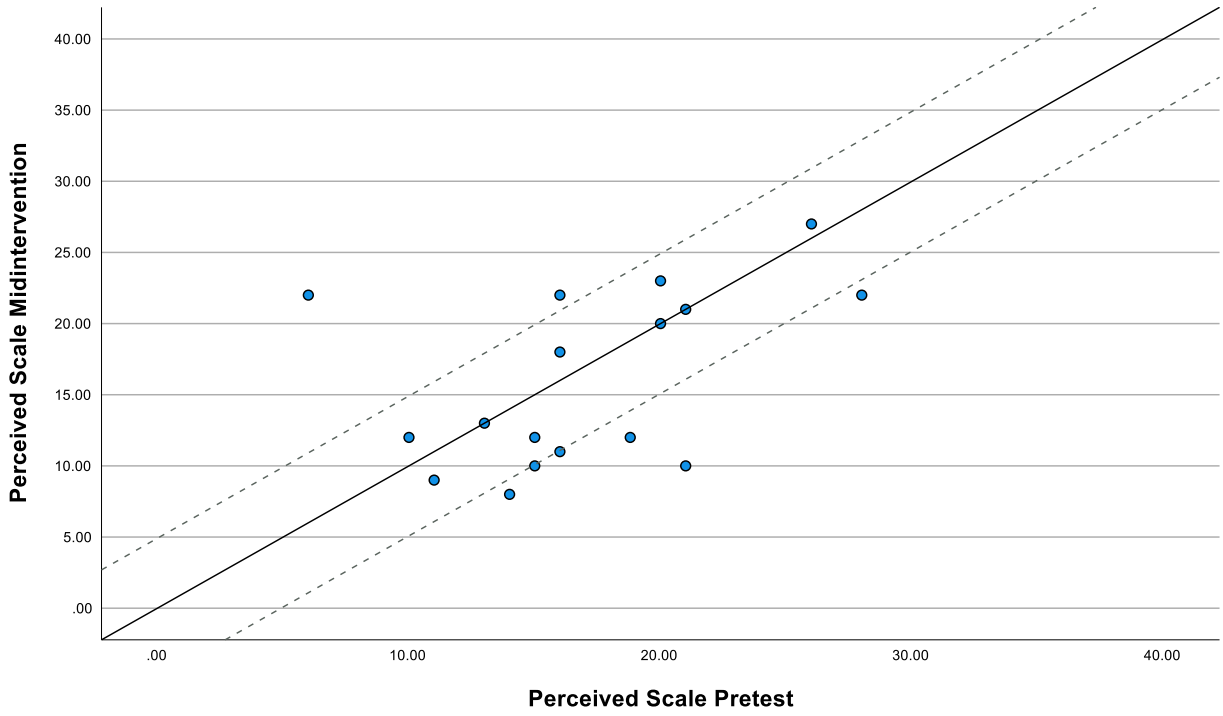
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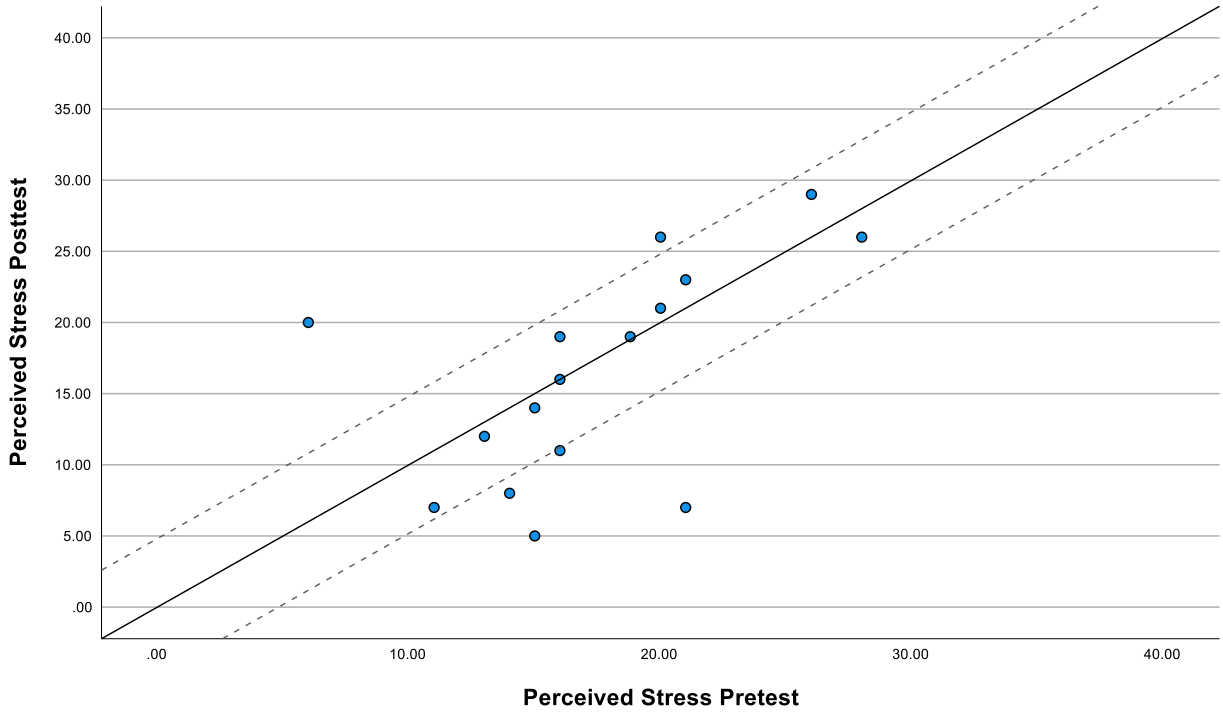
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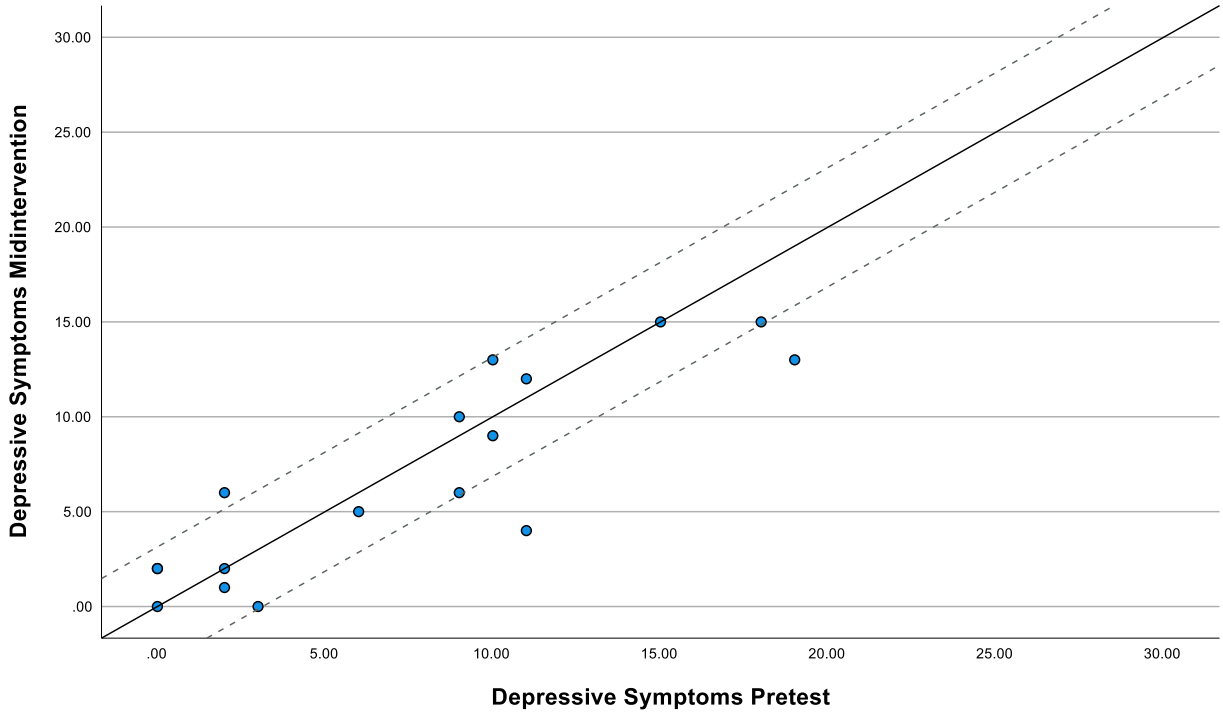
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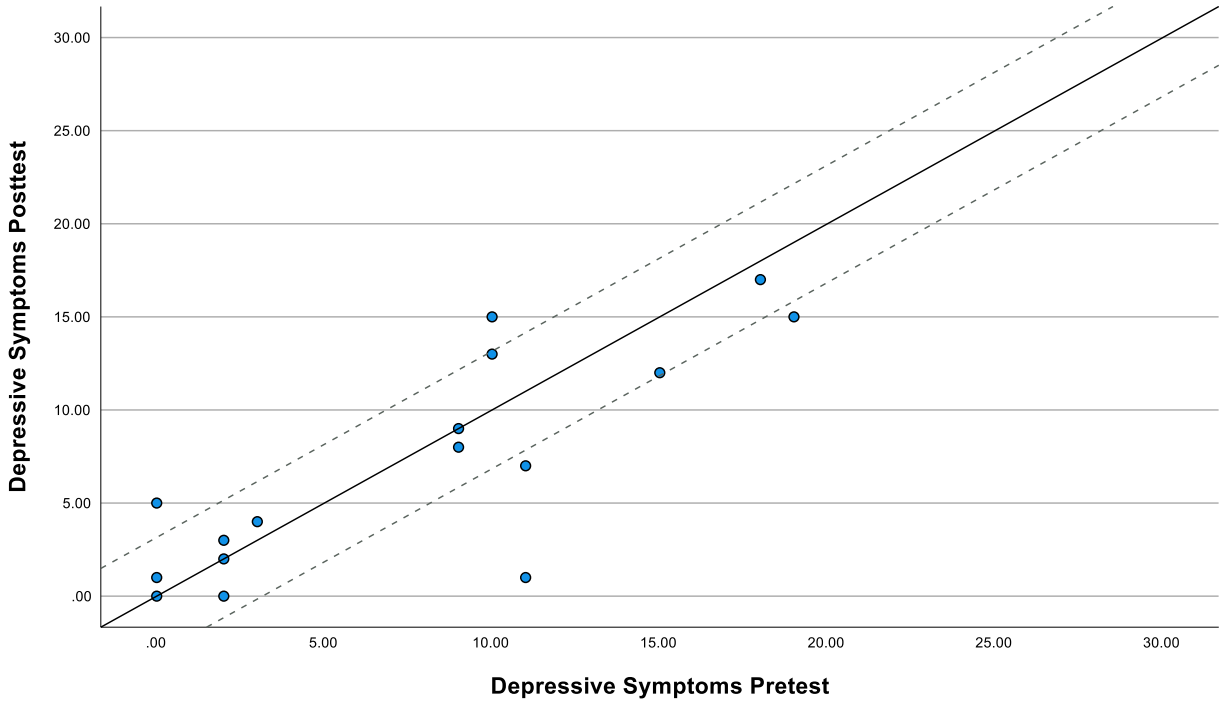
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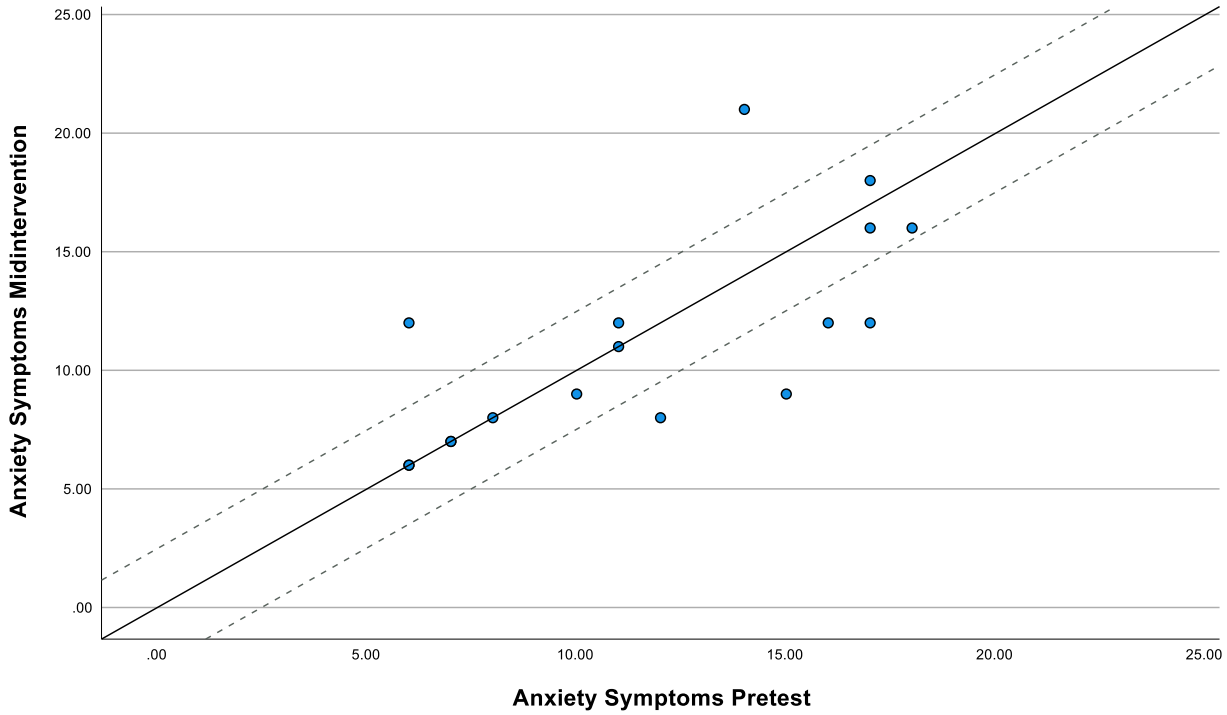
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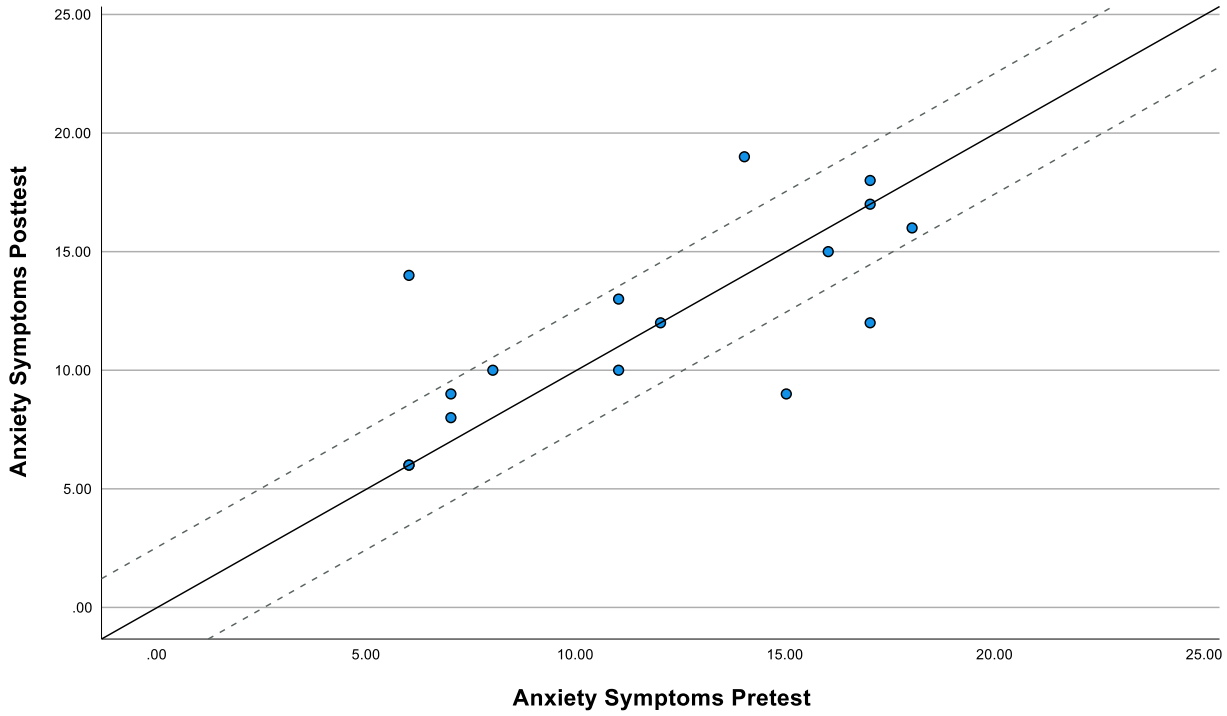
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