COUPLES' FERTILITY INTENTIONS: MEASUREMENT, CORRELATES, AND IMPLICATIONS FOR PARENT AND CHILD WELL-BEING

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ABSTRACT

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Unintended childbearing has emerged as a major social problem in the United States. In response, a wealth of research has emerged spanning topics ranging from union formation and dissolution to parenting, and maternal and child well-being. Although the field has taken great strides in advancing research on retrospective reports of unintended childbearing—usually focusing on its correlates and implications—the majority of this research focuses on mothers' perspectives, largely ignoring fathers and couples. Drawing on a family systems framework, I assert fertility intentions should be modeled as a couple-level construct, as mothers' and fathers' intentions are likely enmeshed into joint, couple intentions to provide a more nuanced understanding of unintended childbearing that acknowledges both parents' intentions. Using the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B), I conducted three sets of analyses that make notable contributions to current research on unintended fertility. The first assesses the validity of mothers' proxy reports of fathers' intentions, weighing the costs and benefits of incorporating men's perspectives, and it considers what sociodemographic characteristics are associated with couples' intentions (i.e. both intended; only mother intended; only father intended; and neither intended). Next, I consider the linkages between couples' unintended childbearing and parents' mental and physical health – examining gender differences (or similarities) and considering changes in the linkage between couples' intentions and well-being over time. Finally, I examine the effects of couples' intentions on child well-being partitioning out direct and indirect effects via parental well-being, investment and the co-parental relationship dynamic. Results from all three chapters demonstrate consideration of couples' intentions

provides a more nuanced understanding of unintended childbearing and its linkages with well-being. Key findings are situated around implications for both practice and research.

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CHAPTER I: INTRODUCTION

Scholarship on unintended fertility is burgeoning, spanning topics such as union formation and stability, parenting, and parent/child well-being. Recent survey estimates demonstrated over one-third of births to US women were either unwanted or mistimed (Guzzo & Payne, 2012; Mosher, Jones, & Abma, 2012). Though most research on unintended fertility has focused solely on women (see Axinn, Barber, & Thornton, 1998; Barber, Axinn, & Thornton, 1999; Miller, Sable, & Beckmeyer, 2009; Musick, 2002; Musick, England, Edgington, & Kangas, 2009; Guzzo & Hayford, 2011), other scholarship has examined men's fertility intentions and linked fathers' unintended childbearing to less warmth toward children (Bronte-Tinkew, Ryan, Carrano, & Moore, 2007) and less paternal involvement (Bronte-Tinkew, Scott, Horowitz, & Johnson, 2009). Although research linking fertility desires – or ideal family size – and intentions to subsequent fertility emphasized the importance of considering couples' desires and intentions as early as the 1970s (e.g. Beckman, Aizenberg, Forsythe, & Day, 1983; Fried & Udry, 1979; Thomson, 1997; Thomson, McDonald, & Bumpass, 1990), work focusing on the correlates and consequences of experiencing an unintended birth has largely modeled fertility intentions as an individual-level construct, with some notable exceptions (discussed below). Drawing on the family systems framework, I conceptualize fertility intentions as a couple-level, rather than an individual-level, construct. In addition, I complement the family systems perspective with insights from other perspectives (e.g., feminist and life course) conducting analyses that explicitly examine the role of gender and couple dynamics in the effects of joint, couple-level fertility intentions on both parent and child well-being.

Although the majority of research on unintended fertility models intentions as an individual-level construct, notable exceptions have conceptualized retrospective fertility

intentions as a couple-level construct. For instance, Korenman and colleagues (2002) used mothers' direct reports of their own intentions alongside mothers' indirect reports of the birth fathers' intentions to construct a couple-level measure for fertility intentions using the National Longitudinal Study of Youth, 1979 (NLSY79). This initial set of analyses suggested children experienced poorer well-being if either parent considered the birth unintended; thus, the authors advocated the use of a new categorization of fertility intentions that identified children who were unintended by either the mother or father (Korenman, Kaestner, & Joyce, 2002). Korenman and colleagues advanced the field's conceptualization of fertility intentions, but data restrictions only allowed them to construct a proximate of couple-level intentions by using mothers' reports of fathers' intentions. The more recent Early Childhood Longitudinal Study— Birth Cohort (ECLS-B) data provide an opportunity to address this limitation as these data include direct information from both mothers and fathers. Indeed, recent research that used the ECLS-B suggested that a father's intending the birth could buffer the negative effects of a mother's not intending the birth with regards to risky behaviors during pregnancy and prenatal care (e.g. Hohmann-Marriott, 2009; Martin, McNamara, Milot, Halle, & Hair, 2007). Further, nuanced conceptualizations of couple's fertility intentions provided greater insight in understanding unintended fertility and its association with child well-being at later ages (Saleem & Surkan, 2014) as well as unintended fertility and subsequent high-risk fertility (Moore, Ryan, Manlove, Mincieli, & Schelar, 2009). This recent scholarship has improved our understanding of gender dynamics by including fathers' fertility intentions alongside mothers' and exploring the effects of discordance in couple' fertility intentions. Yet, this research is in its infancy compared to the well-established research on mothers' fertility intentions and well-being.

I conducted three distinct sets of analyses that complement this emergent body of research by providing a better understanding of gender dynamics and couple disagreement in fertility intentions and their implications for both parent and child well-being. All analyses draw on the ECLS-B data. Please note that couples are defined based on parenthood status (i.e., shared biological child) rather than romantic ties to one another. Although fathers' participation in the ECLS-B is lower than mothers', alternative data sets with better representation of nonresident fathers, like the Fragile Families, are limited to specific target populations and do not include traditional measures of fertility intentions.[1] The notable share of missing data on fathers raises concerns and calls into question the generalizability of findings presented herein. In response, I conducted supplemental analyses, when applicable, to determine which types of fathers are missing (based on mothers' reports). This allowed me to better assess the implications these "missing men" posed for my analyses. Although this study likely produces biased prevalence estimates of couples' unintended fertility – by omitting the least engaged fathers who are probably those most likely to have intended a birth – the examination of couple-level fertility intentions and their impact on family dynamics expands our understanding of gender, fertility intentions, and well-being and complement research that already documents the prevalence of mothers' unintended fertility (see Mosher et al., 2012 for recent estimates).

The first application focuses on predicting fertility intentions as a couple-level construct: *both* mother *and* father intended; only mother intended; only father intended; and *neither* mother *nor* father intended. This conceptualization simultaneously predicts both unintended fertility and couple disagreement in intentions. Other work on couples' fertility intentions used a similar

[1] Waller & Bitler (2008) used a Fragile Families' measure asking if parents had considered abortion as a proximate of fertility intentions, but the Fragile Families data cannot be used to ascertain if a birth was wanted, mistimed, or unwanted.

operationalization of couples' intentions (see Hohmann-Marriott, 2009; Korenman et al., 2002; Martin et al., 2007; Moore et al., 2009; Saleem & Surkan, 2014); however, this scholarship modeled couples' fertility intentions as a predictor of well-being rather than an outcome variable. Hohmann-Marriott (2009) found higher levels of concordance in married parents' intentions when compared to their cohabiting counterparts, but aside from relationship type she did not consider factors leading to agreement versus disagreement in intentions. A well-established body of research discusses a range of characteristics and circumstances that increase a woman's odds of having an unintended birth. For instance, lower levels of education (Musick, 2002; Musick et al., 2009), minority racial/ethnic status (Finer & Henshaw, 2006), living in poverty (Finer & Zolna, 2011), experiencing an unintended first birth (Guzzo & Hayford, 2011), and being single or cohabiting rather than being married (Finer & Zolna, 2011; Musick 2002) all increase a woman's propensity to experience unintended fertility, but less is known about what predicts fathers' or couples' fertility intentions agreement (notable exception being Lindberg & Kost, 2013).

The first application also assesses the consistencies between mothers' and fathers' reports of fathers' intentions. Given data limitations, mothers' reports of fathers' intentions have been used in prior work (e.g. Korenman et al., 2002; Williams, 1994). Although prior research on desired family size and intentions to have a(nother) child suggested wives' reports of husbands' intentions were not too problematic (see Morgan, 1985; Williams & Thomson, 1985), the accuracy retrospective reports of mothers' reports of fathers' intentions has not yet been rigorously assessed among recent cohorts or outside the context of marriage. If mothers' reports of fathers' intentions are consistent with fathers' own intentions, other data sources like the National Longitudinal Survey of Youth 79 (NSLY79) and the National Survey of Family Growth

(NSFG) could be used to construct couple-level measures of fertility. This would provide a great advantage for advancing research on couple-level fertility intentions, as the ECLS-B are currently the only recent data available to provide truly couple-level indicators of fertility intentions. If indirect reports provided by mothers are consistent with fathers' own reports, researchers can draw on the strengths of other data such as the NLSY79's frequent and long-reaching follow-up waves or the NSFG's detailed information regarding relationships, contraceptive use, and fertility experiences to answer a broader range of questions related to couples' fertility intentions.

The second application examines the roles of gender, intention status, and couple disagreement in intentions across multiple domains of parental well-being (i.e., mental and physical health). A large body of work examines the consequences of unintended fertility. One line of research documented negative effects of unwanted or mistimed pregnancy on various dimensions of mothers' well-being (e.g. East, Chien, & Barber, 2012; Kost, Landry, & Darroch, 1998; Su, 2012). Another line linked unintended fertility to risky pregnancy behaviors, less parental warmth and investment, and poorer child well-being (e.g. Barber et al., 1999; Barber & East, 2009; Bronte-Tinkew et al., 2007, 2009; Humbert, Saywell, Zollinger, Priest, Reger, & Kochhar, 2011; Joyce & Grossman, 1990; Joyce, Kaestner, & Korenmann, 2000; Shah, Balkhair, Ohlsson, Beyene, Scott, & Frick, 2011). However, less attention has been paid to the association between unintended fertility and fathers' well-being. Su's (2012) recent work with the now-dated National Survey of Families and Households (NSFH) suggested that unintended fertility increased fathers' depressive symptoms, but research linking unintended fertility and fathers' well-being is very limited compared to work examining the linkage between mothers' fertility intentions and well-being. I contribute to current research by reconsidering Su's analyses among

a more recent cohort of fathers. Also, I tested the differences in effects of unintended childbearing on parental well-being for mothers and fathers, providing an important contribution to current research by ascertaining if couples' intentions have stronger associations with mothers' or fathers' well-being.

In addition to including fathers, the second application considers the role of gender, intentions, and couples' agreement in fertility intentions on parental well-being. Some work on couples' intentions suggested that a father's labeling a birth as intended could buffer the negative effects of a mother considering that birth as unintended on child well-being (e.g. Hohmann-Marriott, 2009; Martin et al. 2007). Conversely, Moore and colleagues (2009) found that when a father intended the first birth (but the mother did not), the couple was at an increased risk of experiencing a second "high risk" birth.[2] It is likely that both intention status and couple agreement are linked to parental well-being. Ultimately, I am able to ask, (1) how are a respondent's own and the "other" parent's intentions associated with parental well-being , (2) is unintended childbearing or couple disagreement in intentions more consequential for parental well-being, and (3) do the effects of unintended childbearing on parental well-being remain stable, increase, or decrease over time? Finally, (4) do these effects operate differently for mothers versus fathers? Answering these questions provides a better understanding of how gender and couple dynamics influence the association between unintended childbearing and parents' well-being.

[2] High risk births were defined as meeting at least two out of five specified criteria: 1) non-marital; 2) occurring to unhappy couples; 3) occurring to couples with frequent conflict; 4) occurring within 12 months of the first birth; or 5) high parity (4^{th} birth or higher).

The third application focuses on children. Unintended fertility has been linked to lower child well-being as parents who experience an unintended birth reported psychological distress and invested less in their children, on average (e.g. Barber et al., 1999; Barber & East, 2009; Cheng, Schwartz, Douglas, & Horon, 2009; Hayatbakhsh, Najman, Khatun, Al Mamun, Bor, & Clavarino, 2011; Humbert et al., 2011; Hohmann-Marriott, 2009; Joyce et al., 2000; Korenman et al., 2002; Miller et al., 2009; Shah et al., 2011). Further, research demonstrated a similar association between intention status, parental well-being (and investment), and child well-being existed for fathers (Bronte-Tinkew et al., 2009). Consideration of couples' fertility intentions suggested various configurations of mothers' and fathers' intentions influenced child well-being (e.g. Hohmann-Marriott, 2009; Martin et al., 2007; Saleem & Surkan, 2014). This early work on couple-level fertility intentions has been instrumental in documenting the importance of both mothers' and fathers' intentions on child well-being. However, scholars have not assessed the role of parental investment, well-being or the co-parental relationship dynamic on child well-being and have not fully considered gender nuances. The final empirical application contributes to current research by (1) considering the relative importance of mothers' versus fathers' intentions on child well-being and (2) quantifying the mediating effects of parental well-being, investment, and the co-parental relationship dynamic on the association between couples' intentions and child well-being.

Childbearing is by default a couple-level experience; however, data concerns and constraints have led prior research to examine mothers' experiences at the expense of fathers'. Recent studies have incorporated fathers' fertility intentions in discussions of childbearing and parenting, but the vast majority of this research has not considered couples' fertility intentions. The ECLS-B provide the only nationally, representative data that include both mothers' and

fathers' fertility intentions and can consider couple-level fertility intentions in the US context. Indeed, some have used these data to consider couples' intentions and their effects on prenatal care, pregnancy outcomes, and child well-being (see Hohmann-Marriott, 2009; Martin et al., 2007; Moore et al., 2009; Saleem & Surkan, 2014), but this body of research in still in a nascent stage.

I developed three applications that make substantial contributions to current research by (1) predicting couples' fertility intentions and considering the consistency between mothers' and fathers' reports of fathers' intentions, (2) examining gender differences in unintended fertility, couple agreement, and their associations with parental well-being, and (3) examining couple's fertility intentions, parental investment, well-being, and the co-parental relationship dynamic and their linkages with child well-being. All analyses are limited to first births for two primary reasons. First and foremost, prior research on unintended childbearing has suggested that births cannot be considered as isolated events (Guzzo & Hayford, 2011) and parental investment in children varies across siblings based on whether each child was intended (Barber & East, 2009). Since fertility intentions are unavailable for previous or additional biological children, I opted to focus on first births. In addition, the second empirical application focuses on parental well-being in the *transition* to parenthood, making a focus on first births particularly insightful.

CHAPTER II: MEASURING & PREDICTING COUPLES' INTENTIONS

Thirty-seven percent of recent births to US women were unintended, a level which has remained stable since the 1980s (Mosher et al., 2012). Unintended fertility in the United States is also concentrated among disadvantaged, minority women (see Finer & Henshaw, 2006; Finer & Zolna, 2011; Maxson & Miranda, 2011; Musick, 2002; Musick et al., 2009), and researchers have linked unintended fertility to risky behavior during pregnancy, mothers' psychological distress, and lower child well-being (e.g. Axinn et al., 1998; Cheng et al., 2009; East et al., 2012; Joyce et al., 2000; Miller et al. 2009; Shah et al., 2011). Given the high prevalence of unintended childbearing and its association with lower well-being, unintended fertility has emerged as a major social problem with implications for parents and children, and its concentration among economically disadvantaged, minority populations suggests these behaviors disproportionately affect "at-risk" populations and may exacerbate differences in health and social behaviors (Finer & Zolna, 2011; Maxson & Miranda, 2011; Musick 2002).

BACKGROUND

Most research on the correlates, causes, and consequences of unintended fertility has focused on mothers' and children's experiences, largely excluding fathers – with few exceptions (e.g., Augustine, Nelson, & Edin, 2009; Bronte-Tinkew et al., 2007, 2009; Lindberg & Kost, 2013; Su, 2012). The exclusion of fathers, in turn, means that few studies have considered *couples*. Childbearing is by default a couple experience, but very little is known about fathers' perspectives on unintended fertility and how they affect mothers', fathers', and children's experiences. The limited work that has focused on couples' intentions has treated them as a

predictor rather than an outcome variable (e.g. Hohmann-Marriott 2009; Martin et al., 2007; Moore et al., 2009; Saleem & Surkan, 2014) or relied on mother's reports of the father's intentions (Korenman, et al., 2002; Williams 1994). Thus, theoretical explanations of couple disagreement in intentions among recent cohorts of parents are lacking. This application contributes to research on unintended childbearing by addressing measurement concerns over couples' intentions, developing a theoretical framework to assess gender and disagreement in couples' intentions, and predicting couples' fertility intentions.

Correlates of unintended fertility and other "problem" fertility behaviors

Given the dramatic increase in nonmarital fertility, the increasing prevalence of multipartnered fertility, and high levels of unintended fertility in the contemporary US, a wealth of research considers which sociodemographic characteristics are associated with these "problematic" fertility behaviors (see Cancian, Meyer, & Cook 2011; Carlson & Furstenberg, 2006; Carlson, VanOrman, & Pilkauskas, 2013; Finer & Zolna 2011; Guzzo & Furstenberg 2007a, 2007b; Musick, 2002; Musick et al. 2009). Unintended fertility raises concerns, as it is associated with risky behaviors during pregnancy (Hohmann-Marriott, 2009; Humbert et al., 2011; Moore et al., 2009) and increased maternal stress, which in turn lowers child well-being (e.g., East et al., 2012; Miller et al., 2009). Prior research consistently found younger, unmarried, less educated, minority women and those living in or near poverty were at a greater risk of experiencing an unintended birth compared to their relatively advantaged counterparts (see Finer & Henshaw, 2006; Finer & Zolna, 2011; Musick, 2002; Musick et al., 2009). Most research considered mothers', rather than fathers', perspectives, but the limited research on fathers suggests that by-in-large the same set of sociodemographic characteristics increased a man's risk of experiencing

nonmarital, unintended, or multipartnered fertility (see Carlson et al., 2013; Guzzo & Furstenberg 2007a; Lindberg & Kost, 2013).

Most research on unintended fertility uses survey data, and fertility intentions have been operationalized as a binary or categorical construct based on the mother's reports about the wantedness and timing of a pregnancy. The construct is often measured retrospectively as women are asked to recall if a birth was wanted and on time (versus too soon or too late) at the time of pregnancy. Researchers have questioned and assessed the degree of retrospective reporting bias in this measure, alongside recall biases that are associated with retrospective reporting in general (see Casterline & El-Zeini, 2007; Crissey, 2005; Joyce et al., 2002). Separately, others suggested intentions could not be adequately captured using crystallized, static categorical response categories (such as wanted, mistimed, or unwanted) as mothers and fathers often emphasized they were neither trying to get pregnant nor surprised when they got pregnant, suggesting intentions are better represented by a continuum rather than a dichotomy (see Augustine et al., 2009; Edin & Kefalas, 2005). In spite of these limitations, the simple binary (or categorical) measure of unintended childbearing, based on retrospective questions, remains the standard approach to measuring fertility intentions, and a recent methodological piece demonstrated it remains a valid measure, at least among women (see Santelli, Lindberg, Orr, Finer, & Speizer, 2009).

Conceptualizing fertility intentions as a couple-level construct

Despite the emphasis in recent years on a fairly simple way of measuring unintended fertility with individual-level, retrospective reports from mothers, family and demographic scholars have often advocated a different approach. In particular, prior work on childbearing desires and

fertility outcomes asserted couples were a more appropriate unit of analysis than individuals (see Beckman et al., 1983; Fried & Udry, 1979; Thomson et al., 1990). In her classic piece, Thomson (1997) asserted, "Omitting husbands' desires or intentions obscures the true relationship between childbearing desires...and outcomes" (pg.343). Drawing on a family systems framework, I return to this viewpoint and posit a more accurate conceptualization of unintended fertility should model joint, couple-level fertility intentions. Essentially, the family systems framework regards families as an interconnected collection of persons and relationships that seeks to maintain a state of family equilibrium (or stable functionality). As such, this framework asserts that families must be viewed as a web of persons and relationships rather than a mere collection of individuals and is often concerned with understanding family functioning, dynamics, processes, and cohesion (White & Klein, 2008). Key tenets of this framework have been applied to better understand topics including but not limited to family boundary ambiguity in diverse family forms (see Brown & Manning, 2009; Stewart, 2005, 2007); widespread variation in child well-being following divorce (see Hetherington, 1979); and the association between economic crisis, family processes, and well-being (for review see Conger, Conger, & Martin, 2010). The family systems model might seem most applicable for families living together in one household, but it has also been applied to relationship ties spanning households. For instance, some have used the family systems framework to examine the co-parenting relationship between mothers and fathers living in separate households (see Carlson, McLanahan, & Brooks-Gunn, 2008; Madden-Derdich, Leonard, & Christopher, 1999).

Based on a family systems perspective, I assert that unintended fertility cannot merely be viewed as a social problem involving and affecting mothers and children. Although mothers' and fathers' intentions are certainly important in their own right, the family systems approach

suggests researchers should consider joint, couple-level fertility intentions rather than viewing mothers' and fathers' intentions as independent constructs. Conceptualizing intentions as a couple-level phenomenon provides a holistic, nuanced framework to better understand both the factors that influence fertility intentions and the effects intentions have on parents and children. Specifically, viewing couples' intentions brings disagreement in mothers' and fathers' reports of intentions to the forefront. Examining mothers' or fathers' fertility intentions in and of themselves assumes either parents share similar intentions or the omitted parents' intentions are not consequential to parent and child well-being, and both assumptions are problematic. For instance, Hohmann-Marriott (2009) found that approximately one-third of couples reported disagreement in intentions, and the limited work examining couples' fertility intentions has consistently found that both mothers' and fathers' intentions are consequential for maternal and child well-being (e.g. Martin et al., 2007; Moore et al. 2009; Saleem & Surkan, 2014). Thus, conceptualizing fertility intentions as a couple-level construct provides a better framework to understand the context of unintended fertility, its correlates and effects on well-being.

There is relatively little research examining fertility intentions at the couple-level due in part to data constraints. I suggest these data limitations may have led scholars to prematurely discount the role fathers play and how fathers' intentions affect mothers' and children's experiences. One of the major data limitations is the availability and quality of male fertility data. Recently, Joyner and colleagues (2012) found men were less likely to provide accurate information regarding fertility than women. In a separate vein, Martin (2007) noted household surveys often omit economically disenfranchised men who have weak ties to households, making certain male target populations – like nonresident fathers – particularly difficult to identify (see also Sorenson, 1997; Stykes, Manning, & Brown, 2013). These concerns over the quality of

men's data cannot be ignored; however, others have asserted scholars should make efforts to include men in discussions of families as they play integral roles in reproductive health and family processes (see Greene & Biddlecom, 2000; Goldscheider & Kaufman, 1996; Lindberg & Kost, 2013; Santelli, Rochat, Hatfield-Timajchy, Gilbert, Curtis, Cabral, Hirsch, & Schieve, 2003).

In addition, the scarcity of couple-level data (where both parents are interviewed) has likely hampered research on couples' fertility intentions. The ECLS-B provide the only data that can directly assess couple's fertility intentions among a recent, diverse sample. The NLSY79 and NSFG provide indirect reports of fathers' fertility intentions by asking mothers to report on fathers' intentions, and these data could be used to create couple-level indicators of intentions. Indeed, early work relied on these indirect reports to model couples' fertility intentions. Williams' (1994) analyses with the 1988 NSFG found that disadvantaged, minority women (i.e. younger, minority racial/ethnic groups, less educated, and never married) experienced higher levels of disagreement in couples' intentions. Korenman and colleagues (2002) considered the effect of couples' intentions on child well-being and found fathers' intentions mattered as children intended by both parents fared better than those intended by the mother, but not the father, but results indicated no differences existed when one versus both parents did not intend the birth.

These early pieces were the first to consider couples' reports of unintended fertility. However, the reliance on mothers' reports of fathers' intentions raises concerns. Retrospective reports of fertility intentions are subject to both recall and social desirability biases, but it is also reasonable to expect mothers might be unaware of fathers' intentions. Prior work found wives' reports of husbands' childbearing desires were largely consistent (see Morgan, 1985; Williams &

Thomson, 1985), but these conclusions were based on dated data that considered prospective reports of childbearing desires rather than retrospective reports of unintended fertility and only considered married parents' perspectives. More recent work has used mothers' and fathers' reports of their own fertility intentions available in the ECLS-B data to model fertility intentions as a couple-level construct, but this research has modeled couple's intentions as a focal predictor variable for maternal and child well-being (e.g. Hohmann-Marriott, 2009; Martin et al., 2007; Moore et al., 2009; Saleem & Surkan, 2014). Thus, it is unclear what factors are associated with couples' intentions, and the theoretical explanations for how gender and sociodemographic characteristics play in to couples' intentions is lacking.

Disagreement in intentions: The intersection between gender, disadvantage, and parenthood

Previously, I detailed the factors that have been linked to unintended childbearing but cautioned the vast majority of this research focused on individual perspectives rather than couples. Drawing on a family systems perspective, I asserted fertility intentions should be a modeled as a couple construct in order to consider disagreement in mothers' and fathers' intentions. For instance, Williams (1994) found disagreement in couples' intentions was most common among disadvantaged, minority women, and Hohmann-Marriott (2009) noted that disagreement in intentions was more common among cohabiting parents than their married counterparts. Taken together, the limited research predicting couples' intentions suggests couple disagreement is more prevalent among relatively disadvantaged, minority mothers. Although the family systems perspective provides an ideal framework for conceptualizing unintended fertility as a couple-level construct, it falls short in explaining differences *between* mothers' and fathers' experiences in families. Next, I discuss differences in gendered identities and parenthood, which could contribute to disagreement in couples' intentions.

The social construction of gender and differences in masculinity and femininity could foster disagreement in mothers' and fathers' intentions, as parenthood is heavily gendered. Prior work by feminists and developmental psychologists alike suggested gender socialization and daily interactions with family, friends, peers, and society from birth to death led to differences in what was deemed masculine and feminine (see Chodorow, 1978; Maccoby, 1998; West & Zimmerman, 1987). Arguably, young girls – and women – were socialized (and expected) to invest more in relationships and parenthood than men (see Maccoby, 1998). Analyses of Mother's and Father's Day celebrations suggested that mothering was more "important" than fathering as families placed greater emphasis on Mother's Day, and mothers were more likely to receive gifts than fathers regardless of traditional versus egalitarian gender attitudes (Cote & Deutsch, 2008). Similarly, Francis-Connolly (2003) found women – more often than men – were portrayed as parents in popular magazines and that mothers were portrayed as caregiving parents whereas fathers were shown as "play parents." Consistent with these cultural depictions of motherhood and femininity, research on infertility found a woman's status as a mother was consequential for her well-being (e.g. McQuillan, Greil, White, & Jacob, 2003; McQuillan, Stone, & Greil, 2007). Taken together, gender socialization and the social construction of gender suggest mothers are more likely than fathers to report a birth as intended in response to heightened social expectations emphasizing the salience of motherhood for women's identities.

In a separate vein, others have asserted that men must strive to maintain and assert their masculinity on a regular basis whereas women are often assumed to be feminine (see Nock 1998; Townsend, 2002), and becoming a father has been identified as a key marker of successful masculinity (Marsiglio, 1998; Nock, 1998; Townsend, 2002). Anderson's (1999) classic *Code of the Street* suggested that in the context of sociodemographic disadvantage, men turned to

violence, aggression, and sexual prowess in order to assert their masculinity in the face of limited economic prospects or threats of a premature death. Similarly, one might expect fatherhood to provide disadvantaged men an opportunity to assert their masculinity in the presence of limited economic prospects. It could be argued that men's concern over demonstrating their masculinity might play out through childbearing, making men more likely to intend a birth than women – especially in the context of socioeconomic disadvantage. In sum, two different approaches emphasizing the role of gender identities in parenthood lead to competing hypotheses concerning gender differences in fertility intentions. The social construction of gender suggests that parenthood is more consequential for women's identities than men's and thus women are more likely to intend a birth. In contrast, research that underscores pressures for men to secure and defend their masculinity suggests that fathers are more likely to intend a birth than mothers, and it is reasonable to expect the latter might be more pronounced among the economically disadvantaged, as fatherhood might allow men to compensate for other challenges to their masculinity.

Relationship factors and intentions

Of course, there are other factors related to intentions and likely related to agreement, with relationship dynamics being particularly salient. Prior work suggested that single and cohabiting parents had a greater risk of both unintended childbearing and couple disagreement in childbearing (see Finer & Zolna, 2011; Musick, 2002; Hohmann-Marriott, 2009; Williams, 1994), but I expect relationship dynamics might also influence couples' fertility intentions as these factors have been linked to contraceptive use. Research demonstrated that poor relationship quality resulted in less consistent contraceptive use which increases the risk of unintended childbearing (see Manlove, Welti, Barry, Peterson, Schelar, & Wildsmith, 2011; Manning,

Flanigan, Giordano, & Longmore, 2009). Although disentangling the temporal ordering between current relationship dynamics and retrospective reports of fertility intentions is problematic, it is reasonable to expect that poorer relationship quality is positively correlated with both unintended childbearing and couple disagreement in intentions. Conversely, it is reasonable to expect that longer relationship duration and positive relationship quality reduce the risk of unintended childbearing and disagreement in intentions.

CURRENT STUDY AND HYPOTHESES

To expand on the limited research examining couple-level intentions and the larger body of work on individuals' intentions, my primary focus is to predict agreement in intentions. However, I first consider measurement issues by assessing the consistency between mothers' and fathers' reports of fathers' intentions differentiating between 1) consistent reports (i.e., mothers' reports of fathers' intentions match the fathers' own reports), 2) father did not intended, mother says he did, and 3) father intended, mother says he did not.[3] I expect mothers who are married to the biological father provide more consistent reports on fathers' intentions than their unwed counterparts. In addition, I expect relatively disadvantaged mothers' reports of fathers' intentions are less consistent than their relatively advantaged counterparts. Prior research does not guide expectations for inconsistencies based on mothers' race/ethnicity and age, but I also consider these factors since they are closely associated with unintended childbearing. Arguably, intending a birth might be indicative of having discussed childbearing intentions with a partner. Thus, I expect a mother's intending the birth increases the likelihood that she provides consistent reports

[3] Unfortunately, I cannot consider consistencies between mothers' and fathers' reports of mothers' intentions as these items were not included in the father surveys.

of the father's own intentions. Further, I expect that when mothers' reports are not consistent with fathers', mothers are more likely to assume the father shares her own intentions.

The second set of analyses predict couple-level fertility intentions: both intended, only mother intended, only father intended, and neither intended. I begin presenting hypotheses addressing both agreement and intentions that are gender neutral. Then, I discuss competing hypotheses concerning gender and disagreement in couples' intentions. Given the concentration of unintended fertility among disadvantaged and minority populations, I expect couples who are older, better educated, or white are more likely to both agree on intentions *and* intend to have the child. Relationship status is also important, and I expect married couples are more likely to both agree and intend the birth than their unwed counterparts. A final set of models, limited to couples living together at the child's birth, considers relationship dynamics. For these couples, I expect that longer relationship duration and higher relationship quality increase the likelihood of couples' both agreeing and intending to have the child whereas poorer relationship quality likely increases the odds of both disagreement and unintended fertility. Exploratory analyses will also assess if relationship quality and duration operate similarly for married and cohabiting couples, though I do not present hypotheses for these interactions.

Hypotheses emphasizing gender and disagreement in intentions become more complex as different perspectives inform competing hypotheses. Based on gender socialization and the social construction of gender, I expect when disagreement occurs a larger share of mothers, rather than fathers, intend the birth. Conversely, Anderson's "Code of the Street" and research men's negotiation of masculinity, suggests when disagreement occurs, a larger share of fathers intend the birth as having a child reaffirms a man's masculinity.

DATA AND METHOD

The ECLS-B is a recent nationally representative survey of children born in the United States that follows approximately 10,700 of an eligible 14,000 children who were born in 2001 (NCES, 2004). Moreover, data were collected from both mothers and fathers, which allows for analyses on families, couples, individual parents, and children. Data are longitudinal as the baseline interviews were conducted when children were about 9 months old and follow-up interviews were conducted when children were approximately two-years-old, four-years-old, and in kindergarten between 2006 and 2008. Data include information on both mother's and fathers' sociodemographic characteristics as well as a number of indicators regarding intentions, involvement, and child well-being. Taken together, these features make the ECLS-B well-suited for analyses focusing on couples' fertility intentions and measurement implications for using indirect reports of fathers' intentions. However, the ECLS-B struggled to recruit fathers, as 25% of eligible resident fathers and 50% of eligible nonresident fathers were not included in the 9-month, baseline data (NCES, 2004). In addition, nonresident fathers were only eligible to be included in the survey if 1) they had contact with the child or mother in the last month, and 2) if the mother agreed to allow the nonresident father to be interviewed. Thus, the sample only includes the most engaged nonresident fathers. As such, results likely underestimate fathers' unintended childbearing, and couple disagreement in intentions and cannot be readily generalized to the broader population.

Sample selection

The ECLS-B includes data from 10,700 parents who provided information on themselves and children. Initially, I limited the sample to children who were the biological child of at least one

parent in the household (n = 10,600). Next, I limited the sample to firstborn children. Approximately, 3,350 mothers reported having one biological child at the baseline interview. However, a substantial number of these mothers' "matching" biological fathers had more than one biological child at the baseline interview as well. After limiting the sample to only comprise children who were both their mother's and father's eldest child, the analytic sample included approximately 2,950 children. Unfortunately, a substantial share of fathers failed to complete surveys. Among the 2,950 eligible firstborn children, approximately 1,150 children did not have valid survey data from their biological fathers at the baseline interview, which yielded an analytic sample of 1,850 children. These 1,850 children correspond to 1,850 couples with data on new biological mothers and fathers. Couples must have valid data on mothers' and fathers' intentions alongside mothers' reports of fathers' intentions – further reducing the sample to approximately 1,800 couples. Lastly, I excluded 150 couples where the mother was of an "other" or multi-racial status as their omission did not alter my results and interpreting odds ratios for these groups is problematic.

Measures

Fertility intentions. The ECLS-B include indicators of fertility intentions that correspond to other data sources, such as the NSFG, by asking both mothers and fathers to report on the wantedness and timing the focal pregnancy. Specifically, respondents were asked, "At the time [you/your partner] became pregnant with your baby, did you yourself actually want to have a(nother) baby at some time?" Respondents who replied "yes" were then asked, "Did [you/your partner] become pregnant sooner than you wanted, later than you wanted, or at about the right time?" Responses were coded into intended (wanted and on-time or late) and unintended (unwanted or mistimed – too soon). Both mother' and fathers' reports were then combined to

create four mutually exclusive, exhaustive categories: both parents intended (reference); only mother intended; only father intended; and neither parent intended. An additional indicator assesses consistency between mothers' and fathers' reports of fathers' intentions by cross-referencing mothers' perceptions of fathers' intentions and fathers' own reports of intentions[4]. Responses were coded into three mutually exclusive, exhaustive categories: consistent reports (reference); father did not intend, mother reported he did; and father intended, mother reported he did not intend. This allows me to assess if mothers' reports of fathers' intentions were consistent proxies for fathers' reports.

Sociodemographic characteristics. Analyses of all couples consider key correlates of mothers' fertility intentions: race/ethnicity, nativity, age, education, and relationship status. *Mothers' race/ethnicity* was coded as: white (reference), black, Hispanic, and Asian. *Nativity status* flagged mothers who were foreign-born as "1". *Mothers' age at birth* (in years) was a continuous indicator ranging from 15 to 50. *Mothers' education* was coded into four mutually exclusive and exhaustive categories: at least a bachelor's degree (reference), some college experience, a high school diploma or GED, and no degree. *Relationship status* corresponds to the mothers' relationship with the biological father at birth and was coded as married (reference), cohabiting, or not living together.

Relationship dynamics. Analyses limited to partnered couples (as described in the analytic strategy below) also included a continuous indicator for *relationship duration prior to birth* (in years). Two indicators reflect relationship quality. The first is a dummy indicator based on a single-item questions about overall relationship quality and flagged *very happy*

[4] Questions used to assess mothers' perceptions of fathers' intentions were identical to those identifying their own intentions.

relationships (very happy = 1; fairly happy or not too happy = 0). In addition, a *relationship conflict* scale was constructed based on responses to four-level Likert items assessing how often couples have arguments about (1) chores/responsibilities, (2) children, (3) money, (4) not showing love/affection, (5) sex, (6) religion, (7) leisure time, (8) drinking, (9) other men/women, and (10) in-laws. I created a mean scale based on the average of mother and father reports for each item. The alpha coefficient for this scale was 0.79 which suggested this scale of relationship conflict was quite reliable.

Analytic strategy

I conducted two sets of analyses. The first assessed consistency between mothers' and fathers' reports of fathers' intentions by applying multinomial logistic regression techniques to the categorical indicator of the consistency between mothers' and fathers' reports. Descriptive statistics provided the distribution of mothers' characteristics for the entire sample as well as by consistency in mothers' and fathers' reports of fathers' intentions. Since measurement analyses are not concerned with mediating effects, the multivariate analyses consider all covariates in a single, full model after discussing the univariate distributions and bivariate associations.

The second set of analyses also made use of multinomial logistic regression techniques and predicted couples' intentions. Once again, descriptive statistics on all covariates were reported for the entire sample and across couple's intentions. Initially, all couples were considered and three models were estimated. The first included mothers' racial/ethnic status, nativity, age, and education. Model 2 only included relationship status at birth, and finally Model 3 entered all covariates. A second set of models were limited to couples living together at the time of birth (n = 1,450) and assessed the role of relationship dynamics on couples' intentions.

The first model replicated the full model from analyses of all couples whereas the second model considered the additional impact of relationship dynamics. I considered interactions for relationship status at birth (i.e. married versus not) and indicators of duration and quality. Yet, none of these proved significant so interaction models were neither presented nor discussed in the results. Given low response rates among fathers and concerns of sample selection biases, I conducted supplemental sensitivity analyses to better assess the generalizability of findings and grapple with problems stemming from sample selection bias.

RESULTS

Sensitivity analyses

Results from these analyses are presented in Tables A1.1 and A1.2 in this chapter's appendices. Table A1.1 regresses mothers' sociodemographic characteristics and indirect reports of couples' intentions (based on mothers' reports of fathers' intentions) on fathers' participation in the baseline survey. Consistent with prior research, results from Table A1.1 suggested my analytic sample omits relatively disadvantaged and minority mothers given missing data from fathers. Specifically, black (rather than white) and foreign-born mothers are less likely to be included in my sample. Mothers without any college experience are less likely than those reporting a bachelor's degree to be included in my sample, and those who were both cohabiting with the child's father at the time of birth and those who were not living with the father at the time of birth are also less likely than their married counterparts to be included in my sample given fathers' nonresponse. Of note, mothers' age and couples' intentions are not significantly associated with fathers' participation in the survey net of mothers' race, nativity, education, and relationship ties. The fact that couples' intentions are not linked to fathers' participation in the

survey is reassuring as it suggests my dependent variable is not directly influenced by sample selection biases.

Table A1.2 provides another check by regressing mothers' sociodemographic characteristics and fathers' participation in the survey on the indirect measure of couples' intentions. Consistent with Table A1.1, I found no evidence that fathers' survey nonresponse biased estimates of couples' intentions net of mothers' sociodemographic characteristics. Rather, mothers who are black, foreign-born, less-educated, and not married to the child's father are underrepresented in my sample. This is of concern, but it is fortunate that fathers' nonresponse was not systematically associated with indirect measures of couples' intentions. I return to the implications of sensitivity analyses in the discussion section.

Measurement analyses: Descriptive statistics

Table 1.1 provides a descriptive portrait of mothers' sociodemographic characteristics in my analytic sample and according to consistency between mothers' and fathers' reports of fathers' intentions. The table presents both weighted column (top numbers) and row (smaller numbers) percentages. Almost two-thirds (63%) of all mothers in my sample intended their first birth. In terms of racial/ethnic status, the majority of mothers (two-thirds) are white, whereas approximately one-fifth of mothers is Hispanic, with one in ten being black and a mere four percent being Asian. Consistent with sensitivity analyses white mothers appear to be overrepresented in my sample, and this is offset by black mothers being underrepresented. Almost one-in-five (19%) mothers is foreign-born. On average, mothers are 25.4 years old closely following their first birth. Approximately one-third (32%) of mothers is college educated whereas three in ten (29%) has some college experience but no degree, almost a quarter (24%) has a high school diploma or GED, and 14% reported no degree. Lastly, the majority (70%) of

mothers in my sample are married to the child's biological father at the time of birth, with 18% of mothers cohabiting with the child's father and 13% not living with the child's father at the time of birth. As with race/ethnicity, married mothers are overrepresented in my sample whereas both cohabiting and single mothers are underrepresented.

Three-fourths of mothers and fathers provided consistent reports of fathers' intentions. Although this suggested the majority of mothers' and fathers' reports of fathers' intentions are consistent, a sizable minority of couples provided inconsistent reports. It is more common for mothers to report the father intended the birth when he did not (18% of all couples and 70% of those providing inconsistent reports) as a mere 8% of mothers "inaccurately" reported the father did not intend the birth. Bivariate analyses confirmed that mothers' characteristics varied substantially according to consistency between mothers' and fathers' reports of fathers' intentions. Approximately 60% of mothers who provided consistent reports with fathers' own intentions intended their birth. In contrast, about 80% of mothers who "inaccurately" reported the father intended the birth characterized the birth as intended themselves. The comparable share among couples where the mother said the father did not intend the birth, when he reported the birth was intended was three in ten. It is not surprising these rather stark differences are significantly different, providing preliminary evidence that when mothers provide inconsistent reports of fathers' intentions, they tend to report that fathers' share their own intentions.

Table 1.1. Descriptive Statistics, by Consistency in Reports (weighted)

	Total		*Consistent Reports*		*Father did not intend, mother said he did*		*Father intended, mother said he did not*	
	Raw N[1]	% or μ	Raw N[1]	% or μ	Raw N[1]	% or μ	Raw N[1]	% or μ
Mother intended birth*	1,050	62.5	800	61.4[bc]	250	81.8[ac]	50	31.2[ab]
(row %)		--		73.1[bc]		23.0[ac]		3.9[ab]
*Mother's Racial/ethnic Status**								
White	950	66.8	750	70.4[b]	150	55.2[a]	50	58.8
(row %)		--		78.5[bc]		14.5[ac]		6.9[ab]
Black	150	9.8	100	8.9	50	13.1	¥	10.9
(row %)		--		67.7[bc]		23.5[ac]		8.8[ab]
Hispanic	250	19.4	200	17.0[b]	50	26.3	50	26.4
(row %)		--		65.4[bc]		23.8[ac]		10.8[ab]
Asian	350	4.0	250	3.7[b]	100	5.4	50	3.9
(row %)		--		68.5[bc]		23.7[ac]		7.8[ab]
Mother foreign-born*	500	19.2	300	16.5[bc]	100	26.8[a]	50	27.8[a]
(row %)		--		64.1[bc]		24.5[ac]		11.4[ab]
Mother's Age*	--	25.4	--	25.4[c]	--	26.2[c]	--	23.4[ac]
Standard deviation		0.2		0.2		0.4		0.5
Mother's Educational Attainment								
At least a Bachelor's	650	32.4	500	33.5	100	31.1	50	25.1
(row %)		--		77.0[bc]		16.9[ac]		6.1[ab]
Some college	450	29.0	350	28.4	100	30.7	50	30.5
(row %)		--		73.1[bc]		18.6[ac]		8.3[ab]
HS/GED	350	24.6	300	24.7	50	24.0	50	24.6
(row %)		--		75.0[bc]		17.2[ac]		7.8[ab]
Less than HS/GED	200	14.0	150	13.4	50	14.2	50	19.8
(row %)		--		71.1[bc]		17.8[a]		11.1[a]
Relationship to Bio. Father at Birth								
Married	1,250	69.5	950	70.4	350	70.0	100	60.2
(row %)		--		75.5[bc]		17.7[ac]		6.8[ab]
Cohabiting	300	18.0	200	16.7[c]	50	17.5[c]	50	30.9[ab]
(row %)		--		69.3[bc]		17.2[a]		13.5[a]
Not in a co-residential union	150	12.5	150	12.9	50	12.5	¥	8.9
(row %)		--		76.9[bc]		17.5[ac]		5.6[ab]
Total	1,650		1,250	74.5	300	17.6	150	7.9

Please note * suggests there is significant variation according to the couple's consistency in mother's and father's reports of father's intentions. "a" denotes a significant ($p<0.05$) difference from couples with consistent reports, "b" denotes a significant ($p<0.05$) difference from couples where the father did not intend, but the mother said he did, and "c" denotes a significant difference from couples where the father intended the birth, but the mother said he did not. ¥ denotes an unweighted cell size that rounds to 0 per ECLS-B restricted data use agreement.

1. Since the ECLS-B requires unweighted frequencies be rounded to the nearest 50, column total might not correspond exactly.

Substantial variation also existed in the distributions of mothers' sociodemographic characteristics across couples' consistency in reports of fathers' intentions. For instance, white mothers made up a significantly larger share of couples providing consistent reports (70%) compared to both couples where the fathers characterized the birth as untended, but the mother characterized his intention as intended (55%) *and* couples where the father intended the birth, but the mother said he did not (59%). This difference was largely offset by Hispanic mothers' underrepresentation in couples with consistent reports of fathers' intentions. Although significant variation existed according to racial/ethnic status, all mothers were more likely to provide consistent reports of the father's intentions regardless of racial/ethnic status. Foreign-born mothers were significantly overrepresented among couples who provided both types of inconsistent reports of fathers' intentions (27% versus 17%). Once again, in spite of these differences, foreign-born mothers were more likely to provide consistent rather than inconsistent reports of fathers' intentions. Lastly, younger mothers were more likely to belong to couples where the mother said the father did not intend the birth when the father reported he did. However, mothers who provided consistent repots of fathers' intentions and those who said he intended the birth when he did not were not significantly different in terms of age. Interestingly, couples who provided consistent and inconsistent reports of fathers' intentions did not differ in terms of mothers' educational attainment or relationship ties with birth fathers.

Table 1.2. Assessing Consistency between Mothers' and Fathers' Reports of Fathers' Intentions (relative risk ratios)

	(*Consistent Reports*)		*(Father did not intend, mother said he did)*
	Father did not intend, mother said he did	*Father intended, mother said he did not*	*Father intended,, mother said he did not*
Mother intended birth	3.47***	0.27**	0.07***
(White)			
Black	2.19†	1.29	0.59
Hispanic	1.65†	1.31	0.79
Asian	1.60	0.78	0.48†
Mother foreign-born	1.26	1.95	1.54
Mother's age (years)	1.01	0.96	0.95
(At least a Bachelor's)			
Some college	1.27	0.89	0.70
High school (or GED)	1.19	0.68	0.57
Less than high school	1.17	0.85	0.73
(Married)			
Cohabiting	1.48	1.14	0.76
Not living together	1.43	0.37*	0.26*
Intercept	0.04***	0.42	10.34*
Global F Statistic		5.04***	
N		1,650	

† (p<0.10), * (p<0.05), ** (p<0.01), *** (p<0.001).

Measurement analyses: Multivariate results

Multivariate results once again underscore the importance of a mother's own intentions as a predictor of consistency between mothers' and fathers' reports of fathers' intentions, as shown in Table 1.2. Net of a mother's sociodemographic characteristics, her own intentions emerge as the most consequential factor influencing consistency between mothers' and fathers' reports. Consistent with bivariate analyses, mothers who intended the birth are both 1) more likely to report the father intended the birth when he did not and 2) less likely to report the father did not intend the birth when he did rather than providing consistent reports with fathers. Specifically, a mother's intending the birth increases her odds of "inaccurately" reporting the father intended the birth by approximately 250% whereas her intending the birth reduces her odds of "inaccurately" reporting the father did not intend the birth by 73%. Mothers' own intentions are also significantly related to the type of inconsistency as shown in the last column, a mother's intending the birth greatly reduces her odds of "inaccurately" reporting he did not intend the birth versus "inaccurately" reporting that he did intend the birth (by 93%).

Net of a mother's own intentions, her racial/ethnic status, nativity status, age, and education have no strong significant associations with the consistency between hers and the father's report of his intentions. However, each of these factors is correlated with mothers' intentions making it difficult to discern which factors are most salient. There is weak evidence that black and Hispanic mothers are more likely than their white counterparts to report a father intended the birth when he did not (rather than provide consistent reports). Similarly, Asian women have a marginally lower odds of "inaccurately" reporting a father did not intend the birth than "inaccurately" reporting he intended the birth compared to their white counterparts. Although relationship status does not have strong, consistently significant linkages with

consistency between mothers' and fathers' reports of fathers' intentions, there are some significant associations; particularly for not living with the child's father at the time of birth. These mothers are less likely than their married counterparts to "inaccurately" report that a father did not intend the birth than provide consistent reports. Similarly, mothers who did not live with the child's fathers are less likely than their married counterparts to "inaccurately" report he did not intend rather than "inaccurately" report he intended the birth. Although this association appears counterintuitive, I reiterate sensitivity analyses suggested single mothers in my sample might be a very select group and revisit this finding in more detail in the discussion.

Predicting couple-level intentions: Descriptive statistics

The first set of analyses focused primarily on considering consistencies between mothers' and fathers' reports of fathers' intentions. Next, I turn to the second set of analyses that explicitly considered what factors were associated with couples' fertility intentions. Table 1.3 suggests there is substantial variation in couples' fertility intentions and that mothers' sociodemographic characteristics and relationship dynamics vary according to couples' intentions. Consideration of both parents' perspective demonstrates that less than half, or 45%, of first births were intended by both parents. Over one-fourth (27%) of couples experienced disagreement in terms of mothers' and fathers' intentions with 17% of couples having only the mother intend the birth and 10% of couples having only the father intend the birth. Lastly, 28% of firstborn children are not intended by either parent. As I already provided a descriptive discussion of my overall sample, which has not changed, I turn to a discussion of differences in mothers' characteristics according to couples' intentions.

Table 1.3. Descriptive Statistics, by Couple's Intentions (weighted)

	Total		*Both Intended*		*Only Mother Intended*		*Only Father Intended*		*Neither Intended*	
	Raw N[1]	% or μ	Raw N[1]	% or μ	Raw N[1]	% or μ	Raw N[1]	% or μ	Raw N[1]	% or μ
Mother's Racial/ethnic Status*										
White	950	66.8	450	74.5[bd]	150	58.1[a]	100	63.8	250	60.8[a]
(row %)		--		50.5[bcd]		15.0[acd]		9.4[abd]		25.1[abc]
Black	150	9.8	50	3.7[bd]	50	11.4[ad]	¥	9.1[d]	100	19.1[abc]
(row %)		--		17.1[d]		20.1[cd]		9.1[bd]		53.7[abc]
Hispanic	250	19.4	100	17.8	50	24.6	50	23.0	50	17.3
(row %)		--		41.7[bcd]		21.9[ac]		11.8[abd]		24.6[ac]
Asian	350	4.0	150	4.0[b]	100	5.9[ad]	50	4.1	50	2.8[b]
(row %)		--		45.2[bcd]		25.5[ac]		10.3[abd]		19.0[ac]
Mother foreign-born*	500	19.2	200	20.3[d]	100	26.4[d]	50	20.1	100	12.7[ab]
(row %)		--		47.8[bcd]		23.8[ac]		10.3[abd]		18.1[ac]
Mother's Age*	--	25.4	--	27.9[cd]	--	27.0[cd]	--	23.2[abd]	--	21.2[abc]
Standard deviation		0.2		0.2		0.5		0.5		0.2
Mother's Educational Attainment*										
At least a Bachelor's	650	32.4	400	45.7[bcd]	150	34.5[ad]	50	27.8[ad]	50	10.9[abc]
(row %)		--		63.9[bcd]		18.4[acd]	8.5	8.5[ab]		9.2[ab]
Some college	450	29.0	200	27.1	100	31.3	50	26.6	150	31.6
(row %)		--		42.3[bcd]		18.6[ac]		9.1[abd]		30.0[abc]
HS/GED	350	24.6	150	18.4[d]	50	21.5[d]	50	26.9	150	35.8[ab]
(row %)		--		33.9[bc]		15.1[ad]		10.9[ad]		40.1[bc]
Less than HS/GED	200	14.0	50	8.8[cd]	50	12.7[d]	50	18.7[a]	100	21.7[ab]
(row %)		--		28.5[bcd]		15.6[ad]		13.2[ad]		42.7[abc]
*Relationship to Bio. Father at Birth**										
Married	1,250	69.5	700	90.5[bcd]	250	71.1[ad]	150	63.3[ad]	200	36.3[abc]
(row %)		--		58.9[bcd]		17.7[ac]		9.0[abd]		14.4[ac]
Cohabiting	300	18.0	50	7.5[bcd]	50	16.4[ac]	50	28.1[ab]	150	32.6[ab]
(row %)		--		18.8[d]		15.8[d]		15.4[d]		50.0[abc]
Not in a co-residential union	150	12.5	¥	2.0[bcd]	¥	12.5[ad]	¥	8.6[ad]	100	31.1[abc]
(row%)		--		7.4[d]		17.2[cd]		6.8[bd]		68.6[abc]

Table 1.3. Descriptive Statistics by Couples' Intentions, continued

	Total		*Both Intended*		*Mother Intended, Father did Not*		*Father Intended, Mother did Not*		*Neither Intended*	
	Raw N[1]	% or μ	Raw N[1]	% or μ	Raw N[1]	% or μ	Raw N[1]	% or μ	Raw N[1]	% or μ
Very happy relationship[2*]	1,200	75.9	650	83.4[bd]	200	74.2[ad]	150	76.9[d]	200	59.1[abc]
(row %)				56.4[bcd]		16.7[ac]		9.9[abd]		17.0[ac]
Relationship conflict[2*]	--	17.6	--	17.0[bd]	--	17.8[ac]	--	17.8[d]	--	18.8[abc]
Standard deviation		0.1		0.1		0.3		0.3		0.2
Relationship duration prior to birth (yrs)[2*]	--	2.8	--	3.5[bcd]	--	2.9[acd]	--	1.7[abd]	--	1.2[abc]
Standard deviation		0.1		0.1		0.2		0.1		0.0
Total	1,650		750	45.3	300	17.3	200	9.9	450	27.5

Please note * suggests there is significant variation according to the couple's consistency in mother's and father's reports of father's intentions. "a" denotes a significant ($p<0.05$) difference from couples where both intended, "b" denotes a significant ($p<0.05$) difference from couples the mother intended, but the father did not, "c" denotes a significant ($p<0.05$) difference from couples where the father intended the birth, but the mother did not, and "d" denotes a significant ($p<0.05$) difference from couples where neither parent intended the birth. ¥ denotes an unweighted cell size that rounds to 0 per ECLS-B restricted data use agreement.

1. Since the ECLS-B requires unweighted frequencies be rounded to the nearest 50, column total might not correspond exactly.
2. Limited to 1,500 couples in a coresidential relationship at the birth.

Couples where both parents intended the birth are disproportionately white (75% versus 67%) and non-black (4% versus 10%). Conversely, non-white mothers are overrepresented among couples where only the mother intended the birth. Among white, Hispanic, and Asian women, mothers were more likely to belong to couples where both parents intended the birth rather than any other "intention scenario." In contrast, black mothers were more likely to belong to couples where neither parent intended the birth versus any couple where at least one parent intended the birth. Foreign-born mothers were disproportionately underrepresented among couples where neither parent intended the birth. Mothers who belonged to couples where the mother intended the birth were older, on average, than couples where the mother did not intended the birth. College-educated mothers were disproportionately represented among couples where both parents – or at least the mother – intended the birth whereas less-educated mothers were overrepresented among all couples where at least one parent did not intend the birth.

The vast majority of mothers in couples where both parents intended the birth were married to the child's biological father at the time of birth (91%), whereas only 8% and 2% of women in these couples were cohabiting and single, respectively. In contrast, among couples where only mothers intended the birth, the distribution of relationship status more closely mirrors the total sample. Among couples where only the father intended the birth, cohabiting mothers are overrepresented (28% versus 18% in the full sample) whereas both married and single mothers are underrepresented. Lastly, couples where neither parent intended the birth are quite evenly distributed among married (36%), cohabiting (33%), and single (31%) mothers, meaning that both cohabiting and single mothers are grossly overrepresented among this group given the sample's overall distribution. Indeed, the majority of married mothers belong to couples where

both intended the birth whereas the majority of cohabiting and single mothers belong to couples where neither parent intended the birth.

Next, I turn to the subsample of couples who were in a coresidential union at the time of the birth. Very happy relationships were overrepresented among couples where both intended the birth and underrepresented among couples where neither parent intended the birth. Indeed, mothers in happy relationships were more likely to belong to couples where both parents intended the birth. Conversely, levels of relationship conflict were highest among couples where neither parent intended the birth (18.8) and those experiencing disagreement (17.8), and lowest among those where both parents intended the birth (17.0). Lastly, couples where both parents intended the birth reported the longest relationship duration prior to birth, 3.5 years on average. These couples were followed by those where only the mother intended the birth (2.9 years), then those where only the father intended the birth (1.7 years), and finally those where neither parent intended the birth (1.2 years).

Predicting couple-level intentions: Multivariate results

Table 1.4 presents relative risk ratios from multivariate, multinomial regression models that predicted couples intentions. Model 1 included mothers' sociodemographic characteristics whereas Model 2 includes only relationship status to the biological father at birth, and Model 3 included all covariates. I adopted this modeling strategy given the very pronounced effects of relationship ties that were reported in Table 1.3. Given small sample sizes, marginally significant findings are both reported in the table and discussed in the text.

Table 1.4. Multinomial Models Predicting Couples' Fertility Intentions, all couples (relative risk ratios)

	(Both intended) Only Mother Intended			(Both intended) Only Father Intended			(Both Intended) Neither intended		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Mother's Race/ethnicity									
(White)									
Black	3.71**		2.23†	1.99		1.75	3.54**		1.71
Hispanic	1.57†		1.32	1.06		0.97	0.78		0.57†
Asian	2.13*		1.88†	1.89		1.89	2.59**		2.16*
Mother foreign-born	0.96		1.19	0.85		0.89	0.58*		0.86
Mother's age (years)	0.99		1.01	0.83***		0.84***	0.78***		0.82***
Mother's Education									
(College degree)									
Some college	1.43		1.33	0.87		0.82	2.04**		1.76†
HS/GED	1.32		1.06	0.78		0.67	1.72†		1.18
Less than HS/GED	1.47		0.99	0.69		0.50†	1.19		0.64
(Married)									
Cohabiting		2.78***	2.82***		5.35***	3.00**		10.87***	5.39***
Not living together		7.75***	7.07**		6.01**	2.15		37.99***	11.43***
Intercept	0.31†	0.30***	0.15**	21.71***	0.15***	14.26**	152.08***	0.24***	32.73***
Global F Statistic	8.16***	21.83***	8.01***	8.16***	21.83***	8.01***	8.16***	21.83***	8.01***
N					1,650				

† (p<0.10), * (p<0.05), ** (p<0.01), *** (p<0.001).

Table 1.4 demonstrates that different characteristics emerge as significant predictors according to which comparisons are being made. For instance, when comparing couples where only the mother intended the birth with those where both parents intended the birth, mothers' racial/ethnic status emerges as the only significant predictor in Model 1. Specifically, all minority mothers are more likely than their white counterparts to belong to couples where only the mother (rather than both parents) intended the birth. However, the effect for Hispanic women only approaches significance. This effect is most pronounced for black mothers who are 3.71 times as likely as whites to have only the mother intend the birth (rather than both parents). Model 2 provides strong evidence that unmarried mothers are more likely than their married counterparts to belong to couples where only the mother intended the birth. The odds of mother only intending the birth, relative to both parents intending, are significantly higher for cohabiting (RRR = 2.78) and single (RRR = 7.75) mothers compared to their married counterparts. Model 3, confirms that relationship status is the most influential predictor in differentiating couples where only the mother intended the birth from those where both parents intended the birth. Indeed, the previously significant relative risk ratios for mothers' racial/ethnic status were reduced to nonsignificance, though the relative risk ratios for black and Asian mothers' remained marginally significant. In contrast, the relative risk ratios of relationship status remained largely unchanged once mothers' other sociodemographic characteristics were included in the model.

Supplemental analyses (available on request) compared couples where only the mother intended the birth versus those where only the father intended the birth. The linkages between relationship status and couples' intentions were much less pronounced in differentiating couples where at least one parent intended the birth once mothers' sociodemographic characteristics were considered. Only mothers who did not live with the child's biological father at birth were less

likely than their married counterparts to belong to couples where *only* the father, rather than *only* the mother, intended the birth. Once again, older mothers were more likely to belong to couples where *only* the mother, rather than *only* the father intended the birth.

In comparing couples where only the father (rather than both parents) intended the birth, mothers' age and relationship status emerge as the most influential predictors. Model 1 suggests older mothers are less likely to belong to couples where only the father, rather than both parents, intended the birth (RRR = 0.83). There are no significant associations with mothers' racial/ethnic status, nativity, or education. Again, Model 2 provides strong evidence that unwed childbearing increases the odds of only the father intending the birth versus both parents intending the birth. In contrast to the previous set of comparisons, fathers who were cohabiting and not living with the child's mother at birth have comparable odds ratios (5.35 and 6.01, respectively). Lastly, Model 3 suggested the association between mothers' age and couples' intentions was more robust than the linkage between relationship status and intentions – at least in differentiating couples where only the father, rather than both parents, intended the birth. The relative risk ratio of mothers' age remains largely unchanged (RRR = 0.84) whereas the association between relationship status and couples' intentions is considerably diminished once mothers' other sociodemographic characteristics are taken into account such that only cohabiting parents experience higher odds of only the father intending the birth relative to their married counterparts; there is also marginal evidence that very low maternal education reduces the odds (RRR = 0.50) of only the father, rather than both parents intended the birth.

When comparing couples where neither parent intended the birth with those where both parents did, all sociodemographic characteristics are significant predictors in at least one model. In Model 1, black and Asian mothers are more likely than their white counterparts to belong to

couples where neither parent intended the birth (RRR = 3.54 and 2.59, respectively). In contrast, foreign-born and older mothers are less likely to belong to couples where neither parent (rather than both parents) intended the birth (respective RRR = 0.58 and 0.78). Mothers with some college experience but no degree are twice as likely as their college-educated counterparts to belong to couples where neither parent (rather than both parents) intended the birth. A similar association exists in comparing mothers who were high school graduates with those having a bachelor's degree, but this effect only approaches statistical significance (RRR = 1.72). Model 2 indicates that unwed childbearing greatly increases a couples' odds of neither parent intended the birth rather than both parents, and this linkage is most pronounced when comparing parents who were not living with the child's father at birth to their married counterparts. Model 3 demonstrates that the relationship context at birth greatly reduces the odds ratios of mothers' race, nativity, and educational attainment. Indeed, in the full model only Asian women remain more likely than their white counterparts to belong to couples where neither parent (rather than both parents) intended the birth (RRR = 2.16). Once relationship ties to the biological father are considered, there is weak evidence that Hispanic women are less likely than white women to belong to couples where neither parent (rather than both parents') intended the birth (RRR = 0.57). Mothers' age at birth remains a significant predictor net of relationship status such that each additional year in mothers' age corresponds to an 18% decrease in the odds of neither parent intending the birth rather than both parents. The relative risk ratios of mothers' education are no longer significant once relationship ties to birth fathers are considered, though weak evidence suggests mothers with some college experience, but no degree, are more likely than their college-educated counterparts to belong to couples where neither parent (rather than both parents) intended the birth (RRR = 1.76). Although the linkages between relationship status and

couples' intentions are greatly reduced, both remain strong predictors and are associated with an increase in the odds of neither parent (rather than both parents) intending the birth compared to their married counterparts.

Supplemental analyses (available on request) compared couples where neither parent intended the birth with those where 1) *only* the mother or 2) *only* the father intended the birth. Mothers' race/ethnicity, age, and relationship status with the biological father were all associated with a mother's odds of belonging to a couple where *only* the mother intended the birth (rather than neither parent) such that older and Hispanic (rather than white) mothers' were more likely to belong to couples where *only* the mother intended the birth compared to couples where neither parent intended the birth. In contrast, cohabiting mothers were more likely than their married counterparts to belong to couples where neither parent, rather than *only* the mother, intended the birth. Mothers' educational attainment and relationship status are the most influential factors differentiating couples where *only* the father, rather than neither parent, intended the birth. Specifically, mothers with some college experience (rather than a bachelor's degree) and those who were either cohabiting or not living with the biological father at birth are more likely to belong to couples where neither parent, rather than *only* the father, intended the birth.

Table 1.5. Predicting Couples' Fertility Intentions, limited to couples in a coresidential union (relative risk ratios)

	(Both intended)					
	Only Mother Intended		Only Father Intended		Neither intended	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Very happy relationship	--	0.81	--	1.08	--	0.61†
Relationship conflict	--	1.05*	--	1.08**	--	1.11***
Duration of relationship prior to birth (years)	--	0.92	--	0.74**	--	0.61***
Mother's Race/ethnicity						
(White)						
Black	3.88**	3.78**	2.03	1.88	3.68*	2.60
Hispanic	1.45	1.54	1.18	1.28	0.59	0.55†
Asian	2.17*	2.11*	1.90	1.72	2.21*	1.85
Mother foreign-born	1.08	1.08	0.92	0.92	0.82	0.89
Mother's age at birth	1.01	1.02	0.86***	0.90**	0.82***	0.88***
Mother's Education						
(College)						
Some College	1.53	1.45	0.79	0.69	1.83†	1.54
HS/GED	1.04	1.09	0.58	0.54	1.31	1.28
Less than HS/GED	1.13	1.17	0.41†	0.39†	0.61	0.64
Married at birth	0.33**	0.36**	0.28**	0.30**	0.19***	0.21***
Intercept	0.44	0.14*	33.36***	3.76	180.08***	15.31*
Global F-statistic	8.09***	6.47***	8.09***	6.47***	8.09***	6.47***
Unweighted N	1,450					

† (p<0.10), * (p<0.05), ** (p<0.01), *** (p<0.001).

Relationship dynamics and couples' intentions

The last set of analyses is limited to 1,450 couples who were in a coresidential relationship at the time of the birth. Two models are presented; the first includes mothers' sociodemographic characteristics and relationship status at birth whereas the second includes indicators that are related to relationship dynamics (i.e., relationship quality, duration, and marital status at birth). I tested for interactions between each relationship dynamic and marital status at time of birth (married versus cohabiting). As none of these interaction terms were significant, they are excluded from both tables and my discussion of the results. Results from Model 1 are consistent with the full model from Table 1.4; therefore, the discussion of these results is limited to the associations between relationship dynamics and couples' intentions.

Relationship conflict is the only relationship dynamics that remains statistically significant across all comparison groups. However, relationship duration significantly differentiates couples where both parents intended the birth from those where the mother did not intend the birth. Positive relationship quality appears to be the least salient relationship dynamic as it is only marginally significant for one of three comparison groups. Net of mothers' sociodemographic characteristics and relationship status at birth, higher levels of conflict are associated with a higher odds that 1) *only* the mother (RRR = 1.05), 2) *only* the father (RRR = 1.08), or 3) neither parent (RRR = 1.11) intended the birth rather than both parents. In contrast, net of all covariates, longer relationship durations (prior to the birth) are associated with a lower odds that *only* the father (RRR = 0.74) or neither parent (RRR = 0.61) intended the birth rather than both parents. Relationship duration is not a significant factor differentiating couples where *only* the mother (rather than both parents) intended the birth. Additional analyses (available on request) found that longer relationship duration was also associated with a 1) higher odds that

only one parent intended the birth (rather than neither parent) and a 2) lower odds of the father (not the mother) intending the birth. Being in a very happy relationship was marginally associated with a decreased odds of neither parent (rather than both parents) intending the birth (RRR = 0.61).

DISCUSSION

Drawing on a family systems perspective and prior research on couples' fertility desires and outcomes (e.g., Beckman et al., 1983; Fried & Udry, 1979; Thomson, 1997; Thomson et al., 1999), I suggested that both mothers' and fathers' retrospective reports of fertility intentions should be considered jointly to model couple's disagreement in fertility intentions in addition to intention status. Although I am not the first to make this argument, my analyses make notable contributions to the limited work on couples' unintended childbearing (see Korenman et al, 2002; Hohmann-Marriott, 2009; Martin et al., 2007; Moore et al., 2009; Saleem & Surkan, 2014; Williams, 1994). As some asserted that the transition to parenthood marks an important life course transition (Rindfuss, 1991) and others have noted births should not be treated as isolated, independent events (Guzzo & Hayford, 2011), I focused on first-time mothers and fathers.

Arguably, two factors have hampered research on couples' childbearing intentions. First and foremost, the scarcity of couple-level data asking both mothers and fathers about fertility intentions is key. To the best of my knowledge, the ECLS-B are the only large-scale data that can be used to measure couples' unintended childbearing directly, in the US context. Second, a notable body of research has voiced concerns over the quality of male fertility data (see Joyner et al., 2012). These concerns are further compounded by difficulty in successfully recruiting disadvantaged, nonresident fathers in data collection efforts. By considering the sample-selection biases that arise from excluding mothers who cannot be matched with corresponding data from

the biological father and considering consistency between mothers' and fathers' reports of fathers' intentions, I effectively weigh the costs and benefits of incorporating fathers' perspectives into discussion of couples' unintended childbearing and determine if mothers' reports of fathers' intentions are an appropriate proxy for fathers' own reports. Prior to these analyses, I am unaware of any research that explicitly considered the both the consistency between mothers' and fathers' reports of fathers' intentions and the factors that are associated with consistency of reports. By limiting the sample to mothers who had corresponding data for the child's biological father, the analyses were less likely to include black (rather than white) mothers, those who were foreign-born, mothers with a high school diploma or less (rather than those who had at least a bachelor's degree), and those who were cohabiting or not living with (rather than married to) the child's biological father at the time of birth. The exclusion of these mothers in discussions of unintended childbearing is problematic as these women, with the exception of the foreign-born, are more likely to experience an unintended birth (Finer & Henshaw, 2006; Finer & Zolna, 2011; Musick, 2002; Musick et al., 2009). Although Williams' (1994) found disadvantaged women were more likely to report disagreement in intentions compared to their relatively advantaged counterparts, sensitivity analyses suggested fathers' participation in the survey was not associated with indirect measures of couples' intentions net of mothers' sociodemographic characteristics.

Should mothers' and fathers' reports of fathers' intentions be consistent, the use of mothers' proxy reports could reduce the problems stemming from the "missing men bias." However, mothers and fathers in one quarter of couples provided inconsistent reports of fathers' intentions. Support for my hypotheses regarding consistency between mothers' and fathers' reports of fathers' intentions was mixed. I expected that married mothers provided more

consistent reports than their unwed counterparts, but I found that either 1) no differences existed between married and unmarried mothers' consistency with fathers' reports or 2) mothers who were not living with the child's father at the time of birth were less likely to "inaccurately" report the father did not intend the birth (rather than provide consistent reports) compared to their married counterparts. This finding is counterintuitive, but results from sensitivity analyses suggested mothers who were not living with the child's father at the time of birth were much less likely to be included in my sample. Thus, mothers who were not living with the child's father at the time of birth — but have corresponding data for the child's biological father — might be comprised of a very select group. Separately, I hypothesized relatively disadvantaged mothers were less likely to provide consistent reports with fathers due to high levels of ambivalence among disadvantaged and minority parents, but analyses did not provide support for this hypotheses. Rather, I found weak evidence that black and Hispanic mothers (rather than white mothers) were more likely to report the father intended the birth when he did not. Although a mother's intending the birth was not associated with her likelihood of providing consistent reports, I found strong, consistent evidence that when mothers' and father's provided inconsistent reports, mothers were more likely to "inaccurately" report fathers shared their intentions.

In sum, measurement analyses suggested the majority of mothers' and fathers' reports were consistent, but a sizable minority of couples provided inconsistent reports. However, mothers' sociodemographic characteristics were not strongly associated with consistency between reports net of her own intentions. Taken together, these results suggest that should research considering couples' intentions chose to retain a more representative sample of mothers (at the expense of incorporating fathers' own perspectives), doing so will likely underestimate

disagreement in couples intentions. Consequently, if researchers prefer to have a precise measure of couples' intentions, doing so results in a relatively privileged sample of mothers and likely underestimates unintended childbearing. These results suggest there are considerable advantages and disadvantages associated with each approach, and researchers should weigh the costs and benefits given their research questions while being mindful of the limitations of each approach in interpreting results.

A second set of analyses considered what sociodemographic characteristics and relationship dynamics were associated with couples' fertility intentions. Prior work examining couple-level unintended childbearing considered the association between couples' intentions and multiple indicators of maternal and child well-being, without first examining what factors predict or are associated with couple-level fertility intentions (see Hohmann-Marriott, 2009; Korenman et al., 2002; Martin et al., 2007; Saleem & Surkan, 2014)[5]. Williams (1994) provided a notable exception in that she explicitly predicted couples' intentions, but her analyses relied on mothers' proxy reports of fathers' intentions and used data from the 1980s. Results indicated that although relationship context of the birth was most salient, a number of other factors (e.g., racial/ethnic status, age at birth, education, relationship conflict, and duration prior to birth) were associated with couples' intentions.

Research documenting the prevalence of unintended childbearing notes that more than one in three births is unintended by mothers (see Mosher et al., 2012; Guzzo & Payne, 2012). This statistic is frequently cited to justify that unintended childbearing in the contemporary US is an important social problem. Consideration of couples' fertility intentions suggests focusing on

[5] Hohmann-Marriott (2009) documents higher levels of disagreement in cohabiting couples compared to their married counterparts, but her analyses do not focus on predicting couples' fertility intentions and only consider the relationship context of the birth as a factor influencing couples' childbearing intentions.

one parent's perspective underestimates the impact of unintended childbearing on children's well-being as over half of firstborn children were born to a couple where at least one parent characterized the birth as either unwanted or mistimed. Over a quarter of firstborn children were intended by neither parent, and mothers' sociodemographic characteristics, relationship context, and relationship dynamics were associated with couples' intentions.

Drawing on a variety of work concerning the intersection of gender, socioeconomic disadvantage, and parenthood (e.g., Anderson, 1999; Edin & Kefalas, 2005; Higgins, Popkin, & Santelli, 2012; Maccoby, 1998; McQuillan et al., 2003; Townsend, 2002), I developed competing hypotheses that suggested why a mother or father might be more likely to intend a birth. Consistent with gender socialization and doing gender perspectives, I found when disagreement in intentions occurred; it was more common for the mother to intend the birth. The linkages between sociodemographic characteristics and couples' intentions also varied depending on which "intention scenarios" (i.e., only mother intended, only father intended, or neither parent intended) were being compared. Specifically, relationship ties to the birth father appear to be the most salient factor associated with the mother, but not the father, intending the birth. In contrast, mothers' age is the most salient factor related to the father's, but not the mother's intending a birth. Mothers' racial/ethnic status, age, education, relationship status at birth are all associated with a couple's risk of neither parent intending the birth. These findings suggest that "intention scenarios" are distinctive and differentiating which parent intended the birth provides a nuanced understanding of the birth context, which is likely linked with both parental and child well-being (see subsequent chapters).

Relationship status was the most robust correlate of couples' intentions. Indeed, at least one form of nonmarital childbearing was significantly linked with couples' intentions net of

mothers' other sociodemographic characteristics across all comparisons, whereas couples who were married at the time of the birth were more likely to both intend the birth compared to their unwed counterparts, which was consistent with my hypotheses. This association was pronounced and remained largely unchanged once mothers' other sociodemographic characteristics were considered. I also found evidence that mothers who belonged to racial/ethnic minorities, were younger, and less educated were more likely to belong to couples where at least one parent did not intend the birth rather than both parents intending the birth, which was consistent with hypotheses. Although many of these associations were reduced to either marginal or nonsignificance once relationship status was considered, prior research found that mothers' age, education, and racial/ethnic status are all associated with the relationship status at birth (see Carlson & Furstenberg, 2006; Guzzo & Furstenberg, 2007a, 2007b). This suggests parsing out the effects of sociodemographic characteristics versus relationship status at birth is challenging and not necessarily theoretically meaningful. Of note, older mothers were less likely to belong to couples where neither parent – or only the father – intended the birth (rather than at least the mother intended the birth). Asian mothers were more likely than their white counterparts to have neither (rather than both) parent(s) intend the birth. This might seem counterintuitive given the salience of traditional family values among Asian-Americans, but other work with the ECLS-B found similar results (Guzman, Wildsmith, Manlove, & Franzettal, 2010). These findings might be influenced by heterogeneity among Asians. For couples who lived together at the time of birth, relationship conflict was positively correlated with at least one or both parent(s) not intending the birth whereas relationship duration was protective in comparing couples where both parents intended the birth versus those where only the father or neither parent intended the birth. These findings were largely consistent with my hypotheses.

This study advances research on unintended fertility by developing a framework to understand the intersection of gender, fertility intentions, and parenthood, assessing the costs and benefits associated with using fathers' own perspectives to construct couple-level intentions, and examining the association between mothers' sociodemographic characteristics and relationship dynamics with couples' intentions. However, analyses are not without limitations. Most notably, analyses that predicted couples' intentions were conducted on a select sample that omitted mothers who were at the greatest risk of experiencing an unintended birth. Therefore, these results are not generalizable to the larger population in spite of the ECLS-B being a nationally representative data set. The lack of generalizability of findings raises concerns, but the present study provides a noteworthy compliment work that documented the prevalence of unintended childbearing (see Finer & Zolna, 2011). Indeed, prevalence of estimates of fathers' unintended fertility might be ill-advised given challenges with including disadvantaged, men, who are more likely to experience an unintended birth (see Lindberg & Kost, 2013), in samples (see Martin, 2007; Sorenson, 1997; Stykes et al., 2013).

My operationalization of unintended childbearing mirrors the limited work on couples' intentions (see Hohmann-Marriott, 2009; Martin et al., 2007; Moore et al., 2009; Korenman et al., 2002; Saleem & Surkan, 2014; Williams, 1994), but binary retrospective measures of unintended fertility are certainly not ideal (see Augustine et al., 2009; Casterline & El-Zeini, 2007; Crissey, 2005; Edin & Kefalas, 2005; Joyce et al., 2002). Consideration of more nuanced constructs, such as ambivalence, was beyond the scope of this study but would provide key insights into discussion of couples' fertility intentions. Lastly, as these analyses are cross-sectional, it becomes difficult to parse out temporal ordering or discuss potential causal mechanisms such as relationship quality. Therefore, analyses predicting couples intentions are

limited in that I can only speak to the associations between sociodemographic characteristics, relationship dynamics, and couples' fertility intentions.

Results from both measurement and prediction analyses lay a foundation that could inform future work and answer a host of other research questions related to couples' fertility intentions. Conclusions based on the measurement analyses allow researchers to assess the viability of using mothers' reports of fathers' intentions available in alternative data sources, such as the NSFG and NLSY79. Collectively, the ECLS-B, NSFG, and NLSY79 could be used to address a wide variety of research questions so long at the limitations of mothers' proxy reports are acknowledged. This would greatly expand the possibilities for research on couples' unintended childbearing, family dynamics, transitions, and processes and their linkages with individual well-being. In addition, subsequent chapters build off the conceptual framework that I developed to predict couples' fertility intentions by linking couples' unintended childbearing to parental and child well-being. Finally, these results raise important policy implications. Unintended childbearing has emerged as an important social problem given its relatively high prevalence in the contemporary US, and my results indicate prior work focusing on mothers underestimates the share of children who are potentially influenced by a parent's not intending their birth. Future programs can strive to encourage parents to be more communicative in terms of their childbearing desires and contraceptive use. In addition, programs that are designed to help parents effectively co-parent in spite of differences in intentions could be useful as over a quarter of all first-time parents report disagreement in terms of their intentions.

CHAPTER III: GENDER, COUPLES' INTENTIONS, & PARENTAL WELL-BEING

The transition to parenthood is frequently cited as a key life course event and a marker of adulthood (e.g. Baxter, Hewitt, & Haynes, 2008; Rindfuss, 1991; Rindfuss, Swicegood, & Rosenfeld, 1987). Moreover, becoming a parent has been associated with both positive and negative changes in parental well-being (e.g. Goldberg & Perry-Jenkins, 2004; Knoester & Eggebeen, 2006; McLanahan & Adams, 1989; Nomaguchi & Milkie, 2003; Nomaguchi & Brown, 2011; Roy & Dyson, 2010; Umberson, Pudrovska, & Reczek, 2010), with well-being strongly influenced by the circumstances defining the entry into parenthood, including whether the birth was intended, among other factors (e.g. Knoester & Eggebeen, 2006; Nomaguchi & Milkie, 2003; Nomaguchi & Brown, 2011; Umberson, et al., 2010; Su, 2012).

Prior work on unintended childbearing and parental well-being consistently found unintended childbearing was associated with lower parental well-being – regardless of gender. For mothers, unintended childbearing increased psychological distress and reduced happiness (e.g. Barber et al., 1999; Barber & East, 2009; Su, 2012) and was associated with less healthy behaviors during pregnancy (e.g. Cheng et al., 2009; Joyce et al., 1990, 2000; Humbert et al., 2011). Similarly, research on fathers, though more limited, showed those who did not intend the birth reported greater depressive symptoms and less warmth toward their children than those with intended births (Bronte-Tinkew et al., 2007, 2009; Su, 2012). However, most extant research conceptualizes unintended fertility as an individual-level construct. Building on my previous assertion that both parents' intentions should be considered, I contribute to current research by emphasizing couple dynamics (i.e., disagreement in intentions), individuals' own intentions, and how these factors are associated with parents' depressive symptoms and self-

rated health. Since I am primarily interested in the transition to parenthood, analyses focus on first births. In addition, I explore whether couples' intentions are more detrimental for mothers' or fathers' well-being, providing another noteworthy contribution to current research. Lastly, by examining broad indicators of parental well-being that can change substantially over the life course, I consider change in the linkages between couples' intentions and parental well-being over time.

I chose to focus on depressive symptoms as Umberson and colleagues' (2010) decade in review noted that general indicators of psychological distress were a widely used indicator of parental well-being. Indeed prior work has consistently found that unintended childbearing undermines mothers' mental health by reducing happiness and increasing depressive symptoms (see Barber et al., 1999; Su, 2012). However, Simon's (2002) classic piece suggested men's and women's emotional problems manifested in different ways such that men reported higher levels of alcohol consumption whereas women reported greater depressive symptoms, suggesting a focus on depressive symptoms might underestimate the association between couples' intentions and fathers' depressive symptoms. In spite of these concerns, Su's (2012) recent analyses with the NSFH found that unintended childbearing was associated higher mean scores of depressive symptoms for fathers, which suggested that consideration of fathers' depressive symptoms was a valid endeavor. The secondary focus on self-rated health was also spurred by Umberson and colleagues' (2010) review which asserted that future research should focus on physical aspects of well-being (outside the context of maternal health during pregnancy). Given data restrictions, self-rated health was the only reasonable indicator that could be applied to both mothers' and fathers' well-being. Although consideration of anxiety surrounding parenthood would have been

another ideal indicator of well-being given my focus on couples' intentions and well-being, such questions were not asked consistently in the ESLS-B mother and father survey instruments.

BACKGROUND

The limited, recent work on couples' fertility intentions and its linkages with parental well-being has considered the associations between intentions and mothers' risky health behaviors during pregnancy (e.g. Hohmann-Marriott, 2009; Martin et al., 2007; Moore et al., 2009). Scholars have not yet considered the linkages between couples' intentions and broader indicators of parental well-being, which also merit attention. Although prior work on such outcomes is abundant, I assert these studies inadequately modeled intentions by focusing on individuals' rather than couples' intentions. Findings from the previous chapter suggested consideration of couples' intentions emphasized distinctive "intention scenarios" within birth contexts (i.e., both parents intending a birth, only the mother intending a birth, only the father intending a birth, and neither parent intending a birth). Based on this assertion, it is reasonable to expect unintended childbearing might be less detrimental for a mother's (or father's) well-being if the "partner" intended the birth, as the other parent's intentions might be indicative of social supports that could buffer the negative effects of unintended childbearing. Conversely, if a mother (or father) intends to have a birth but the "partner" does not, the disagreement might be a source of strain for the parent who intended the birth and undermine well-being in spite of that parent's intending the birth. I estimate separate models for mothers and fathers to ascertain if couples' intentions are more consequential for mothers' or fathers' well-being, and if the association between "intention scenarios" and well-being varies for mothers and fathers. Lastly, when available, I draw on the panel structure of the ECLS-B to model change in the effects of couples' intentions on parental well-being over time.

Unintended childbearing and parental well-being

Becoming a parent is an important milestone that undoubtedly influences well-being. Previous research largely assumed becoming a parent lowered psychological well-being (McLanahan & Adams, 1989; Umberson & Williams, 1999). However, more recent work demonstrated the association between parenthood and parental well-being was more complex, as becoming a parent had both positive and negative effects on well-being (Nomaguchi & Milkie, 2003), and the context in which individuals became parents affected parental well-being (e.g. Knoester & Eggebeen, 2006; Nomaguchi & Milkie, 2003; Nomaguchi & Brown, 2011; Umberson et al., 2010). In particular, intentions provided an important context with implications for parental well-being following the transition to parenthood (see Su, 2012).

A longstanding body of research finds evidence of a negative association between unintended childbearing and mothers' well-being. Although the bulk of this research has emphasized mothers' risky behaviors during pregnancy and use of prenatal care (e.g. Joyce et al. 1990, 2000; Humbert et al., 2011; Shah et al., 2011), others have examined the association between unintended childbearing and mothers' depressive symptoms, warmth toward children, and maternal investment (e.g. Barber et al., 1999; Barber & East, 2009; Cheng et al., 2009; East et al., 2012; Miller et al., 2009). Unfortunately, research on fathers' intentions and well-being is less developed. However, an emergent literature has found unintended childbearing reduced fathers warmth toward children (Bronte-Tinkew et al., 2007) and increased their depressive symptoms (Su, 2012). Given the lack of research on fathers' intentions and well-being, it is not surprising that analyses including both mothers' and fathers' perspectives are quite rare. To the best of my knowledge, Su's recent analyses provide the only empirical assessment of unintended childbearing on both mothers' and fathers' well-being. Specifically, she found unintended

childbearing (rather than remaining childless) increased fathers' depressive symptoms and lowered mothers' overall sense of happiness (Su, 2012). This suggests intentions are linked with both mothers' and fathers' well-being – though the manner in which negative "effects" manifest varies for mothers and fathers.

Overall, work on unintended childbearing – which spans multiple disciplines – provides rather compelling evidence that unintended childbearing is detrimental for multiple aspects of parental well-being. However, there is an important caveat regarding much of this work. For instance, many of these conclusions were based on specific samples, such as adolescent Latina mothers (East et al., 2012) or births in Maryland between 2001 and 2006 (Cheng et al., 2009). In addition, most analyses drawing on a broader sampling frame are arguably dated as they are either representative of births occurring in the late 1980s or early 1990s (see Barber et al., 1999; Miller et al., 2009; Su, 2012) or among women who came of age in the late 1970s to early 1980s (see Barber & East, 2009; Joyce et al., 1990, 2000).

These caveats suggest more recent work with nationally representative data is needed, and some scholars have begun to address this limitation. Bronte-Tinkew and colleagues (2007) considered father involvement among men having a resident birth in 2001 and found unintended childbearing was associated with less warmth toward children, which in turn reduced involvement (see Bronte-Tinkew et al., 2009). Limited research emphasizing a couple perspective on unintended childbearing examined the association between couples' intentions and mothers' risky behaviors during pregnancy and prenatal care (e.g. Hohmann-Marriott, 2009; Martin et al., 2007; Moore et al., 2009) and found both mothers' and fathers' intentions influenced maternal well-being during the pregnancy. A father's intending the birth appeared to

have some influence in buffering the negative association between the mother not intending the birth and the mother's use of prenatal care (Hohmann-Marriott, 2009; Martin et al., 2007).

Although these studies are representative of recent births, notable gaps remain in this research. Specifically, this work emphasizes the association between intentions and detailed indicators of maternal health *during the pregnancy* rather than more global indicators of parental well-being. The omission of broad indicators of well-being is problematic as an emphasis on *mothers'* well-being *during pregnancy* hampers our ability to assess 1) the impact of unintended childbearing on fathers' well-being and 2) if the linkages between couples' intentions and parental well-being change over time. Further, prior work indicated unintended childbearing reduced child well-being via depressive symptoms and harsh parenting (see Barber et al., 1999; East et al., 2012; Miller et al., 2009), suggesting that a parent's psychological well-being may have longer-term implications for child well-being. Revisiting the linkage between unintended childbearing and parental well-being provides notable contributions to current work as parental well-being is arguably important in its own right and likely influences parenting and child well-being (see next chapter). In addition to addressing these limitations, these analyses are also novel in that they stress the importance of *couples'* rather than individuals' intentions and their association with well-being among parents having a recent birth.

Intentions, couple disagreement in intentions, and parental well-being: Life-course influences

Examining couple- rather than individual-level intentions allows researchers to consider how couple dynamics might have implications for parental well-being. For instance, research modeling unintended fertility as an individual-level construct can only consider how an individual's perception of a birth as unwanted or mistimed influences his or her well-being,

ignoring the "other" parent's intentions. Drawing on the linked lives tenet of the life course perspective, I assert couple dynamics (i.e., disagreement in intentions) could influence the association between unintended childbearing and parents' well-being. For Elder (1994), linked lives embodied the social support systems within which individuals are embedded. When applied to parents, it is plausible that disagreement in intentions could be a source of social support or social strain influencing parental well-being depending on a parent's own intentions.

At its root, disagreement in intentions likely introduces stress to both the co-parenting and romantic relationships between parents, lowering an individual's well-being. However, the role of disagreement in intentions might vary depending on the parent's own intentions. For instance, if a mother (or father) intended a birth, but the child's other parent did not intend the birth, disagreement likely serves as a source of social strain lowering individual well-being by either introducing stressors to the parental relationship or undermining the positive effects of intending the birth. Conversely, in cases where the mother (or father) did not intend the birth but the other parent did, the latter parent's intending the birth could be indicative of greater social support and buffer the negative effects of unintended childbearing. Accordingly, I assert situating a parent's own intentions in relation to the "other" parent's intentions provides a novel opportunity to determine how both an individual's intentions and their partner's intentions are associated with parental well-being.

A second major tenet of the life course perspective concerns change over time (see Elder, 1994). Although research on unwanted childbearing and well-being has established long-term, detrimental effects of unintended childbearing for child outcomes (see Axinn et al., 1998; Hayatbakhsh et al., 2011), research linking intentions to parental well-being has primarily taken a cross-sectional approach. Indeed, the limited work that linked unintended childbearing to

indicators of parental well-being that could change over time (such as mental or physical health) only looked at parental well-being at one time point following the child's birth (see Su, 2012). Barber and colleagues (1999) found long-ranging effects of intentions on the parent-child relationship, but their analyses of mothers' depressive symptoms, happiness, and physical health did not incorporate a longitudinal approach. Therefore, it is unclear if the effect of unintended childbearing on parental well-being wanes or persists with the passage of time. A life course perspective suggests experiencing an important, mistimed life course transition, such as an unintended first birth, can set individuals on a trajectory that influences other domains of their life (e.g. educational aspirations, aspirations to marry, etc.) which in turn has long-reaching implications for well-being over time (see Umberson et al., 2010). Consistent with this perspective, Guzzo and Hayford (2011) found experiencing a first, unintended birth increased a mother's odds of experiencing unintended childbearing at higher parities. Indeed, it is reasonable to suggest having an unintended birth might have spillover effects on subsequent life course transitions such that the effects of unintended childbearing could potentially increase over time.

Conversely, a resilience perspective suggests individuals react to stressors, such as unintended childbearing, by drawing on personal resources to adapt and buffer the negative effects that accompany stressors (for review see Luthar, Cicchetti, & Becker, 2000). Therefore, this perspective suggests the negative effects of unintended childbearing deteriorate over time. And arguably, in this context, the other parent's intending the birth could be a resource reducing the negative "effects" of unintended childbearing over time.

The role of gender in intentions, disagreement, and parental well-being

To this point, I have largely assumed the associations between couples' intentions and parental well-being do not vary by parents' gender, but this assumption might be problematic. A number of factors could lead to gender differences in the associations between couple dynamics in fertility intentions and parental well-being. Indeed, there are reasonable explanations as to 1) why couples' intentions are more detrimental for mothers' well-being as well as 2) gender differences in which components of couples' intentions (i.e., *intending the birth* versus couple *disagreement in intentions*) are more consequential for a mother's versus a father's well-being.

Substantial differences exist in what is deemed masculine and feminine (see Chodorow, 1978; Maccoby, 1998; West & Zimmerman, 1987). Young girls, and women, are socialized (and expected) to invest more in relationships and parenthood than men (see Maccoby, 1998). Consistent with these perspectives, analyses of time diaries data concluded mothers spent more time in childrearing tasks than fathers in spite of the cultural shift encouraging greater father involvement (Hoschild, 1989; Milkie, Raley, & Bianchi, 2009; Sayer, Bianchi, & Robinson, 2004). Coupled with Hays' (1996) notion of intensive mothering, these perspectives and findings suggest mothering entails greater expectations, standards, and demands than fathering. Therefore, unintended childbearing is likely more detrimental for mothers' rather than fathers' well-being. However, it is also important to consider costs and rewards that accompany the transition to parenthood (see Knoester & Eggebeen, 2006; Nomaguchi & Milkie, 2003). Bearing this in mind, the literature discussed previously also suggests mothers might reap greater rewards from the transition to parenthood than fathers. Assuming mothers' greater involvement in parenting increases the rewards associated with parenthood (regardless of intentions), these

rewards might offset the negative effects of unintended childbearing for mothers, making unintended childbearing more detrimental for fathers' well-being.

Coupling this research with other perspectives provides additional insights that demonstrate how the multiplicative effects of unintended childbearing and couple disagreement in intentions might differ for mothers and fathers. Townsend's (2002) sentinel piece on fatherhood described fatherhood as an "indirect" act that was largely mediated or controlled by mothers whereas motherhood was considered a "direct" act. According to this perspective, disagreement in intentions might be less consequential for mothers – whose parenting does not seem to be as heavily influenced by fathers – than for fathers whose parental involvement must be negotiated through mothers (see Jarrett, Roy, & Burton, 2002; Townsend, 2002). Considering parenthood as a direct versus indirect act for mothers and fathers (respectively) suggests intentions are more consequential for mothers' well-being whereas the partner's intentions and couple agreement (or disagreement) are more consequential for fathers' well-being.

Relationship status, parenthood, and parental well-being

Although my focus is on gender, intentions, and couple disagreement in intentions, the context of a couple's relationship and the context in which they parent also have implications for parental well-being. In particular, prior research emphasizes the importance of relationship status (or resident status for fathers). Nomaguchi and Milkie (2003) found unmarried parents reported lower self-efficacy (regardless of gender), and reported gender differences in some dimensions of well-being, such that mothers (but not fathers) reported greater strains from housework, regardless of marital status. Among married parents, Nomaguchi and Milkie (2003) also reported that mothers (but not fathers) reported more frequent disagreements with their spouses after

becoming parents, yet, married mothers (but not married fathers) reported fewer depressive symptoms than their childless counterparts. Woo and Raley (2005) extended these analyses by differentiating between single and cohabiting parents and found the transition to parenthood was particularly detrimental to cohabiting mothers' well-being whereas cohabiting fathers fared better than their single counterparts. Similarly, Knoester and Eggebeen (2006) considered how experiencing a new birth affected men's social ties with their family, depressive symptoms, and social outings and found marked differences emerged for resident and nonresident father's well-being. Specifically, new resident children increased fathers' support from family members whereas new nonresident children increased fathers' depressive symptoms (Knoester & Eggebeen, 2006).

Other factors influencing parenthood and its effect on parental well-being

Prior research notes a number of other characteristics that are associated with resources and influence the transition to parenthood and parental well-being. Nomaguchi and Brown (2011) found that both costs and rewards associated with motherhood followed an educational gradient. Higher levels of education reduced mothers' anxiety about parenting, increased mothers' sense of role captivity, and lowered the sense of life-meaning accompanying the transition to motherhood (Nomaguchi & Brown, 2011). Similarly, Umberson and colleagues' (2010) recent review suggested that in addition to gender and relationship status, race/ethnicity and parental age were also consequential in defining the parenting context and influencing parental well-being in the transition to parenthood. Previous work on unintended childbearing consistently found it was associated with lower maternal health during the pregnancy (see Hohmann-Marriott, 2009; Joyce et al., 2000, 2002). Therefore, I also include indicators to account for maternal health

during the pregnancy to better isolate the effects of intentions and couple disagreement in intentions for maternal mental and physical health after experiencing a birth.

CURRENT STUDY AND HYPOTHESES

Fertility intentions contribute to parental well-being by influencing the context of parenthood such that unintended childbearing generally lowers parental well-being (e.g. Barber et al., 1999; Barber & East, 2009; Bronte-Tinkew et al., 2007, 2009; Cheng et al., 2009; Su, 2012). By incorporating both parents' fertility intentions, I add to our existing body of knowledge and explicitly consider the couple dynamics contribute to the broader context in which individuals transition into parenthood. In doing so, I am able to facilitate a more nuanced discussion of the setting in which people interpret and experience a birth. Ultimately, analyses consider the multiplicative effects of intentions and disagreement to understand how both intentions and couple dynamics are associated with parental well-being. Separate models are estimated for mothers and fathers to facilitate a discussion of gender differences (or similarities). Lastly, when available, longitudinal analyses are considered to examine change in the linkages between couples' intentions and parental well-being over time.

Ultimately, I expect parents who belong to a couple where both parents intended the birth report better well-being than their counterparts belonging to other "intention scenarios," given the expected negative effects of either unintended childbearing or strained couple dynamics. However, in certain situations, disagreement might buffer the negative effects of unintended childbearing. I expect that for individuals having an unintended birth, their partner's intending the birth is indicative of social support and might lead to fewer depressive symptoms and less

substantial declines in physical health compared to their counterparts belonging to couples where neither parent intended the birth.

Different perspectives inform competing hypotheses regarding gender differences in the linkages between couples' intentions and parental well-being. According to gender socialization, the social construction of gender, and gendered expectations surrounding parenthood (e.g., Hays, 1996; Maccoby, 1998; West & Zimmerman, 1987), it is reasonable to expect the linkages between couples' intentions and parental well-being are stronger for mothers. Conversely, research noting greater benefits associated with mothering rather than fathering suggest couples' intentions are more consequential for fathers' well-being than mothers (see Nomaguchi & Milkie, 2003). Lastly, assuming mothering is a "direct" act and fathering is an "indirect" act (see Townsend, 2002), I expect intentions are more consequential for mothers' well-being whereas couple dynamics are more consequential for fathers' well-being.

Similarly, competing hypotheses for the effects of couples' intentions on parental well-being over time are plausible based on resilience and life course frameworks. According to a resilience perspective, individuals draw on resources and react to unintended childbearing (and arguably negative relationship dynamics) such that the linkages between couples' intentions and parental well-being become less pronounced over time. Conversely, a life course perspective suggests less than "ideal" circumstances influence individuals' trajectories such that the linkages between couples' intentions and parental well-being either persist or become more pronounced over time.

DATA AND METHOD

The previous chapter provided a description of the ECLS-B, which are used in this application as well. Thus, I do not repeat those details but focus on new information pertinent to this particular empirical application (e.g. sample selection, new measures, and analytic strategy).

Sample selection

In the baseline, 9-month ECLS-B data, approximately 10,700 parents completed at least one of the parent questionnaires. Given my focus is on biological children, I initially excluded approximately 100 parents who were not the biological parent of the focal child. In addition, as this application focuses on the transition to parenthood, I excluded parents who reported having multiple children at the baseline interview. Substantial differences exist in mothers and fathers in the selection criteria. For instance, approximately 10,600 biological mothers completed the baseline survey. Of these biological mothers, 3,350 reported the focal child was their first birth. In contrast, of a potential 10,700 fathers, only 6,850 fathers completed the baseline interview. Among these 6,850 biological fathers, 2,400 fathers reported the focal child was his first birth. Approximately, 2,200 eligible mothers can be linked to fathers' data and 2,150 of these mothers had valid data for both mothers' and fathers' intentions and parental well-being. Practically all fathers who completed the baseline interviews were matched with mothers, and 2,350 of these eligible, first-time fathers had valid data on both mothers' and fathers' intentions[6].

The substantial share of "missing" fathers raises concerns as over 1,000 eligible mothers could not be linked with valid father data. Arguably, one could assert that mothers' perceptions

[6] This analytic sample includes more first-time parents than the previous application as mothers' and fathers' were eligible if they only had one child – regardless of the number of children the other parent had.

of fathers' intentions are just as consequential for mothers' well-being as fathers' own reports of his intentions. Thus, I conducted supplemental analyses on mothers that used mothers' reports of fathers' intentions rather than the fathers' own reports of his intentions. Doing so retains approximately 1,000 eligible mothers who did not have matching data from the child's biological father. 3,250 mothers (out of an eligible 3,350) who provided valid data on both theirs and the child's father's intentions are considered in these analyses.

I consider the association between the couple context of unintended childbearing and two domains of parental well-being (i.e., mental and physical health). Unfortunately, differences between mothers', resident fathers', and nonresident fathers' survey instruments affected the availability of specific indicators for each domain of well-being (detailed below). For instance, some indicators – such as depressive symptoms – are asked at each wave for mothers and only at the baseline, 9-month interview for fathers. Therefore, certain longitudinal analyses are limited to mothers or resident parents. In spite of these limitations, I am able to consider the linkages between couples' fertility intentions and multiple domains of parental well-being for most parents. I return to the implications of this in the discussion of the study's limitations. Figures 2.1 and 2.2 provide flowcharts detailing the sample restrictions across multiple domains of mothers' and fathers' well-being respectively.

Figure 2.1. Detailing sample sizes for mother's domains of well-being

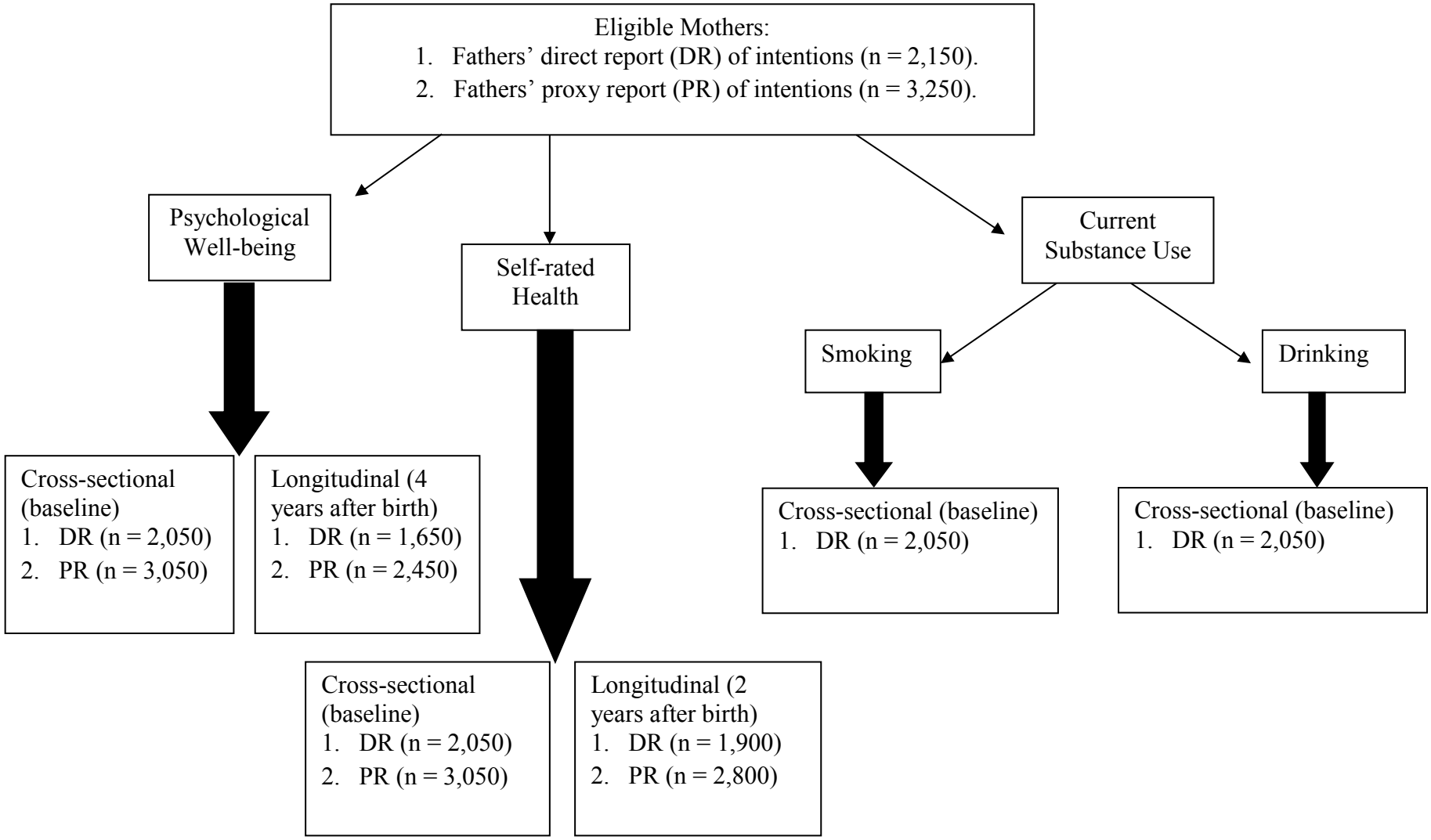
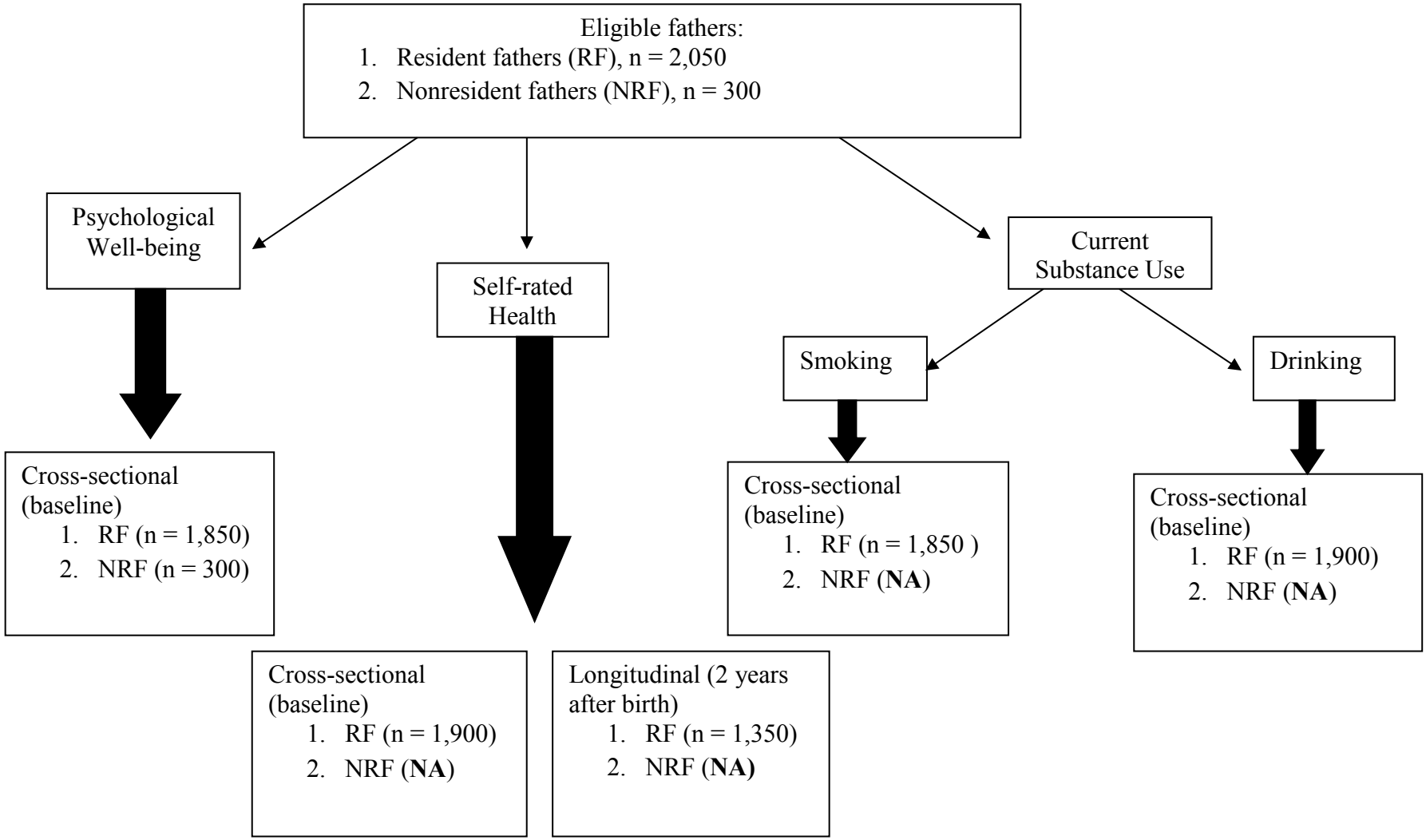


Figure 2.2. Detailing sample sizes for fathers' domains of well-being by resident status at baseline, 9-month interview



NA means data are not available given differences in survey instruments.

New measures: Domains of parental well-being

Depressive symptoms. I assessed parent's mental health using the 12-item CESD scale (see Radloff, 1977) and summed responses from Likert items that assessed how frequently respondents reported they: (1) were bothered by things that usually didn't bother them, (2) did not feel like eating, (3) could not shake off the blues, (4) had trouble keeping their mind on what they were doing, (5) felt depressed, (6) felt everything was an effort, (7) were fearful, (8) had restless sleep, (9) talked less than usual, (10) felt lonely, (11) felt sad, and (12) could not get going *during the past week*. Responses for these items range from 1 ("rarely, never, or less than one day") to 4 ("most, all, or 5-7 days"). These questions were asked of all parents at the baseline, 9-month interview. Alpha coefficients for *depressive symptoms* for both mothers and fathers were acceptable which suggested this scale was reliable (0.85 for mothers; 0.84 for fathers). Follow-up interviews only asked mothers to report their depressive symptoms, limiting longitudinal analyses of mental health to mothers.

Physical health. *Self-rated health* was used as a global indicator of physical health. Respondents worsere asked, "Would you say your health in general is..." Response categories ranged from 1 "excellent" to 5 "poor." I constructed a binary dummy indicator (indicative of "excellent/very good health"). Respondent's *self-rated health* is available at each wave for mothers and resident fathers, but it was only included at the two-year interview for nonresident fathers. Given very low response rates among nonresident fathers at the follow-up interview, analyses of *self-rated health* were limited to mothers and resident fathers. Supplemental analyses also considered two other indicators of physical health that assess parents' substance use (current drinking and smoking behaviors).

New measures: Independent variables

In terms of sociodemographic characteristics, I use more traditional indicators than the previous chapter given individuals (rather than couples) serve as the unit of analysis. *Education* is coded into four mutually-exclusive and exhaustive categories: less than high school/GED, high school diploma/GED, some college, and at least a bachelor's (reference). *Race/ethnicity* is coded into white (reference), black, Hispanic, and Asian, and *age at birth* was modeled as a continuous variable. I used two indicators of maternal health during pregnancy. The first, *adequate prenatal care*, is based on mothers' self-reports of receipt of prenatal care and flags mothers who reported receiving adequate prenatal care in the first trimester as 1 (versus those who did not 0). I also include an indicator of flagging mothers who used smoke or drank during the pregnancy as 1 (versus those who did not 0).[7]

Analytic strategy

Descriptive statistics are stratified by couples' intentions and reported in separate tables for mothers and fathers (see Tables 2.1 and 2.2). In this manner, bivariate estimates inform a discussion of differences in the composition of mothers and fathers belonging to each "intention scenario" (i.e., both intended, only mother intended, only father intended, neither intended).

Next, cross-sectional multivariate analyses (see Tables 2.3 and 2.4) are presented for depressive symptoms (estimated via ordinary least squares regression) and self-rated health (estimated via logistic regression) closely following the birth. Models proceed in three steps. Model 1 is limited to couples' intentions whereas Model 2 introduces sociodemographic

[7] Both indicators of maternal health during pregnancy will only be included in models predicting mothers' well-being, not fathers.

characteristics. Lastly, Model 3 – which is limited to mothers – includes indicators of maternal health during pregnancy. Tables 2.5 and 2.6 draw on the panel structure of the ECLS-B to model the linkages between couples' intentions and change in depressive symptoms (for mothers only) and self-rated health. Diagnostic analyses (available on request) suggested latent growth curve analyses were the most appropriate technique to model changes in parental well-being over time. However, I opted to estimate auto-regressive regression models because latent growth curve analyses would be difficult to employ for fathers given limited time points and repeated measures. As a key contribution of this chapter lies in considering gender differences (or similarities), I selected a less-sophisticated technique to model change over time in order to retain meaningful gender comparisons. Longitudinal analyses of depressive symptoms are limited to mothers and predict depressive symptoms four years after the birth whereas longitudinal analyses of self-rated health predict health two years after the birth (but include mothers and resident fathers). For both sets of longitudinal analyses, Model 1 is limited to couples' intentions, Model 2 introduces sociodemographic characteristics, and Model 3 adds baseline indicators of well-being effectively modeling change in parental well-being over time. A number of supplemental analyses were conducted that considered mothers' well-being among a more representative sample (using proxy reports of fathers intentions) – see Tables A2.1 through A2.5 in this chapter's appendix. In addition, Tables A2.6 and A2.7 considered parental substance use and predict current drinking and smoking behaviors closely following the birth.

RESULTS

The previous chapter asserted there were costs and benefits associated with using fathers' direct reports of intentions. Sensitivity analyses comparing Table 2.1 with Table A2.1 in this chapter's appendices – indicated minimal variation existed in distributions of all indicators of maternal

well-being (including health during the pregnancy) when direct and indirect measures of fathers' intentions were used. In contrast, differences emerged in the samples when comparing intentions, disagreement in intentions, and mothers' sociodemographic characteristics. This suggests the use of mothers' proxy reports of fathers' intentions is preferable when focusing solely on mothers' well-being. However, a key contribution of this chapter lies in assessing gender differences (or similarities) in the effect of couples' intentions on parental well-being. As such, comparing coefficients across models of a nationally representative sample of mothers with those of a relatively advantaged sample of fathers is problematic. The remaining results presented herein use fathers' own reports of intentions to construct couple-level indicators of fertility intentions. However, Tables A2.2-A2.5 (in this chapter's appendix) provide results for mothers' depressive samples and self-rated health using mothers' proxy reports among a more nationally representative analytic sample of first-time mothers.

Descriptive statistics

Mothers' and fathers' characteristics were presented in Tables 2.1 and 2.2 (respectively) according to couples' intentions. Mothers reported slightly higher levels of both depressive symptoms and good self-rated health than fathers, on average. Further, depressive symptoms and self-rated health varied according to couples' intentions. Regardless of gender, parents reported the lowest levels of depressive symptoms when both parents intended the birth, followed by only the mother intending the birth, only the father intending the birth, and lastly neither parent intending the birth. A similar pattern existed for mothers in terms of self-rated health. However, a larger share of fathers who intended the birth when their partner did not reported good (or very good) health when compared to their counterparts belonging to couples where only the mother intended the birth.

Table 2.1. Descriptive Statistics for Mothers, by Couples' Intentions

	Total Sample		*Both Intended*			*Mother intended, Father did not*			*Father intended, mother did not*			*Neither Intended*		
	Raw N[1]	μ or %	Raw N[1]	μ or %		Raw N[1]	μ or %		Raw N[1]	μ or %		Raw N[1]	μ or %	
Parental Well-being														
Depressive Symptoms*	2,150	16.4	900	15.4	cd	400	15.9	cd	250	17.1	ab	550	18.2	ab
Good/very good Health*	1,450	73.5	700	79.9	cd	300	73.9	d	150	70.9	a	350	62.0	ab
Sociodemographic Characteristics														
Race/ethnicity*														
White	1,100	68.9	500	76.3	bcd	200	62.0	a	100	62.9	a	300	62.9	a
Black	250	8.7	50	3.1	bcd	50	10.4	ad	50	10.8	ad	100	17.0	abc
Hispanic	350	18.7	150	17.1		50	22.7		50	22.1		100	17.2	
Asian	350	3.7	150	3.5		100	4.9	d	50	4.2		50	2.9	b
Foreign-born*	550	18.9	250	19.5	d	150	24.9	d	100	20.2		100	12.9	ab
Educational Attainment*														
At least a bachelor's degree	750	33.9	450	46.5	bcd	150	33.4	ad	50	27.7	ad	100	12.9	abc
Some college experience	550	29.8	250	27.6	d	100	31.6		50	27.7		150	33.9	a
High school diploma/GED	450	23.2	150	17.0	cd	50	21.7	d	50	28.6	a	200	33.9	ab
No degree	250	13.1	100	8.9	cd	50	13.3	d	50	17.0	a	100	19.3	ab
Relationship Status at Birth*														
Married to bio father	1,450	72.2	800	90.1	bcd	300	71.7	ad	150	64.3	ad	250	41.6	abc
Cohabiting with bio father	400	18.7	50	8.1	bcd	50	19.4	ad	50	26.9	a	200	34.9	ab
Not living with bio father	200	9.1	50	1.8	bcd	50	8.9	ad	50	8.8	ad	150	23.5	abc
Age at birth (in years)*	2,050	26.1	900	28.2	cd	400	27.6	cd	250	24.2	abd	550	21.8	abc
Health During Pregnancy														
Adequate prenatal care	1,550	74.9	700	78.1	d	300	73.8		150	71.7		400	70.9	a
Smoke/drank during pregnancy*	250	12.3	50	8.6	bcd	50	13.6	a	50	15.8	a	100	16.9	a
Total	2,050		900	46.7		400	18.3		250	10.5		550	24.5	

Please note * suggests there is significant variation according to the couple's consistency in mother's and father's reports of father's intentions. "a" denotes a significant ($p<0.05$) difference from couples where both intended, "b" denotes a significant ($p<0.05$) difference from couples the mother intended, but the father did not, "c" denotes a significant ($p<0.05$) difference from couples where the father intended the birth, but the mother did not, and "d" denotes a significant ($p<0.05$) difference from couples where neither parent intended the birth.

1. Unweighted frequencies might not sum appropriates as frequencies are weighted to nearest 50 per NCES restricted data agreement.

Table 2.2. Descriptive Statistics for Fathers, by Couples' Intentions

	Total Sample		*Both Intended*			*Mother intended, Father did not*			*Father intended, mother did not*			*Neither Intended*	
	Raw N[1]	μ or %	Raw N[1]	μ or %		Raw N[1]	μ or %		Raw N[1]	μ or %		Raw N[1]	μ or %
Parental Well-being													
Depressive Symptoms[*]	2,050	15.8	1,000	14.9	cd	300	15.9	d	200	16.5	a	750	16.9
Good/very good Health[2]	1,300	67.3	650	69.8		200	65.1		100	67.8		350	63.8
Sociodemographic Characteristics													
Race/ethnicity[*]													
White	1,150	59.5	600	66.7	d	150	60.2	d	100	65.4	d	300	48.0
Black	200	9.2	50	5.0	d	50	8.3	d	50	10.9		100	15.0
Hispanic	500	27.3	200	23.9	d	50	26.2		50	20.0	d	200	33.9
Asian	400	4.0	200	4.4	d	100	5.3	d	50	3.7		100	3.1
Foreign-born[*]	600	19.9	300	22.3	d	100	27.1	d	50	17.8		150	14.2
Educational Attainment[*]													
At least a bachelor's degree	750	26.9	450	36.2	cd	100	31.8	d	100	25.7	ad	150	12.4
Some college experience	650	29.9	300	31.3		100	26.8		50	23.2		200	30.7
High school diploma/GED	500	23.2	150	18.3	d	50	24.9		50	21.1		250	29.7
No degree	350	20.0	100	14.2	cd	50	16.5	cd	50	30.0	ab	150	27.2
Relationship Status at Birth[*]													
Married to bio mother	1,550	65.1	850	83.2	bcd	250	71.7	ad	150	62.9	ad	300	37.9
Cohabiting with bio mother	450	21.7	100	12.1	cd	50	16.3	cd	50	28.5	ab	250	35.4
Not living with bio mother	250	13.2	50	4.7	bd	50	12.0	ad	¥	8.6	d	150	26.7
Age at birth (in years)[*]	--	27.9	--	29.7	cd	--	29.1	cd	--	26.2	ab	--	24.9
Total	2,150		1,000	46.2		300	13.0		200	7.4		750	33.4

Please note * suggests there is significant variation according to the couple's consistency in mother's and father's reports of father's intentions. "a" denotes a significant ($p<0.05$) difference from couples where both intended, "b" denotes a significant ($p<0.05$) difference from couples the mother intended, but the father did not, "c" denotes a significant ($p<0.05$) difference from couples where the father intended the birth, but the mother did not, and "d" denotes a significant ($p<0.05$) difference from couples where neither parent intended the birth. ¥ denotes an unweighted cell size that rounds to 0 per ECLS-B restricted data use agreement.

1. Unweighted frequencies might not sum appropriates as frequencies are weighted to nearest 50 per NCES restricted data agreement.
2. Limited to resident fathers as these questions were not included in the baseline, nonresident father instrument.

Mothers and fathers reported a comparable share belonging to couples where both parents intended the birth (i.e., approximately 46%). Alternatively, among first-time fathers there was less disagreement in intentions such that 33% of fathers belonged to couples where neither parent intended the birth (compared to 25% of first-time mothers). When disagreement in intentions occurred, it was more common for mothers (not fathers) to intend the birth (i.e., 18% and 13%, for mothers and fathers respectively) with 11% and 7% of first-time mothers and fathers belonging to couples where only the father intended the birth.[8] First-time mothers were disproportionately white compared to first-time fathers (i.e., 69% versus 60%) and this difference was largely driven by a larger share of Hispanic, first-time fathers (27% compared to 19% among mothers). A comparable share of first-time mothers and fathers were black (9%) and Asian (4%). Approximately one-fifth of first-time mothers and fathers alike were foreign-born. Mothers reported somewhat higher levels of education than fathers as over one-third (34%) of first-time mothers had a Bachelor's degree compared to just over one-fourth (27%) of first-time fathers whereas a larger share of fathers (20%) reported no degree than mothers (13%). The sample consisted primarily of married parents (70% of mothers and 65% of fathers), with about 20% cohabiting at the time of birth. On average, first-time mothers were 26 years-old at the time of birth compared to first-time fathers who were approximately 28. Three-fourths of first-time mothers reported receiving adequate prenatal care with only 12% reporting either smoking or drinking during the pregnancy.

[8] Please note that parents (not couples) are the unit of analyses in this chapter. Thus, the unweighted n's and distributions for couples' intentions are not quite identical for mothers and fathers. Parents were eligible to be included in this sample regardless of the "other" parents' older children.

Bivariate associations

For both mental and physical indicators of mothers' health, significant differences were predicated on a mother's own intentions more than couple dynamics or her partner's intentions (i.e., no difference when comparing both intended versus only mother and only father intended versus neither). Conversely, among fathers, higher depressive symptoms were predicated more on the mother's not intending the birth than his own intentions or disagreement in intentions (i.e., no significant difference when comparing only father and neither intended *but* differences in both intending and only mother versus neither intending the birth). Unlike first-time mothers, there were no significant differences in fathers' self-rated health according to couples' intentions at the bivariate level.

Significant variation existed in the composition of first-time mothers' and fathers' sociodemographic characteristics according to couples intentions – though gendered nuances emerged when parsing out these differences. For instance, first-time mothers belonging to couples where both parents intended the birth were disproportionately white and non-black compared to all other "intention scenarios" (i.e., mother intended, father did not; father intended, mother did not; neither intended) whereas minimal race/ethnic differences existed for first-time Hispanic and Asian mothers across couples' intentions. Conversely, for fathers, most racial/ethnic variation existed in comparing couples where neither parent intended the birth with each of the other "intention scenarios" such that black and Hispanic fathers were overrepresented among this group and white and Asian fathers were underrepresented. Foreign-born, first-time mothers and fathers alike were significantly underrepresented among couples where neither parent intended the birth compared to couples where both or only the mother intended the birth.

Variation also existed in the distribution of educational attainment according to couples' intentions. The most distinctive pattern that emerged for both mothers and fathers was the overrepresentation of college-educated parents in couples where both parents intended the birth and the overrepresentation of parents having a high school diploma (or less) among couples where neither or at least one parent did not intend the birth. Although there were subtle gender differences in which comparisons are statistically significant, the general pattern was not gender-specific. Likewise, substantial variation existed in both first-time mothers' and fathers' relationship statuses at birth across couples' intentions. Again, despite subtle gendered nuances, married parents were overrepresented among couples where both intended the birth, cohabiting parents were most notably overrepresented among couples where neither or only the father intended the birth, and parents who were not living with the "other" parent were most notably overrepresented among couples where neither parent intended the birth. Among first-time mothers, those who belonged to couples where either both parents or only the mother intended the birth were, on average, older than their counterparts in couples where only the father or neither parent intended the birth. A similar pattern existed for first-time fathers as well. Lastly, among first-time mothers, slight variation existed in health during the pregnancy according to couples' intentions at the bivariate level. A greater share of first-time mothers who belonged to couples where both parents intended the birth reported receiving adequate prenatal compared to couples where neither parent intended the birth. Mothers were less likely have smoked or drank during pregnancy when both parents intended the birth compared to all other "intention scenarios."

Multivariate findings: Depressive symptoms closely following the birth

Table 2.3 predicts depressive symptoms approximately 9 months after the birth, and results progress in three models. Model 1 includes couples' intentions as the sole predictor of parental well-being whereas Model 2 adds sociodemographic characteristics as control variables. Lastly, Model 3 – which is limited to mothers – includes two indicators assessing health behaviors during pregnancy. A similar modeling strategy was applied to analyses predicting self-rated health 9 months after the birth (see Table 2.4).

Table 2.3. Results for OLS Regression of Depressive Symptoms, for Mothers and Fathers

	Model 1		Model 2		Model 3
	Mother's Baseline CESD B	*Father's Baseline CESD* B	*Mother's Baseline CESD* B	*Father's Baseline CESD* B	*Mother's Baseline CESD* B
(Both intended)					
Intended birth, partner did not	0.48	1.53 ***	0.30	0.99 †	0.20
Did not intend birth, partner did	1.72 ***	0.87 †	1.31 **	0.79 †	1.20 *
Neither parent intended birth	2.76 ***	1.97 ***	1.87 ***	0.99 **	1.77 ***
(White)					
Black			-0.14	0.32	0.08
Hispanic			-0.86 †	-0.05	-0.67
Asian			0.99 †	1.68 **	1.06 *
Foreign-born			-0.99 *	-2.04 ***	-0.89 *
(At least a bachelor's degree)					
Some college experience			0.67 *	0.55 *	0.70 †
High school diploma/GED			0.94 *	0.00	0.82 *
No degree			1.32 *	0.79	1.03 *
(Married to "other" bio parent)					
Cohabiting with "other" bio			0.66 †	1.07 *	0.46
Not living with "other" bio			1.09	1.27 *	1.05
Age at birth (in years)			-0.01	-0.04 *	-0.02
Health During Pregnancy (mothers only)					
Adequate prenatal care					-0.19
Smoke/drank during pregnancy					1.72 ***
Constant	15.45 ***	14.98***	15.67 ***	16.21 ***	15.82 ***
F Statistic	25.78 ***	9.06 ***	8.20 ***	7.34 ***	7.73 ***
R^2	0.05	0.03	0.07	0.07	0.08
N (unweighted)	2,050	2,150	2,050	2,150	2,050

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Couples' intentions are associated with both mothers' and fathers' depressive symptoms and these linkages remain statistically significant when sociodemographic characteristics and former health behaviors were included in models – though "effects" are somewhat attenuated. For both mothers and fathers, belonging to a couple where neither parent, rather than both, intended the birth was associated with the greatest unit-increase in depressive symptoms across all models. Gendered nuances emerged when considering the relationship between couples' intentions and depressive symptoms among couples experiencing disagreement in intentions. For instance, for first-time mothers, not intending a birth when the father did was associated with higher levels of depressive symptoms (b = 1.72***) whereas mothers who intended the birth when their partners did not reported comparable depressive symptoms to their counterparts in couples where both parents intended the birth (b = 0.48). Conversely, first-time fathers who either intended the birth when the mother did not or belonged to couples where neither parent intended the birth reported higher levels of depressive symptoms (b = 1.53*** and 1.97***, respectively) compared to fathers in couples where both parents intended the birth. Fathers who did not intend the birth when the mother did reported somewhat elevated depressive symptoms compared to their counterparts belonging to couples where both parents intended the birth (b = 0.87†).

Additional analyses (available on request) treated neither parent intended the birth as the reference group. For both mothers and fathers, having a partner intend the birth – when they did not – was associated with lower levels of depressive symptoms when compared to their counterparts where neither parent intended the birth (b = -1.03† and -1.10* respectively). However, the protective "effects" of the partner's intending the birth are no longer significant once sociodemographic characteristics are included in the model.

In most instances, patterns remained largely unchanged once sociodemographic characteristics were introduced in the model – though coefficients were somewhat attenuated (see Model 2). Mothers who belonged to couples where 1) she did not intend the birth but her partner did and 2) neither parent intended the birth continued to report significantly higher levels of depressive symptoms. However, the effect sizes were reduced from 1.72*** to 1.31** and 2.76*** to 1.97***, respectively. Although the inclusion of sociodemographic characteristics reduced the magnitude of effects, couples' intentions continued to have highly significant and relatively substantial linkages with mothers' depressive symptoms. In contrast, the inclusion of sociodemographic characteristics had more noted effects on the linkages between couples' intentions and fathers' depressive symptoms. A father's intending the birth when the mother did not – rather than both intending the birth – was only *marginally* associated with mental health net of sociodemographic characteristics, b = 0.99†, formerly b = 1.53***. In addition, the magnitude and significance of belonging to a couple where neither parent intended the birth (compared to both parents intending the birth) was reduced such that neither parent intending the birth was associated with a 0.99** unit-increase in fathers' depressive symptoms (formerly b = 1.97***). After considering fathers' sociodemographic characteristics, there is weak evidence that intending a birth (when the mother did not), rather than both parents intending the birth, was associated with greater depressive symptoms (b = 0.99†, formerly b = 0.30).

Though it is not the focus of this study, the linkages between sociodemographic characteristics and mental health appear to differ according to gender. For mothers, being Hispanic (rather than white) and being foreign-born was associated with lower levels of depressive symptoms – though effects for Hispanic mothers were marginally significant. In contrast, being Asian (rather than white), reporting lower levels of education, and cohabiting

with the biological father at the child's birth (rather than being married) were all positively associated with depressive symptoms. In addition, for mothers, the inclusion of indicators assessing maternal health during pregnancy further attenuated the effects of couples' intentions (see Model 3) as mothers who reported smoking or drinking during pregnancy reported a 1.72 unit increase in depressive symptoms, which was highly significant. For fathers, being Asian (rather than white), reporting lower levels of education, and not being married to the biological mother at the time of birth were all associated with higher levels of depressive symptoms whereas being either foreign-born or older at the time of birth were negatively associated with depressive symptoms.

Multivariate findings: Self-rated health closely following the birth

The linkages between couples' intentions and a global indicator of physical health were less pronounced compared to depressive symptoms (see Table 2.4). Indeed, for first-time, resident fathers, only one "intention scenario" was marginally associated with self-rated health such that fathers who belonged to couples where neither parent intended the birth were less likely to report good or very good health (OR = 0.76†), compared to their counterparts belonging to couples where both parents intended the birth.[9] Alternatively, among mothers, belonging to a couple where either 1) she did not intend the birth but the father did or 2) neither parent intended the birth – rather than both parents intending the birth – was associated with a lower odds of reporting good health (OR = 0.61* and 0.41***, respectively). There was weak evidence that when mothers intended the birth, but the father did not, mothers were less likely to report good health (OR = 0.71†) compared to their counterparts belonging to couples where both parents intended the birth.

[9] Self-rated health was not included on nonresident fathers' survey instruments. Thus, analyses of self-rated health are limited to resident fathers.

Table 2.4. Cross-sectional Analyses Predicting the Odds of Good/Very Good Self-Rated Health, for Mothers and *Resident* Fathers

	Model 1		Model 2		Model 3
	Mother's Self-rated Health OR	*Father's Self-rated Health* OR	*Mother's Self-rated Health* OR	*Father's Self-rated Health* OR	*Mother's Self-rated Health* OR
(Both intended)					
Intended birth, partner did not	0.71 †	0.91	0.82	1.11	0.84
Did not intend birth, partner did	0.61 *	0.80	0.83	0.84	0.86
Neither parent intended birth	0.41 ***	0.76 †	0.64 *	1.03	0.66 *
Sociodemographic Characteristics					
(White)					
Black			1.29	1.73 †	1.20
Hispanic			0.81	1.17	0.77
Asian			0.63 †	0.89	0.62 *
Foreign-born			1.04	0.92	1.00
(At least a bachelor's degree)					
Some college experience			0.54 **	0.65 *	0.54 **
High school diploma/GED			0.50 **	0.64 *	0.52 **
No degree			0.31 ***	0.41 ***	0.34 ***
(Married to "other" bio parent at birth)					
Cohabiting with "other" bio			0.84	0.50 ***	0.90
Not living with "other" bio			0.87	0.63	0.88
Age at birth (in years)			1.03 †	0.99	1.03 †
Health During Pregnancy (mothers only)					
Adequate prenatal care				--	1.15
Smoke/drank during pregnancy				--	0.60 *
Constant	3.98 ***	2.31 ***	2.85 *	3.65 **	2.59
Model X^2	36.34 ***	3.24	121.84 ***	61.02 ***	129.69 ***
N (unweighted)	2,050	1,900	2,050	1,900	2,050

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Additional analyses (available on request) treated "neither parent intended" as the reference and provided limited evidence that for mothers, a father's intending the birth when she did not, was associated with better self-rated health (OR = 1.49†) compared to mothers in couples where neither parent intended the birth. However, this modest association was no longer significant once sociodemographic characteristics were included in the model. There was not a similar protective "effect" for a partner's intending the birth for fathers.

The marginally significant linkage between couples' intentions and resident fathers' self-rated health became non-significant when sociodemographic characteristics were introduced (see Model 2). Both fathers' education and relationship ties to the mother at birth played a role in explaining the association between couples intentions and fathers' self-rated health, as lower levels of education and cohabiting with the mother (rather than being married) were associated with a lower odds of reporting good health. Alternatively, for mothers, belonging to a couple where neither – rather than both parent(s) – intended the birth continued to reduce the odds of being healthy (OR = 0.64*) net of sociodemographic characteristics. The linkages between couples' intentions and mothers' health were primarily attenuated by education as mothers who reported lower levels of education had a lower odds of being healthy. Model 3 demonstrated the association between couples' intentions and mothers' health was statistically robust to indicators of maternal health during pregnancy – though reporting a risky pregnancy was negatively associated with self-rated health 9-months after the birth (OR = 0.60*).

Multivariate findings: Well-being years following the birth and changes over time

Table 2.5 predicts mothers' depressive symptoms four years after the birth. Models 1 and 2 largely replicate prior analyses with a focus on depressive symptoms four years (rather than 9 months) after the birth whereas Model 3 includes an indicator of baseline depressive symptoms

effectively predicting change in mothers' depressive symptoms. Mothers do not report elevated levels of depressive symptoms four years after the birth so long as at least one parent intended the birth. However, mothers who belonged to couples where neither parent (rather than both parents) intended the birth reported higher depressive symptoms, on average (b = 1.31** net of sociodemographic characteristics). Sociodemographic characteristics had similar effects to those found in cross-sectional analyses (see Model 2). Once baseline levels of depressive symptoms were included, there was marginal evidence that mothers in couples where neither parent (rather than both parents) intended the birth experienced a 0.69† unit increase in depressive symptoms over time.

Additional analyses (available on request), confirmed mothers belonging to couples where neither parent intended the birth reported significantly higher levels of depressive symptoms when compared to all other "intention scenarios." However, once sociodemographic characteristics are modeled mothers who did not intend the birth report comparable depressive symptoms regardless of their partner's intentions. Similarly, when compared to mothers in couples where neither parent intended the birth, those who intended the birth report decreases in depressive symptoms over time regardless of their partner's intentions.

Table 2.5. Analyses Predicting Mothers' Depressive Symptoms 4 Years after the Birth

	Model 1 B	Model 2 B	Model 3 B
(Both intended)			
Intended birth, partner did not	0.04	-0.04	-0.21
Did not intend birth, partner did	0.67	0.55	0.14
Neither parent intended birth	1.84 ***	1.31 **	0.69 †
Sociodemographic Characteristics			
(White)			
Black		-0.85 †	-0.60
Hispanic		-1.65 ***	-1.27 **
Asian		1.08 *	0.73
Foreign-born		-0.74 †	-0.31
(At least a bachelor's degree)[1]			
Some college experience		0.50 †	0.27
High school diploma/GED		1.52 ***	1.11 **
No degree		1.76 **	0.98 †
(Married to "other" bio parent 4 years after birth)			
Cohabiting with "other" bio		0.68	0.17
Not living with "other" bio		1.20 *	0.83
Age at birth (in years)		0.02	0.03
Former Health Behaviors			
Adequate prenatal care			0.11
Smoke/drank during pregnancy			0.57
Depressive symptoms at baseline [1]			0.33 ***
Constant	16.01 ***	14.99 ***	9.71 ***
F Statistic	7.72 ***	5.03 ***	9.63 ***
R^2	0.02	0.06	0.18
N (unweighted)		1,650	

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

1. Taken from baseline, 9-month data.

Table 2.6 predicts the likelihood that a parent reports good or very good health two years after the birth. Once again, the general patterns are consistent with cross-sectional analyses predicting good health 9 months after the birth. Net of sociodemographic characteristics, mothers who intended the birth when their partner did not were less likely to report good health (OR = 0.62*) two years after the birth. In contrast, just 9 months following the birth, mothers were only less likely to report good health when neither parent – rather than both parents – intended the birth. Model 3 provided marginal evidence that – for mothers – intending the birth when the father did not (rather than both parents intending the birth) was associated with a decrease in the likelihood of reporting better health over time (OR = 0.61†). Alternatively, for fathers, neither parent intending the birth was associated with a decrease in the likelihood of reporting good health two years after the birth (OR = 0.69*) and improvements in self-rated health over time (OR = 0.65*).

Additional analyses (available on request) treated neither parent intended the birth as the reference, rather than both parents intended. Neither mothers nor fathers experienced significant health benefits two years after the birth if the partner intended the birth when they did not.

Table 2.6. Analyses Predicting the Odds of Good/Very Good Self-Rated Health 2 Years after the Birth, for Mothers and Resident Fathers

	Model 1		Model 2		Model 3	
	Mother's Self-rated Health	*Father's Self-rated Health*	*Mother's Self-rated Health*	*Father's Self-rated Health*	*Mother's Self-rated Health*	*Father's Self-rated Health*
	OR	OR	OR	OR	OR	OR
(Both intended)						
Intended birth, partner did not	0.54 **	0.94	0.62 *	0.89	0.61 †	0.93
Did not intend birth, partner did	0.58 *	0.80	0.78	0.78	0.81	0.79
Neither parent intended birth	0.50 ***	0.70 *	0.77	0.69 *	0.88	0.65 *
(White)						
Black			0.98	1.36	0.73	1.21
Hispanic			0.89	1.48	0.80	1.60
Asian			0.42 **	1.11	0.40 **	1.13
Foreign-born			1.19	0.74	1.20	0.69
(At least a bachelor's degree) [1]						
Some college experience			0.48 **	0.58 *	0.55 *	0.66 †
High school diploma/GED			0.29 ***	0.50 *	0.33 ***	0.52 *
No degree			0.14 ***	0.29 ***	0.18 ***	0.35 **
(Married to "other" bio parent 2 years after birth)						
Cohabiting with "other" bio			0.95	1.18	1.13	1.82 **
Not living with "other" bio			1.07	0.58	1.34	0.44
Age at birth (in years)			0.99	0.97	0.99	0.98
Health During Pregnancy (mothers only)						
Adequate prenatal care					0.66 *	--
Smoke/drank during pregnancy					0.65 †	--
Baseline, self-rated health [1]					5.68 ***	5.99 ***
Constant	4.29 ***	2.92 ***	8.65 ***	8.34 ***	3.99 *	2.24
Model X^2	20.72 ***	4.85	109.00 ***	50.32 ***	322.97 ***	250.06 ***
N (unweighted)	1,900	1,300	1,900	1,300	1,900	1,300

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

1. Taken from baseline, 9-month data.

Assessing gender differences in the linkages between couples' intentions and well-being

Prior discussion of the results highlighted gendered patterns in the "effects" of couples' intentions on indicators of parental well-being. However, this discussion of broad patterns could not speak to the statistical differences or similarities in the "effects" of couples' intentions on mothers' versus fathers' well-being. In order to determine if the coefficients for couples' intentions had statistically different associations for parental well-being for mothers and fathers, I conducted post-estimation tests to conclude if the difference in effects for mothers and fathers was statistically different from "0" (for formula please see Paternoster, Brame, Piquero, Mazerolle, & Dean's (1998) discussion of testing difference in coefficients across models):

$z = (b_m - b_f)/(seb_m^2 + seb_f^2)$ where $z = 1.96$ ($p<0.05$)[10].

In spite of substantially different patterns in the linkages between couples' intentions and parental well-being discussed in Tables 2.3, 2.4, and 2.6 only one "level" of couples' intentions operated differently for mothers and fathers. Belonging to a couple where neither parent (rather than both parents) intended the birth had stronger associations with mothers' mental and physical health when compared to fathers closely following the birth ($z = 3.04$ and 5.04, respectively). Further, this "gender difference" was also observed in longitudinal analyses. Belonging to a couple where neither parent intended the birth (rather than both parents) marginally reduced a father's likelihood of reporting a positive change in self-rated health (OR = 0.70†) but had virtually no effect on mothers' changes in self-rated health (OR = 0.91), and the difference in these "effects" was statistically significant ($z = 2.36$).

[10] Where b_m and seb_m^2 refer to the coefficient for each "intention scenario" and the corresponding variance for mothers and b_f and seb_f^2 corresponds to the coefficient and error variance for fathers. Please note that all post-estimation tests were computed based on coefficients and standard errors from Model 2.

Alternative indicators of well-being

Primary analyses focused on global indicators of mental and physical health – though additional indicators of parental well-being (i.e., current substance use) were considered and are reported in Tables A2.6 and A2.7 in this chapter's appendix. Analyses of alcohol consumption were challenging as inadequate cell sizes did not allow me to properly distinguish binge-drinking from "healthy" consumption of alcohol (i.e., a glass of wine with dinner, or 4-6 glasses per week). Accordingly, the linkages between couples' intentions and drinking behaviors 9 months after the birth appear somewhat sporadic (see Table A2.6). Consideration of smoking nine months after the birth suggested that mothers who belonged to couples where neither parent intended the birth (rather than both parents) were more likely to be current smokers (OR = 1.86* in Table A2.7). However, relatively low levels of smoking among recent parents prevented me for assessing the degree of smoking – which might be more indicative of smoking as a coping mechanism linked to unintended childbearing. I return to these findings in the discussion section.

DISCUSSION

The transition to parenthood is a key life course event (e.g. Baxter, et al., 2008; Rindfuss, 1991; Rindfuss, et al., 1987) that is associated with both positive and negative changes in well-being (for review see Umberson, et al., 2010). Moreover, prior work underscored the importance of circumstances surrounding a birth, including but not limited to intentions, to understand how the transition to parenthood was associated with parental well-being. (e.g. Knoester & Eggebeen, 2006; Nomaguchi & Milkie, 2003; Nomaguchi & Brown, 2011; Umberson, et al., 2010; Su, 2012). Although prior work consistently found unintended childbearing was associated with lower levels of well-being, for both mothers and fathers (e.g., Barber et al., 1999; Barber & East, 2009; Su, 2012), this work conceptualized unintended fertility as an individual-level construct.

Consistent with the previous chapter, I assert focusing solely on whether an individual intended a birth or not overlooks the other parent's intentions. I contribute to current research by assessing the multiplicative "effects" of unintended childbearing and couple dynamics (i.e., disagreement in intentions) on two broad indicators of parental well-being (depressive symptoms and self-rated health). Further, I consider gender differences (or similarities) in how couples' intentions are associated with parental well-being, which provides a noteworthy contribution to current research which has focused either on mothers or fathers alone (notable exception see Su, 2012). Lastly, I consider if the linkages between couples' intentions persist or wane in the years following the birth and consider how couples' intentions are associated with changes in parental well-being over time.

The previous empirical application demonstrated "intention scenarios" (i.e., both parents, only the mother, only the father, and neither parent intending the birth) were quite distinctive. Accordingly, it stands to reason that considering the context of a birth via the couple's "intention scenario," provides key insights into understanding how couples' intentions are linked with parental well-being. Prior work has demonstrated that intending a birth is associated with better outcomes for mothers and fathers alike, on average (see Su, 2012). However, it is plausible to expect that a parent who intended the birth, when their partner did not, might report lower levels of well-being given strain in the couple (or co-parenting) relationship dynamic. Alternatively, a partner's intending the birth might be a source of social support buffering the negative "effects" of unintended childbearing. Indeed, the limited research considering couples' intentions and maternal health during pregnancy with the ECLS-B provided some evidence of this as a father intending the birth when the mother did not was associated with healthier pregnancies when compared to couples where neither parent intended the birth (see Hohmann-Marriott, 2009;

Martin et al., 2007). In addition to parsing out a nuanced discussion of couples' intentions, I asserted it was important to consider if observed linkages between intentions and parental well-being were stronger for mothers or fathers, and if different components of "intention scenarios" (i.e., intending the birth versus disagreement in intentions or the "other" parent's intentions) were more consequential for mothers or fathers well-being. Results provided compelling evidence that couples' intentions were linked with parental well-being both closely following the birth and years later, and that gendered nuances emerged in considering the linkages between intentions and well-being.

Support for hypotheses was somewhat mixed. Overall, I found the strongest support for the prediction that parents who belonged to a couple where both intended the birth reported higher levels of well-being compared to all "other" groups. The benefits associated with both parents intending the birth were most pronounced when considering depressive symptoms closely following the birth. Although the linkages between couples' intentions and depressive symptoms were somewhat attenuated once sociodemographic characteristics were included, the association remained statistically significant – though in some cases it was reduced to marginally significant distinctions. In contrast, I found less support for this hypothesis in considering self-rated health closely following the birth. Although mothers who belonged to any "other" intention scenario were less likely to report good or very good health, this association was no longer significant for most comparisons once sociodemographic characteristics were included in the model. However, net of sociodemographic characteristics, mothers who belonged to couples where neither parent intended the birth were less likely to report good health. Further, the linkages between couples' intentions and fathers' self-rated health were not pronounced in initial models and became nonsignificant once sociodemographic characteristics were considered.

Supplemental analyses provided some evidence that a partner's intending a birth when the respondent did not was associated with fewer depressive symptoms (for mothers and fathers alike) and better health (for mothers only) closely following the birth. However, this association was not robust to sociodemographic characteristics. Rather, and consistent with the previous chapter, it appears that parents belonging to a couple where at least one parent intended the birth are relatively advantaged in terms of sociodemographic characteristics (compared to their counterparts where neither parent intended the birth), and that these "privileged" statuses are a stronger form of social support than the "other" parent's intending the birth.

Although couples' intentions had linkages with parental well-being for both mothers and fathers, notable gender-specific patterns emerged. For instance, in considering the relationship between couples' intentions and depressive symptoms, intentions appear the most salient component of "intention scenarios" for mothers. Please note there is never a significant difference in the depressive symptoms of mothers who belonged to couples where both parents intended the birth or those where only the mothers intended the birth. In contrast, for fathers, couple dynamics appear more consequential for depressive symptoms. Indeed, on average, fathers reported the greatest unit-increase in depressive symptoms when the mother did not intend the birth regardless of the father's own intentions. These findings are in line with Townsend's (2002) assertion that mothering constitutes a "direct" act whereas fathering is "indirect" and is largely navigated and negotiated through mothers. In terms of self-rated health, couples' intentions are not strongly associated with either mothers' or fathers' well-being. However, at least for mothers, belonging to a couple where neither parent intended the birth was associated with poorer health. Net of a father's sociodemographic characteristics there was not association between couples' intentions and men's self-rated health.

In spite of gendered patterns in the linkages between couples' intentions and parental well-being, post-estimation tests – which considered if the difference in coefficients for mothers and fathers was significantly different from zero – found weak evidence that the "effects" of couples' intentions were significantly different for mothers versus fathers. However, consistent with the social construction of gender and gender socialization, I found the negative "effect" of belonging to a couple where neither (rather than both) parent(s) intended the birth was stronger for mothers than fathers. This gender difference was statistically significant for both depressive symptoms and self-rated health.

The final set of hypotheses considered the relationship between couples' intention and parental well-being in the years following the birth, and considered change in parental well-being over time. Consistent with a resilience perspective, I found the linkages between couples' intentions and depressive symptoms (mothers only) were less pronounced years after the birth. Interestingly, the story for mothers' well-being in the years following the birth is not entirely consistent with the patterns observed nine months after the birth. Cross-sectional analyses provided evidence that a mother's own intentions were the most salient factor contributing to her mental health closely following the birth. However, years after the birth, considering the couple dynamic (i.e., multiplicative effects of one's own intentions and her partner's) proves more consequential. In terms of mental health, mothers do not report higher levels of depressive symptoms so long as at least the mother or the father intended the birth. Arguably, this "effect" might be explained by the relatively disadvantaged status of parents in couples where neither parent intended the birth. Yet, this association remained highly significant and quite substantial net of a mother's own characteristics. One interpretation of this finding is the social supports from the father's intending the birth do not manifest in the months following the birth. Rather,

the father's intending the birth could serve as a social support that mothers are able to draw on in the early years of the child's life. Overall, couples' intentions were not strongly associated with changes in mothers depressive symptoms over time, but there was weak evidence that belonging to a couple where neither (rather than both) parent(s) intended the birth was associated with an increase in depressive symptoms over time, which is more consistent with a lifecourse perspective.

The magnitude of the association between couples' intentions and self-rated health did not appear to wane with the passage of time. Rather, the pattern remained largely unchanged for fathers whereas for mothers the magnitude of "effects" was quite similar – though the pattern changed. Unlike depressive symptoms or self-rated health closely following the birth, mothers who intended the birth when the father did not were less likely to report good health two years after the birth when compared to their counterparts where both parents intended the birth. It stands to reason that mothers who intended the birth when the father did not might feel increased stress or strain to meet the standards associated with intensive mothering (see Hays, 1996) with less support from the child's father in the first two years of the child's life. Since this is a rather demanding period of the child's life, it is plausible this stress could result in poorer self-rated health. There is also weak evidence that, for mothers, intending a birth when the father does not is associated with a decreased likelihood in reporting better health over time. For fathers, a similar association is observed for men belonging to a couple where neither (rather than both) parent(s) intended the birth.

These analyses provide rather compelling evidence that consideration of both mothers' and fathers' intentions inform a more nuanced, detailed discussion of how intentions are linked with parental well-being during the transition to parenthood. However, they are not without their

limitations. Most notably, analyses are conducted on a relatively privileged sample and likely underestimate unintended childbearing. A mother's perception of the father's intentions is likely associated with her well-being, and consideration of mothers' proxy reports would retain a more representative sample. However, since a key contribution of this chapter was assessing gender differences or similarities, retaining a more representative sample of first-time mothers and a relatively privileged sample of first-time fathers would have been problematic. Supplemental analyses (reported in Tables 2.1A- 2.5A) considered the linkages between mothers' intentions and well-being among a more representative sample by using mothers' proxy reports of fathers intentions. Overall, these analyses suggested that couples' intentions remained associated with mothers' well-being – though sociodemographic characteristics had more pronounced effects in attenuating the linkages between couples' intentions and mothers' well-being among a more diverse sample.

A second noteworthy limitation concerned the methodological approach used to model change in parental well-being over time. Diagnostic analyses suggested a latent-growth curve approach was ideal in considering change in parental well-being over time. However, such an approach is most advantageous when multiple time points are available – which becomes a problem given the limited data points available for fathers. Accordingly, I opted to use a less sophisticated methodological technique to examine change over time in order to retain more meaningful gender comparisons. Third, primary analyses are limited to two single indicators of parental well-being. Tables A2.6 and A2.7 (see this chapter's appendix) considered the linkages between couples' intentions and substance use and found couples' intentions were associated with substance use. Ideally, consideration of anxieties on the transition to parenthood would have made a notable contributions, but such questions were not asked consistently in both mother and

father survey instruments. Fourth, considerable differences in survey instruments for mothers, resident fathers, and nonresident fathers hampered my ability to consider parental well-being for all parents (most notably at later time points). Lastly, my discussion of gender differences and similarities rests on the assumption that mothers and fathers interpret survey questions about intentions in a similar manner. Since researchers have not yet assessed the quality of retrospective reports of fathers' fertility intentions, this assumption might be problematic.

In spite of these limitations, the present study makes considerable contributions to current research on intentions and parental well-being. Analyses clearly demonstrate couples' intentions are consequential for both mothers and fathers well-being. Moreover, the consideration of both the respondent's intentions and their partner's intentions provides a more holistic representation of how intentions are associated with well-being. Although patterns concerning the linkages between couples' intentions and well-being appear gender-specific, minimal statistical differences emerged in comparing the coefficients for mothers versus fathers. This is not entirely surprising given patterns of gender convergence in parenthood (see Doucet, 2013). Arguably, parental well-being is important in its own right. However, a host of research on intentions has demonstrated parental well-being has implications for child well-being via parenting (see Barber et al., 1999; Barber & East, 2009; East et al., 2012). Accordingly, the next and final empirical application considers both direct and indirect effects of couples' intentions on child well-being.

CHAPTER IV: UNINTENDED FERTILITY, PARENTING, & CHILD WELL-BEING

Lastly, I turn to the third and final party directly affected by unintended childbearing, children, again focusing on first births. Research consistently demonstrated unintended childbearing was associated with poorer child well-being (e.g. Axinn et al., 1998; Barber et al., 1999; Barber& East, 2009; Bronte-Tinkew et al., 2007, 2009; Hayatbakhsh et al., 2011; Hohmann-Marriott, 2009; Joyce et al., 2000; Korenman et al., 2002; Shah et al., 2011). Further, parenting stress, parental investment, and psychological well-being appear to be key mediating mechanisms for this relationship (e.g. Barber et al., 1999; Bronte-Tinkew et al., 2009; East et al., 2012; Miller et al., 2009). To date, the field has focused on the association between *mothers'* intentions, *mothers'* investment, and child well-being, paying little attention to fathers' intentions and investment. Two noteworthy exceptions demonstrated that unintended childbearing lowered fathers' investment, or warmth, toward children (Bronte-Tinkew et al. 2007), which in turn lowered fathers' involvement with children (Bronte-Tinkew et al. 2009). These latter findings do indeed suggest fathers' intentions are important but still leave a gap in how we understand mothers' and fathers' intentions in tandem. Drawing on the panel structure of the ECLS-B data, I consider the direct effects of couples' intentions (reported nine months after the birth) on children's socio-emotional well-being on entering kindergarten. In addition, I consider three viable mediating mechanisms that might explain the linkages between couples' intentions and child well-being (parental investment, co-parental relationship dynamic, and parents' mental health).

Consideration of children's socio-emotional well-being on entering kindergarten is particularly important as entry into school marks a key life stage with implications for child development. Specifically, researchers have linked performance in early elementary to subsequent educational outcomes throughout school (see Alexander, Entwisle, & Dauber, 1993; Votruba-Drzal, Li-Grining, & Maldonado-Carreno, 2008; Ladd, Birch, & Buhs, 1999; Pianta & Stuhlman, 2004; Whitehurst & Lonigan, 1998). Further, the kindergarten wave of the ECLS-B data includes teachers' reports of child well-being. Teachers' reports are less biased than mothers' reports of child well-being. Indeed, Saleem and Surkan (2014) drew on the teachers' comprehensive reports of child well-being (assessed using a 22-item question set) in the ECLS-B to consider the linkages between mothers', fathers', and couples' intentions and child well-being in kindergarten. Their analyses of couples' intentions indicated that only the mother (rather than both parents) wanting the birth reduced child well-being net of sociodemographic characteristics. Saleem and Surkan (2014) demonstrated that couples' intentions were associated with child well-being on entering kindergarten.

I extend their analyses to try and understand why couples' intentions are associated with child well-being after the birth. Although we both make use of the teachers' reports, I opted to consider a more nuanced indicator of child well-being. Rather than drawing on all questions teachers answered regarding children, I focused on three specific items that loaded strongly onto a construct for socio-emotional well-being (i.e., eagerness to learn new things, focusses easily, and is readily accepted by peers). Although Saleem and Surkan (2014) used an established scale, confirmatory factor analyses concluded that this scale encompassed a number of various dimensions. Separately, I have a more restrictive sample than Saleem and Surkan as I focus on mediating mechanisms and draw on three different waves of data collection. Lastly, I

operationalize couples' intentions with a focus on *intended* (which is consistent with most prior work) whereas Saleem and Surkan emphasized *wantedness*. Collectively, both my results and Saleem and Surkan's demonstrated that couples intentions were associated with child well-being on entering kindergarten.

BACKGROUND

Studies of unintended fertility are frequently set against the backdrop of child well-being. Shah and colleagues' (2011) recent systematic review of research linking fertility intentions to child health noted unintended childbearing was consistently associated with increased risk of preterm birth and low birth weight. Yet the implications of an unintended birth are not limited to immediate birth outcomes; researchers have also considered other domains of child well-being (i.e., depressive symptoms, increased anxiety, and substance use) and documented long-reaching negative "effects" of unintended childbearing among children aged 14 (Hayatbakhsh et al., 2011) and young adults aged 23 (Axinn et al., 1998). Recent research examining couples' intentions found couple dynamics influenced child well-being such that a father's intending a birth – when the mother did not – buffered the negative effects of unintended childbearing but also increased the risk for experiencing a "high risk" subsequent birth[11] (Hohmann-Marriott, 2009; Martin et al., 2007; Moore et al., 2009).

Taken together, research considering the association between unintended childbearing, parental investment, and child well-being indicates 1) unintended childbearing is associated with lower child well-being and these linkages persist over time, 2) parental mental health and

[11] High risk births were defined as meeting at least two out of five specified criteria: 1) non-marital; 2) occurring to unhappy couples; 3) occurring to couples with frequent conflict; 4) occurring within 12 months of the first birth; or 5) high parity (4th birth or higher).

investment partially mediate the relationship between unintended childbearing and child well-being, and 3) consideration of both parents' intentions provides a more nuanced understanding of the association between intentions and child well-being. However, to the best of my knowledge, researchers have not yet considered a research design that integrates these key findings into a single set of analyses among a recent sample of children. In this chapter, I consider the linkages between couples' intentions and both mothers' and teachers' reports of child well-being upon entering kindergarten. Further, I emphasize three focal mediating mechanisms (i.e., parental investment, parental well-being, and the co-parental relationship dynamic) to better understand why couples' intentions are associated with child well-being. Ultimately, the current study makes noteworthy contributions to research on intentions and child well-being by considering a couple-level indicator of intentions and testing various pathways to understand how couples' intentions influence child well-being.

Mothers' intentions, mental health, investment, and child well-being

Recent scholarship has considered cultural expectations surrounding motherhood (Hays, 1996; Lareau, 2011), diversity in living arrangements and its implications for parenting behaviors (e.g. Brown, 2004; Demuth & Brown, 2004; Sweeney, 2007), and parental investment and its association with child well-being (e.g. Artis, 2007; Brown, 2004; Pleck & Masciadrelli, 2004). Two key conclusions from this work are that higher levels of positive involvement are associated with better child well-being, and a number of factors (e.g., relationship status, educational attainment, and birth intentions) influence parental investment in children. Given the focus of this project, I emphasize the linkage between unintended childbearing, mental health, and parental investment.

The previous chapter synthesized work noting unintended childbearing was detrimental for multiple aspects of mothers' well-being, which is important in its own right. Further, the negative association between unintended childbearing and mothers' well-being has implications for child well-being. Prior work has linked unintended childbearing with mothers' depressive symptoms, harsher parenting, and less parental warmth or investment in children raising implications for child well-being (e.g. Barber et al., 1999; Barber & East, 2009; East et al, 2012; Miller et al., 2009). Barber and colleagues (1999) capitalized on the strengths of two data sets (one having a unique 31-year panel design and another being broadly representative) and found unintended childbearing was detrimental to mother's mental health (based on results from the nationally representative survey). This, in turn, hampered mother-child relationships later in life (based on results from the 31-year panel). A recent update reached similar conclusions for a sample of adolescent Latina mothers (East et al., 2012). Lastly, Miller and colleagues (2009) followed a sample of mothers and documented less attachment to unintended children 24 months after the child's birth in part due to increased depressive symptoms and parenting stress. Unintended childbearing might also be associated with less parental investment more directly. Family-level, fixed effect models demonstrated parental investment varied across children in a family with the same mother such that intended children received more cognitive and emotional investment from mothers than their unintended siblings (Barber & East, 2009). Taken together, this research provides rather compelling evidence that unintended childbearing undermines child well-being through mothers' depressive symptoms and investment in children. However, this work is somewhat limited as it has overwhelmingly focused on the mother-child relationship, ignoring the role of fathers and the implications of father involvement on child well-being.

Parental investment and child well-being: The role of fathers

Research on fathers and father involvement has burgeoned in recent decades given the increased availability of data on fathers (see Tamis-Lemonda, Shannon, Cabrera, & Lamb, 2004; Dyer et al., 2013). At the same time, cultural representations of fatherhood have shifted such that modern fathers are expected to play an active role in their children's lives and provide emotional support in addition to fulfilling the traditional breadwinner role (see Marsiglio & Pleck, 2005; Sayer et al., 2004; Townsend, 2002). Congruent with this cultural shift in fatherhood, recent work demonstrated father involvement was important for child development as it improved child well-being independently of mother involvement (e.g Pleck & Masciadrelli, 2004; Tamis-Lemonda et al., 2004) and mediated the negative effects associated with children's family structure (see Carlson, 2006). Prior work shows mothers' involvement has more sizable effects on child well-being than father involvement; however, it is also important to acknowledge that father involvement has implications for child well-being that are independent of mother involvement (Pleck & Masciadrelli, 2004).

The research cited above suggests fathers' birth intentions might also influence child well-being via father involvement. As such, it should be taken into consideration when examining the association between unintended childbearing and child well-being, yet the majority of research on intentions, childrearing, and well-being is limited to mothers and children. To date, I am aware of two studies considering the linkage between fathers' childbearing intentions and parental investment. Bronte-Tinkew and colleagues (2007) found unintended childbearing was associated with less warmth toward children. In a follow-up paper, they reported lower warmth then resulted in lower levels of father involvement as well (Bronte-Tinkew et al., 2009). The limited work on fathers' childbearing intentions and parental

investment appears to mirror the more established, congruent research on mothers (i.e., that intending a birth is associated with higher levels of involvement). However, it must be noted that understanding father involvement is complicated. Prior work has labeled fathering an "indirect" act that must be negotiated through mothers, with mothers acting as "gatekeepers" controlling access to children (see Jarrett, Roy, & Burton, 2002; Townsend, 2002). Accordingly, it seems plausible that the linkages between intentions and involvement might be less pronounced for fathers compared to mothers.

Couples' intentions, couple dynamics, and child well-being

I have asserted that to better understand the relationship between childbearing intentions, parental investment, and child well-being, both mothers' and fathers' perspectives should be considered. However, I am not the first to make this assertion. Recent work modeled fertility intentions as a couple-level construct and focused on child well-being as the primary dependent variable, finding that couple dynamics contributed to various components of child well-being (Hohmann-Marriott, 2009; Martin et al., 2007; Moore et al., 2009; Saleem & Surkan, 2014). Much of this research emphasized the association between intentions and maternal health, finding unintended childbearing was generally detrimental to maternal health, yet there was some evidence that a father's intending a birth could buffer the negative effects of a mother not intending the birth (see Hohmann-Marriott, 2009; Korenman et al., 2002; Martin et al., 2007). Conversely, Moore and colleagues (2009) found negative effects of couple discordance in intentions as having a first birth that was intended by the father but not the mother increased the risk of having a subsequent "high-risk" birth.

This work emphasizes the importance of couple dynamics (which I operationalize as having a positive relationship with the child's father regardless of romantic ties) for child well-being, but the emphasis on maternal health at the expense of other dimensions of well-being is problematic. For instance, prior research suggested parental well-being and parental investment were important mediators for the association between unintended childbearing and child well-being (e.g. Axinn et al., 1998; Barber et al., 1999; Barber & East, 2009; Bronte-Tinkew et al., 2009). Saleem and Surkan (2014) were the first to examine couples' intentions and children's socio-emotional well-being at later ages. They considered the linkages between mothers', fathers', and couples' intentions on teachers' reports of children's socio-emotional well-being on entering kindergarten and found mothers' unintended childbearing, fathers' mistimed childbearing, and one form of couple discordance (mother intending, father not) were all associated with poorer child well-being. However, the authors simply control for mothers' and fathers' sociodemographic and relationship-specific characteristics, paying little attention to potential mediating mechanisms.

Indeed, intention status and agreement in intentions are likely important for both parental investment and reporting a positive relationship with the other biological parent, which could in turn influence child well-being. If a father's intending the birth buffers the negative effects of a mother not intending the birth (see Hohmann-Marriott, 2009; Martin et al., 2007), a similar finding is plausible for parental investment, but it has not yet been tested. It is also plausible to expect couples' intentions might influence the co-parental relationship dynamic, and in turn, influence child well-being. In this instance, both parents' intending the birth likely has protective effects compared to neither parent intending the birth. However, "intention scenarios" where only one parent intended the birth could have positive, negative, or null effects. For instance, one

parent intending the birth might offset the other parent not intending the birth, such that one parent intending the birth is better than neither parent intending. Alternatively, disagreement could also strain the co-parental relationship dynamic thus undermining child well-being (see Baril, Crouter, & McHale, 2007; McHale & Rasmussen, 1998) such that neither parent intending the birth is better for child well-being than only one parent intending the birth. Either way, it is important to consider the pathway from couple's intentions to co-parental relationship dynamics, as effective co-parenting has been found to improve involvement and well-being regardless of family structure and coresidence (e.g. Feinberg & Kan, 2008; Sobolewski & King, 2005).

It is also important to note which parent intended the birth when couples disagree. In general, it seems children would fare worse when mothers (rather than fathers) did not intend the birth. For instance, cultural representations of mothers as primary caregivers (e.g. Cote & Deutsch, 2008; Francis-Connolly, 2003; Perala-Littunen, 2007) coupled with evidence that mothers' involvement is more consequential for child well-being than fathers' (Pleck & Masciadrelli, 2004; King & Sobolewski, 2006) suggest a mother's labeling a birth as unintended is more consequential for child well-being than a father's. Similarly, work on maternal gatekeeping suggested a father's level of involvement was to an extent negotiated and controlled by mothers (Fagan & Barnett, 2003; McBride, Brown, Bost, Shin, Vaugh, & Korth, 2005; Schoppe-Sullivan et al., 2008). This literature suggests the association between intentions and parental investment might be stronger for mothers than fathers. In effect, a father's intending a birth might not correspond to higher levels of investment such that a father's intending a birth cannot compensate for a mother not intending the birth.

Family and sociodemographic characteristics' linkages with child well-being

Couples' intentions are certainly not the sole factor associated with child well-being. A wealth of research examining family structure and other family processes on child well-being consistently found children living with two, married biological parents fared better than children having an "other" family structure on a host of outcomes (for review, see Brown, 2010). Research has also found a combination of economic resources, parenting styles, and parental investment explained the differentials across two-parent families for most indicators of child well-being among young children (Artis, 2007; Brown, 2004). Others have noted family instability was detrimental to child well-being as well (e.g. Brown, 2010; Fomby & Cherlin, 2007; Heard, 2007). Lastly, as recent work on family complexity and sibling composition demonstrates children living with a half or stepsibling report worse outcomes than their counterparts having without half or stepsiblings (see Halpern-Meekin & Tach, 2008), it is important to acknowledge the linkages between sibling composition and child well-being.

It is also important to account for sociodemographic characteristics (i.e., race/ethnicity, nativity, parental age, and education) as these characteristics are associated with child well-being (e.g. Bradley & Corwyn, 2003; Heard, Gorman, & Kapinus, 2008). In addition, class is important; Lareau (2011) posited cultures of parenthood varied by class such that children of middle-class parents received more parental investment than children of working-class parents, and quantitative analyses supported this theory (see Kalil, Ryan, & Corey, 2012; Kornrich & Furstenberg, 2013). Lastly, based on prior work that demonstrated couples' intentions were associated with child well-being closely following the pregnancy (Hohmann-Marriott, 2009; Korenman et al., 2002; Martin et al., 2007), models will also account for child well-being at the

baseline to better isolate the longer-term associations between couples' intentions, parental investment, parental relationship dynamics, and child well-being.

CURRENT STUDY AND HYPOTHESES

In sum, research on unintended fertility is frequently set against the backdrop of child well-being and typically suggests 1) unintended childbearing reduces child well-being across multiple domains, 2) parental mental health and investment serve as important mediating mechanisms, and 3) couples' intentions provide a more nuanced understanding of the association between intentions and well-being. Yet, researchers have not integrated these findings into a singular project. I assert this oversight merits attention given the longstanding body of research linking unintended childbearing to maternal depression, parental investment, and child well-being (see Barber & East, 2009; East et al., 2012; Miller et al., 2009). I address these limitations and integrate the three primary findings highlighted above by considering the relationship between couples' intentions, parents' mental health and investment, the parental relationship dynamic and children's well-being on entering kindergarten.

Examining child well-being in kindergarten is beneficial for a number of reasons. First and foremost, entry into kindergarten marks a key transition in child development and has been used in previous work examining the association between family dynamics and child well-being (see Artis, 2007; Saleem & Surkan, 2014). Second, by examining child well-being at the kindergarten interview, I am able to establish a clear temporal order between couples' intentions, the proposed mediating mechanisms, and child well-being. Third, I will be able to compare mothers' and teachers' reports of child well-being. Arguably, one might expect teachers' reports of child well-being to be less subject to bias than mothers' reports.

Hypotheses concerning couples' intentions, mediating mechanisms, and child well-being

Specifically, I hypothesize that both (rather than neither) parents intending the birth has positive direct effects on child well-being and increases child well-being indirectly by fostering 1) higher levels of mother and father involvement, 2) a positive parental relationship dynamic, and 3) better mental health (i.e., fewer depressive symptoms) for both mothers and fathers. Consideration of couples where only one parent intended the birth (rather than neither) become more complex and gender-specific. I expect when only the mother intends the birth (rather than neither parents), there is a somewhat weaker positive, direct effect on child well-being and positive indirect effects via higher levels of mother involvement and fewer depressive symptoms for mothers. Likewise, when only the father (rather than neither parent) intends the birth, I expect the weakest, positive direct effect on child well-being coupled with positive indirect effects via higher levels of father involvement and fewer depressive symptoms for fathers. I expect a mother's intending the birth is more consequential for child well-being. For couples who disagree on intentions, competing hypotheses are plausible for indirect effects on child well-being through the co-parental relationship dynamic. On the one hand, if having one parent intended the birth can help the other parent cope with the demands of parenthood, I expect both couples where 1) only the mother or 2) only the father intended the birth (rather than neither parent) have a better co-parental relationship dynamic which in turn improves child well-being. On the other hand, it is reasonable to expect disagreement could serve as a social strain, resulting in a worse co-parental relationship dynamic with negative implications for child well-being.

DATA AND METHOD

This application draws on multiple waves of the ECLS-B data. Couples' intentions, parents' sociodemographic characteristics, and depressive symptoms were taken from the baseline, 9-month data whereas indicators of child well-being are taken from the kindergarten data. The remaining mediating mechanisms (i.e., parental investment and parental relationship dynamic) and parental well-being are taken from the 2-year follow-up interview. Thus, I am able to establish a clear temporal order between my focal independent variable – couples' intentions (baseline, 9-month interview), the mediating mechanisms of parental investment and the parental relationship dynamic (2-year follow-up), and the primary dependent variable of child well-being (kindergarten follow-up). Indicators for parents' sociodemographic characteristics and parental well-being were the same as those discussed in the previous chapters and are not detailed below. Once again, couples' intentions are coded as a four-level categorical variable: both intended, only mother intended, only father intended, and neither parent intended (reference) the birth.

Among the 10,700 children included in the ECLS-B data, 10,600 lived with at least one biological parent. 2,950 of these children were eldest children (or by default a first birth), but only 1,850 of these children had data on both mothers and fathers (with 1,800 having valid data on intentions from both mothers and fathers at the baseline interview). Among the initial 1,800 children, 850 were excluded as they did not have valid data on parental investment and the co-parenting relationship dynamic at the 2-year and reports of child well-being at the kindergarten follow-up interviews (yielding an analytic sample of 950). Lastly, I excluded 50 children whose mother was of an "other" or multiracial race/ethnicity as interpreting race/ethnic effects for these children is difficult. Thus, analyses drawing on mothers' reports of child well-being were limited to 900 children whose mothers were not of an "other" racial/ethnic status, provided valid reports

on child behavior on entering kindergarten and who have valid data on both mothers' and fathers' investment at the two-year interview. Likewise, analyses using teachers' reports included 650 (out of 950 eligible children) who had valid data on teachers' reports of child behavior, parental investment at the two-year interview, and couples intentions at the baseline.

New indicators

Child well-being. I include two latent, multi-item constructs that assess child well-being; the first is derived from mothers' reports of the child's behavior whereas the second draws on teachers' reports. Both indicators are taken from the kindergarten interview and focus primarily on children's cognitive and social well-being. Mothers' reports of children's well-being is a latent construct derived from questionnaire responses on various behaviors. Responses were coded on a Likert scale ranging from 1 "never" to 5 "very often" and were recoded such that higher scores correspond to better child well-being. Given differences in mothers' and teachers' survey instruments and my focus on children's cognitive and social well-being, I drew on three specific items. Mothers were asked to report, "How often does your child behave in the following ways": shows eagerness to learn new things, pays attention well, and is liked by other children. I replicate the same construct of child well-being using the teachers' reports although the question wording for the last indicator is "accepted by peers" rather than is liked by other children. In effect, I am able to assess two separate reports of child well-being.

Lagged indicator of child well-being. To adjust for child behavior prior to my indicators for parental investment and the parental relationship dynamic, I also include a control for children's behavior at the 9-month interview. The ECLS-B uses developmentally appropriate indicators of child development at each wave so I cannot use responses for the previous measure

of child well-being from the baseline data. I use mothers' responses to how often the baby: goes from whimpering to intense crying easily, demands your attention and company constantly, or is unable to wait for food/toys without crying. Responses range from 0 "never" to 3 "most times."

Parental investment. Based on differences in survey instruments, I am only able to consider a limited number of indicators for parental involvement that were asked of mothers, resident fathers, and nonresident fathers at the two-year follow-up interview. I create latent constructs for mothers' and fathers' investment that uses reports of "How you do the following activities with your child in a typical week": read books, tell stories, and sing songs to your child. Responses range from 1 "not at all" to 4 "every day".[12]

Parental relationship dynamic. Differences in mother, resident father, and nonresident father survey instruments make constructing an indicator for parental relationship dynamics challenging as well. Parents who lived together at the 2-year interview were asked, "Would you say your marriage/relationship is [very happy/fairly happy/not too happy]?" Alternatively, nonresident fathers were asked, "Which of the following best describes your current relationship with the child's mother?" Responses range from, "We generally get along pretty well" to "We avoid seeing each other." I create a dummy indicator noting *positive parental relationship* where (1) both mothers and fathers report being very happy with their relationship or (2) nonresident fathers report "we generally get along pretty well" are coded as 1. Coresident couples in which at least one parent reports anything less than being very happy and nonresident fathers who report anything less than "we generally get along pretty well" are coded as 0.

[12] Although resident and nonresident fathers reported different mean scores on indicators of involvement, factor loadings for involvement were acceptable for both resident fathers (ranging from 0.50 to 0.71) and nonresident fathers (ranging from 0.55 to 0.90). Unfortunately, due to a small number of nonresident fathers, I was unable to test for the equivalence of loadings across resident and nonresident fathers.

Parental mental health. I draw on responses from the same questions that assessed parental mental and physical health in the previous chapter. However, rather than creating a summed scale, I make use of factor analyses in structural equation modeling (SEM) to provide a more detailed, nuanced construct of depressive symptoms.

Family instability. Parental relationship status pertains to the status at the child's birth. However, it is unreasonable to expect all families remain unchanged the first five years of a child's life. Therefore, I include two dummy indicators that flag *any change* in families occurring between the baseline, 9-month and kindergarten surveys. The first documents the *change in parental relationship status*[13]. Unfortunately, due to small sample sizes, I was only able to construct a dummy indicator noting if there was any change in the parent's relationship status over the course of the study. The second concerns the *addition of siblings* over the course of the study and has three levels: no new sibling (reference), only new full biological sibling(s), and at least one new half/step sibling.

Analytic strategy

SEM techniques were used and are particularly useful for this application as latent constructs are created using confirmatory factor analyses rather than standard mean (or summed) scales. Confirmatory factor analyses are superior to standard scales as the scores for each indicator are assigned a weight based on how "much" they contribute to the construct and each item is allowed to have its own, unique error term. SEM is also useful for assessing theoretically motivated "paths" providing more rigorous and detailed tests of mediation. Ultimately, models

[13] Sensitivity analyses reported in Appendices 3D and 3E were limited to children who did not experience a change in parental relationship status and those born to married or cohabiting parents where instability only flags dissolution (respectively). Substantive conclusions were consistent so I retained the largest sample and included a crude indicator for family instability.

consider the association between the focal independent variables and mediating mechanisms as well as the associations between the focal independent variables and the final outcome (child well-being) simultaneously. Thus, I can determine if couples' intentions primarily influence child well-being directly and/or indirectly via parental well-being, investment, and co-parenting dynamics. Figure 3.1, which is discussed in detail below, provides a conceptual diagram detailing the associations and paths that were specified.

RESULTS

Sample characteristics and descriptive statistics

Table 3.1 reports descriptive statistics for the observed characteristics, or single-item indicators, among the 900 children belonging to the "mother sample." Table A3.1 (see this chapter's appendices) replicates the same table for the 650 children whose teachers provided reports of the child's socio-emotional adjustment on entering kindergarten. The analytic sample only includes firstborn children who had corresponding data from both biological parents on intentions (baseline), parental involvement (year 2), the co-parental relationship dynamic (year 2), and reports of children's behaviors (on entering kindergarten). Given previous concerns over sample selection biases in earlier chapters, this suggests the sample in this application is even more select than previous analytic samples, which is discussed at length in this chapter's limitations.

Still, just over half (54%) of children in this analytic sample were intended by both parents, whereas 16% were only intended by the mother, 8% were only intended by the father, and 22% were intended by neither parent. Even among a relatively privileged sample, almost one-fourth of firstborn children were not intended by either parent. This sample is disproportionately white (76%), with black mothers being most notably underrepresented (6%), as are Hispanic mothers to a lesser extent (15%). Foreign-born mothers are somewhat

underrepresented as well (18%). On average, mothers were approximately 26 years old at the time of birth. This is a well-educated sample, as four in ten mothers has at least a bachelor's degree with just under one-third (31%) having some college experience. One-fifth of mothers reported a high school diploma (or GED), with just 11% reporting no degree. Consistent with prior chapters, a disproportionate share of children were born to married parents (79%) with cohabiting and single births both being underrepresented (13% and 8% respectively). Although over half (59%) of couples reported having a positive relationship with the child's other biological parent two years after the birth, a substantial minority (40%) did not. A small share of children in this sample experienced change in the parental relationship status over the course of the study (12%). The majority of children experienced a change in sibling composition over the panel, as 70% experienced the birth of a younger, full sibling and 3% experienced the entry of at least one half or step-sibling into the household. Please note that descriptive statistics for the more limited sample of children having teachers' reports of child well-being are quite similar to the "mother sample" (see Table A3.1 in appendices).

Table 3.1. Distribution of Observed Characteristics for the Mother Sample (teacher sample reported in Table A3.1.)

	Raw N[1]	μ or %
Couples' Intentions		
Both intended	450	53.7
Only mother intended	150	16.0
Only father intended	100	8.4
Neither parent intended	200	21.9
Mothers' Characteristics		
Race/ethnicity		
White	500	75.6
Black	50	5.5
Hispanic	150	15.2
Asian	200	3.7
Foreign-born	250	17.7
Age at birth	900	26.4
Educational Attainment at Birth		
College degree	400	39.7
Some college experience	250	30.6
High school diploma (incl. GED)	150	19.2
No degree	100	10.5
Relationship Ties to Father at Birth		
Married	750	79.2
Cohabiting	100	13.1
Not in a union	50	7.7
Parental Relationship Dynamic 2 Years after Birth		
Positive relationship	500	59.0
Instability Flags (over course of entire panel)		
Child *ever* experienced change in parental relationship status	100	12.4
No younger sibling	300	27.2
Only full, younger sibling	600	69.6
At least one half/step sibling	50	3.2
Total n (unweighted)	900	

1. Unweighted frequencies might not sum appropriates as frequencies are weighted to nearest 50 per NCES restricted data agreement.

Table 3.2 provides the standardized factor loadings for all single-item indicators that contribute to latent constructs as well as their individual mean values. Three items contribute to a latent construct depicting child's socio-emotional adjustment on entering kindergarten. Mothers' were asked to report how often their child 1) was eager to learn new things, 2) paid attention, and

3) was liked by other children. On average, mothers provided high reports of child well-being with mean values ranging from 3.79 to 4.54 (on a scale of 1 to 5). All indicators yielded significant factor loadings as well that ranged from 0.47 to 0.58. I also included a latent construct assessing the child's well-being at baseline, where mothers reported how often the child 1) went from whimpering to intense crying easily, 2) demanded attention/company constantly, and 3) was unable to wait for food or toys without crying. Mothers' reported relatively high levels of "fussiness" as the means on these items ranged from 1.08 to 2.04 (on a scale of 0 to 3). Please note, the lagged indicator of child well-being is reverse coded in the structural models such that higher levels indicate better well-being at both time points. Although factor loadings for this construct are lower (ranging from 0.34 to 0.41), they are all highly significant. In terms of parental investment, I use three forms of engagement that were asked similarly for mothers and fathers and assessed the frequency the parent 1) read books, 2) told stories, or 3) sang to the child two years after the birth. Not surprisingly, mothers reported higher mean levels on all three indicators of involvement. However, the factor loadings for father involvement were stronger (ranging from 0.56 to 0.76) than for mother involvement (ranging from 0.40 to 0.66). Once again, all factor loadings for both mother and father involvement were highly significant.

Table 3.2. Standardized Factor Loadings for Latent Constructs in the Mother Sample (teacher sample loadings and variances reported in Table A3.2)

	Standardized value		*Weighted μ*
	Loading	Var.	
Child Well-being			
How often does your child behave in the following ways? (on entering kindergarten: range 1-5)			
Shows eagerness to learn new things	0.57	0.65	4.54
Pays attention well	0.58	0.65	3.79
Is liked by others (accepted by peers)	0.47	0.77	4.50
How often does your child behave in the following ways? (at baseline: range 0-3)			
Goes from whimpering to intense crying easily	0.41	0.82	2.04
Demands attention and company constantly	0.40	0.83	1.08
Is unable to wait for food/toys without crying	0.34	0.87	1.43
Mother Involvement (at age 2)			
How often do you do the following things with your child in a typical week? (range 1-4)			
Read books to your child	0.66	0.55	3.48
Tell stories to your child	0.47	0.77	3.67
Sing songs to your child	0.40	0.83	2.80
Father Involvement (at age 2)			
How often do you do the following things with your child in a typical week? (range 1-4)			
Read books to your child	0.56	0.48	2.69
Tell stories to your child	0.76	0.56	2.87
Sing songs to your child	0.56	0.71	2.30
Mothers' SES (at birth)			
Relationship ties to birth father (range 1-3)	0.61	0.62	[1]
Age at birth (continuous indicator)	0.85	0.27	[1]
Educational Attainment (range 1-4)	0.67	0.54	[1]
Mothers' Depressive Symptoms (at baseline)			
How often during the past week have you felt the following ways? (range 1-4)			
Bothered by things that don't usually bother you	0.53	0.71	1.32
Did not feel like eating	0.33	0.88	1.27
Could not shake off the blues	0.67	0.53	1.18
Had trouble keeping your mind on what you were doing	0.54	0.70	1.44
Felt depressed	0.81	0.32	1.31
Felt everything was an effort	0.54	0.69	1.50
Was fearful	0.56	0.68	1.22
Had restless sleep	0.43	0.81	1.61
Talked less than usual	0.57	0.66	1.23
Felt lonely	0.64	0.58	1.29
Felt sad	0.77	0.40	1.36
Could not get going	0.52	0.72	1.43

Table 3.2. Factor Loadings for Latent Constructs in Mother Sample (cont.)

	Standardized value		*Weighted μ*
	Loading	Var.	
Fathers' Depressive Symptoms (at baseline)			
How often during the past week have you felt the following ways? (range 1-4)			
Bothered by things that don't usually bother you	0.45	0.79	1.21
Did not feel like eating	0.21	0.95	1.21
Could not shake off the blues	0.73	0.45	1.18
Had trouble keeping your mind on what you were doing	0.51	0.73	1.36
Felt depressed	0.74	0.44	1.28
Felt everything was an effort	0.51	0.73	1.48
Was fearful	0.48	0.76	1.14
Had restless sleep	0.38	0.85	1.59
Talked less than usual	0.60	0.63	1.26
Felt lonely	0.60	0.63	1.17
Felt sad	0.80	0.35	1.24
Could not get going	0.47	0.77	1.35
Covariance			
Error child-wellbeing (kindergarten) with baseline	0.33	0.08	
Error mother involvement with father involvement	0.61	0.07	
Error mothers' depressive symptoms with fathers' depressive symptoms	0.32	0.05	
Model Fit Statistics			
$X^2(592)$	1472.66	***	
RMSEA	0.04		
CFI	0.88		
N (unweighted)	900		
ρ child well-being on entering kindergarten	0.83		
ρ child well-being at baseline	0.53		
ρ mother involvement	0.72		
ρ father involvement	0.66		
ρ mothers' SES at baseline	0.72		
ρ mothers' depressive symptoms	0.89		
ρ fathers' depressive symptoms	0.90		

Please note that all standardized factor loadings and covariance coefficients presented in this table are highly significant at the $p<0.001$ level.

1. Please see distributions in Table 1 for a more meaningful depiction of the sample distributions. Model fit improved by collapsing these indicators into a latent construct for the structural model.

While SEM can handle categorical indicators, it is more efficient in modeling continuous or ordinal measures. Bearing this in mind, I considered sensitivity analyses (available on request) that entered relationship status to father at birth, mothers' education at birth, and mothers' age at

birth as three separate constructs (two categorical and one continuous) and as three dimensions of mothers' socioeconomic status (SES) at birth. Sensitivity analyses suggested the latent construct was more efficient, improved model fit, and did not alter substantive conclusions. Accordingly, I opted to make mothers' relationship ties to the father, education, and age at birth indicators for the latent construct denoting SES at birth. Factor loadings are all statistically significant and range from 0.61 to 0.85. For mothers' and fathers' depressive symptoms, I use items from the CESD 12-item scale. As this is a well-established indicator, it is not surprising all factors were statistically significant ranging from 0.33 to 0.81 (among mothers) and 0.21 to 0.80 (among fathers). Although some of these factor loadings are below the standard threshold (less than 0.40), I opted to retain them as the CESD is a well-established indicator of depressive symptoms.

Consideration of the measurement model's fit statistics suggested this is a solid measurement model (model $X^2_{(592)}$ = 1,472.66***, RMSEA 0.04, and CFI 0.88). Although a non-significant X^2 is ideal (meaning there is no difference in the measurement model parameters and all observed patterns in the data), it is unreasonable to expect a specified model to completely explain all correlations between indicators. The root mean squared error of approximation (RMSEA) considers how much error exists for each degree of freedom, with any value less than 0.05 being representative of a good fit and 0.08 being a reasonably close fit. Lastly, the comparative fit index (CFI) indicates how much better the specified model fits the data compared to a null model where none of the items are assumed to be correlated. This model does 88% better than the null model and approaches the recommended cutoff value of 0.90.

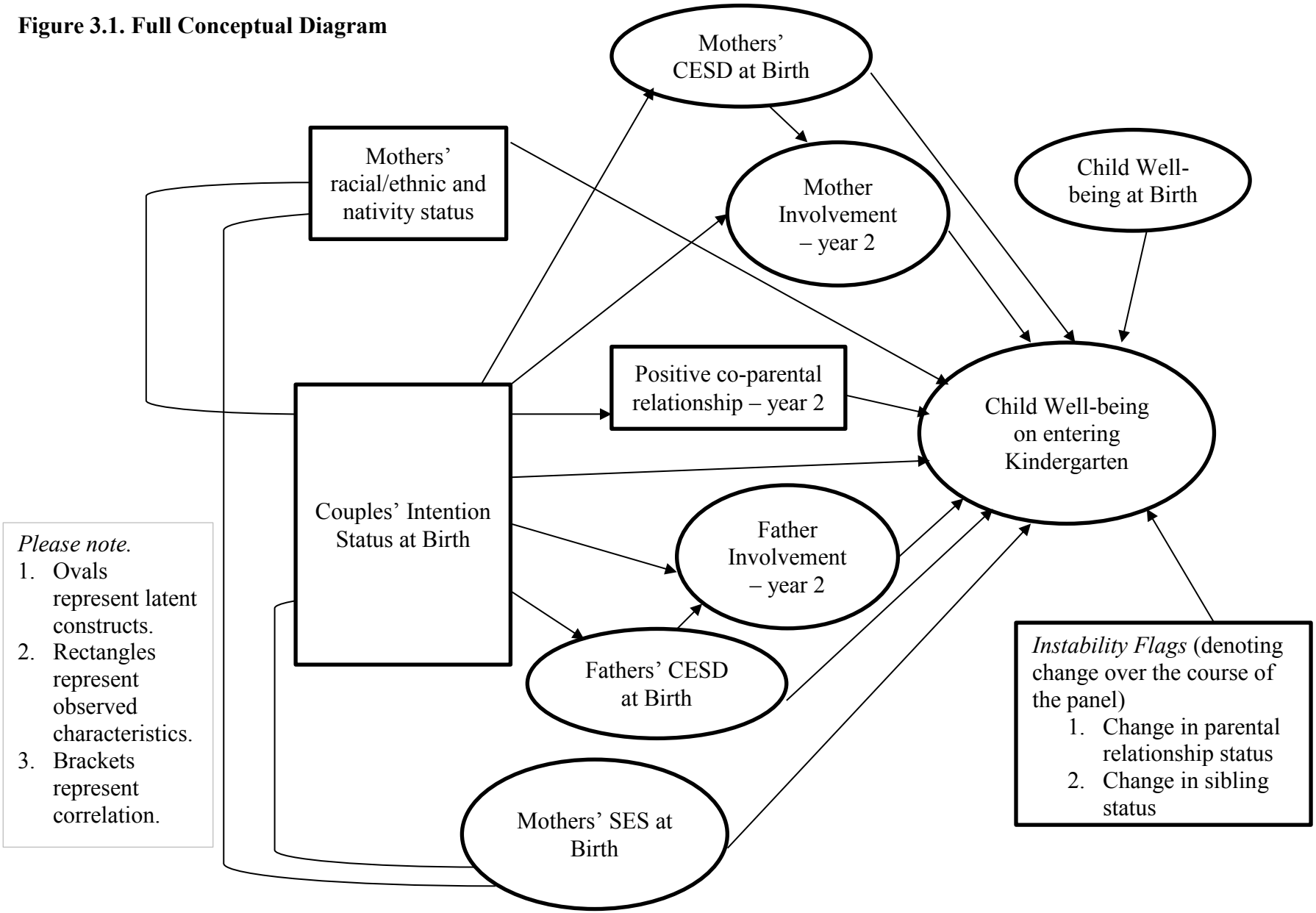
I also provide a reliability statistic of each latent construct, ρ. Reliability coefficients range from 0.53 for child well-being at the baseline to 0.90 for fathers' depressive symptoms. It

is not surprising the reliability and loadings for child well-being at baseline (akin to general "fussiness") is the weakest construct as it is difficult to assess a child's socio-emotional adjustment closely following the birth and a number of factors can contribute to other sources of measurement error for these items as well. Table A3.2 (see appendices) replicates Table 3.2 among the "teacher sample." Factor loadings, overall mean values, model fit statistics, and reliability indicators are quite similar to those reported in Table 3.2.

Model estimation

Figure 3.1 provides a conceptual path diagram for all latent constructs, observed indicators, and paths that I test empirically. Couples' intentions serve as the focal independent variable and are allowed to influence child well-being directly and indirectly through parents' depressive symptoms, parental involvement, and the co-parental relationship dynamic. The specified model considers the linkages between couples' intentions and the proposed mediating mechanisms net of race/ethnic and SES differences in child well-being. In addition, it does so while acknowledging that couples' intentions are correlated with mothers' racial/ethnic status and SES at birth (correlations are reported in Appendices 3B and 3C for mothers' and teachers' samples respectively). Although I do not assess paths from race/ethnicity (or SES) to depressive symptoms, and parental investment, these linkages are effectively modeled in the direct paths specified from sociodemographic characteristics to child well-being. Consideration of these indirect pathways would address a different set of research questions (i.e., What roles do couples' intentions, parental depressive symptoms, and involvement play in explaining race/ethnic or SES differences in child well-being?). Lastly, I include a stability indicator of child well-being by considering the direct path between child well-being at baseline as well as instability flags noting changes in parental relationship ties and sibling composition.

Figure 3.1. Full Conceptual Diagram

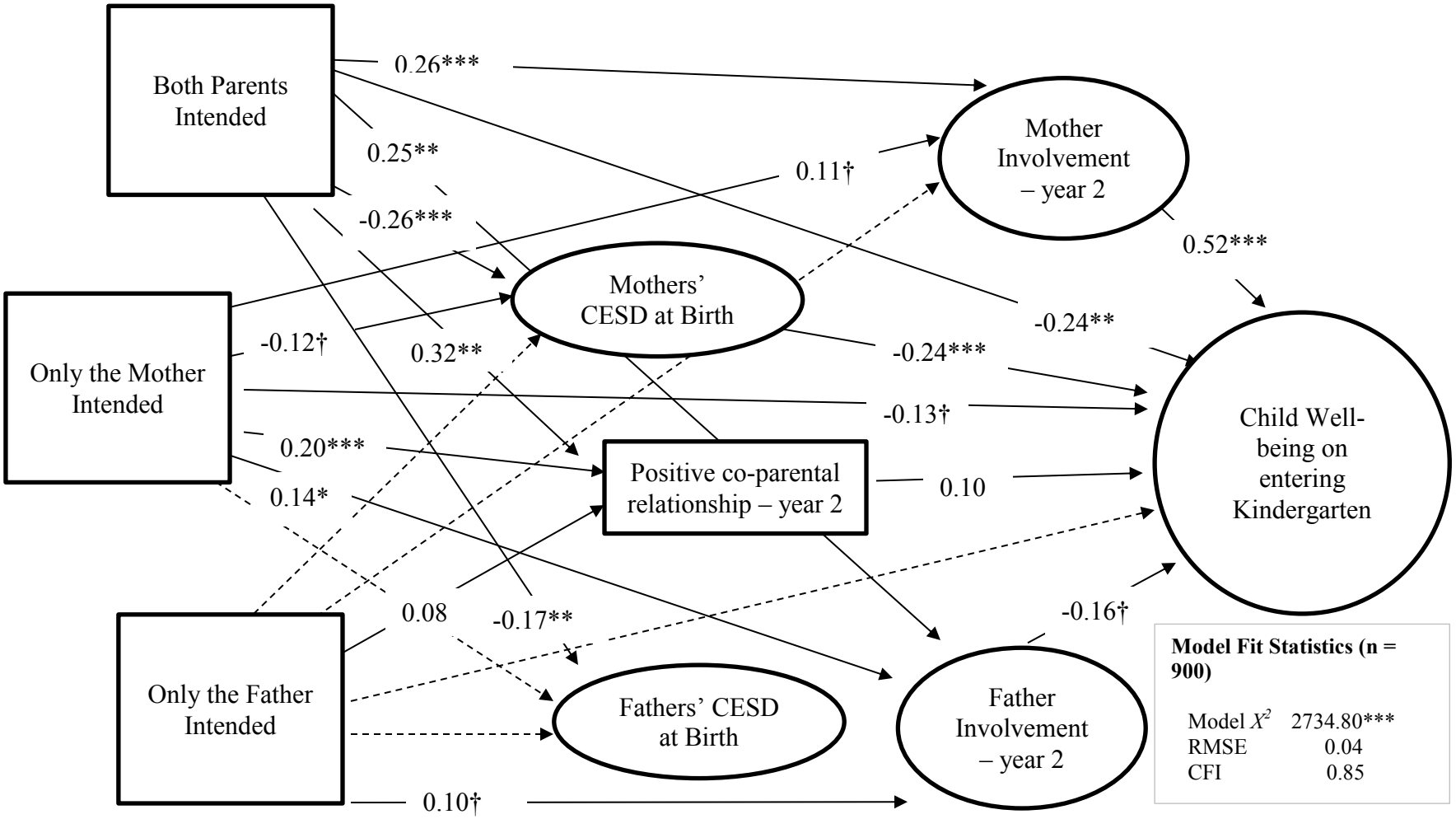


Model convergence in SEM is often challenging (especially when considering a relatively complex model such as this). Accordingly, settling on a final model often requires tweaking the proposed model and removing statistically nonsignificant paths in order to obtain reasonable model fit statistics (Acock, 2013). Therefore, I have included the output from the structural model components for the full model represented in Figure 3.1 (for both mother and teacher samples) in Appendices 3B and 3C respectively. The results presented and discussed herein are from trimmed, parsimonious models that removed all indicators that had neither direct nor indirect effects on child well-being on entering kindergarten. In addition, nonsignificant paths that were originally presented in Figure 3.1 were removed as well.

Couples' intentions and mothers' reports of child well-being: Mediating mechanisms

Figure 3.2 demonstrates couples' intentions at birth influence child well-being on entering kindergarten both directly and indirectly through the co-parental relationship dynamic, mother involvement, mothers' depressive symptoms, and father involvement. Overall, results provide partial support for hypotheses. For illustrative purposes, Figure 3.2 does not include additional characteristics that were associated with child well-being (e.g., race/ethnicity or the lagged indicator of child well-being at birth). These effects are reported in Table 3.3 and will be discussed in turn.

Figure 3.2. Couples' Intentions, Parents' Depressive Symptoms, Involvement, and Child Well-being: Pathways between Focal Independent Variables and Mothers' Reports of Child Well-being on Entering Kindergarten (standardized coefficients)[14]



[14] Please Note. Dashed lines represent nonsignificant paths for couples' intentions. All paths are taken from a model that accounted for the significant paths between: (1) child well-being at birth and age 5, (2) the total effect of mothers' race/ethnicity on child well-being, (3) the correlation between mothers' race/ethnicity and couples' intentions, (4) the correlation between mothers' race/ethnicity and SES at birth, and (5) the correlation between mothers' SES at birth and couples' intentions. All other paths specific in Figure 3.1 were nonsignfiicant and thus omitted in the interest of improving Model Fit and parsimony. Appendix C provides output for the full model (including nonsignificant paths specified in Figure 3.1

Couples' intentions, parental involvement, mothers' depressive symptoms, and a positive co-parental relationship dynamic are all significantly associated with child well-being on entering kindergarten. Both parents intending the birth (rather than neither parent intending the birth) has a negative, direct effect on child well-being (B = -0.24**). A similar – though less substantial – association existed for children when only the mother (rather than neither parent intended the birth), B = -0.13†. Both of these associations were contrary to hypotheses predicting that both parents' and only mothers' intending the birth (rather than neither parent) are positively associated with child well-being. Please note there was no significant, direct effect of only the father intending the birth and child well-being. This suggests that net of positive, indirect effects of couples' intentions on child well-being through mediating mechanisms (i.e., parental investment, co-parenting relationship dynamics, and mental health) a mother's intending a birth is associated with her providing lower reports of child well-being on entering kindergarten. I revisit this unexpected finding in the discussion. Mother involvement and positive co-parental relationship dynamics were both associated with better child outcomes – though the effect for mother involvement was much more pronounced (B = 0.52*** and B = 0.10†, respectively) whereas mothers' depressive symptoms were associated with lower child well-being (B = -0.24***). Father involvement was also associated with lower child well-being (B = -0.16†), contrary to expectations.

Results provided stronger support for hypotheses concerning indirect effects of couples' intentions on child well-being. For instance, both parents intending the birth (rather than neither parent) has significant, expected influences on all of the proposed mediating mechanisms by: 1) fostering a positive co-parental relationship (0.32***), 2) increasing mother involvement (B = 0.26**), 3) lowering mothers' depressive symptoms (B = -0.26***), 4) increasing father

involvement (*B* = 0.25**), and 5) reducing fathers' depressive symptoms (*B* = -0.17*). Three of these five associations corresponded to positive indirect effects on child outcomes whereas only one of these indirect pathways (i.e., both parents intending -> father involvement -> child well-being) indicates that both parents intending the birth indirectly lowers child well-being. It is also important to note that this pathway has the smallest indirect effect (i.e., 0.25** X -0.16† = -0.04) whereas the indirect effect of both parents intending through mother involvement, for example, is substantially stronger (i.e., 0.26*** X 0.52*** = 0.13). The total indirect effect of both parents intending the birth (rather than neither parent) – which is calculated by summing the standardized coefficients between all indirect pathways – is 0.20, which is highly significant ($p<0.001$) and quite substantial.

Separately, only the mother intending the birth (rather than neither parent) had similar – though less pronounced – linkages with mediating mechanisms, which was consistent with hypotheses, although fathers' depressive symptoms did not differ when only the mother versus neither parent intended the birth. Ultimately, mothers-only intending the birth had positive indirect effects on child well-being by increasing mother involvement (0.11† * 0.52*** = 0.05), reducing mothers' depressive symptoms (-0.12† X -0.24*** = 0.03), and fostering a positive co-parental relationship dynamic (0.20*** X 0.10† = 0.02). As with both parents intending the birth, only the mother intending the birth (rather than neither parent) has a negative, indirect effect on child well-being via father involvement (0.14* X -0.16† = 0.02). Once all indirect pathways are summed, the total indirect effect of only the mother (rather than neither parent) intending the birth is 0.09, which is significant at $p<0.05$. Substantially fewer significant pathways exist when only the father (versus neither parent) intended the birth, which was also consistent with hypotheses. Indeed, only the father intending the birth modestly increases child

well-being via fostering a positive co-parental relationship dynamic (0.08† X 0.10† = 0.008) and modestly undermines child well-being via higher levels of father involvement (0.10† X -0.16† = - 0.016). Not surprisingly, these weak countervailing pathways sum to a weak, nonsignificant total indirect effect of only the father (versus neither parent) intending the birth.

Model fit statistics suggest this model is solid. Although the model X^2 is statistically significant, the RMSEA meets the criteria for a good model fit (<0.05), and the estimated model does 85% better in describing the patterns existing in these data than when a null model assuming all factors are unrelated. Further, most theoretically driven pathways between couples' intentions, mediating mechanisms, and child well-being are statistically meaningful and in the expected direction.

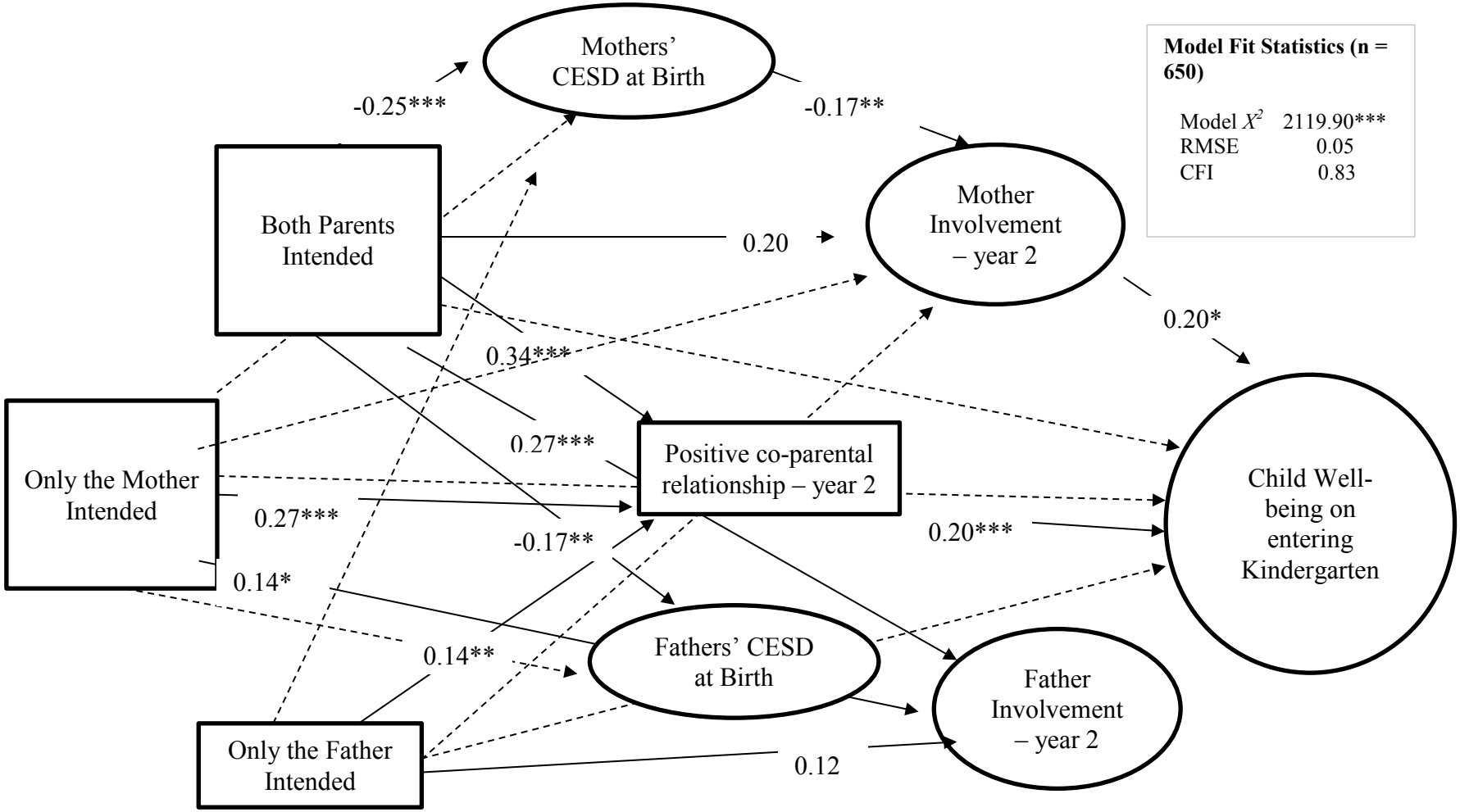
Table 3.3. Direct and Total Effects for All Characteristics significantly associated with Mothers' Reports of Child Well-Being on Entering Kindergarten
(standardized)

	Total Effects	*Direct Effects*
Focal Independent Variable: Couples' Intentions		
(Neither parent intended)		
Both intended	-0.03	-0.24**
Only the mother intended	-0.04	-0.13†
Only the father intended	0.00	-0.00
Sociodemographic Controls and Stability Indicators		
Child well-being at birth	0.19*	0.19*
Race/ethnicity		
(Mother white)		
Black	0.05	0.05
Hispanic	0.09†	0.09†
Asian	-0.05	-0.05
Unweighted n	900	

† p<0.10, * p< 0.05, ** p<0.01, ***p<0.001

Table 3.3 provides both total and direct effects for all factors that had significant associations with child well-being on entering kindergarten that were not featured in Figure 3.2 as well as the total and direct effects for couples' intentions. Please note, direct and total effects are equal when there were no indirect pathways specified between the predictor variable and child well-being (i.e., any predictor other than couples' intentions). Previously, I acknowledged somewhat counterintuitive linkages between couples' intentions and child well-being (i.e., both parents intending and only the mother intending being associated with lower well-being compared to neither parent intending the birth). Table 3.3 succinctly demonstrates that overall pronounced, negative direct effects are offset by the countervailing, positive indirect effects via the mediating mechanisms discussed at length above. In addition, children reporting higher levels of well-being closely following the birth were more likely to report higher levels of well-being on entering kindergarten (B = 0.19*), which is not surprising. There is also weak evidence that children whose mothers are Hispanic report somewhat higher levels of well-being (B = 0.09†) compared to their counterparts whose mothers are white. As the linkages between 1) mothers' SES at birth, 2) experiencing a change in the parental relationship status, and 3) changes in sibling composition and child well-being on entering kindergarten are not significant these pathways were not estimated in the final, parsimonious model (see Appendix C for output taken from the full model).

Figure 3.3. Couples' Intentions, Parents' Depressive Symptoms, Involvement, and Child Well-being: Pathways between Focal Independent Variables and Teachers' Reports of Child Well-being on Entering Kindergarten (standardized coefficients)[15]



[15] Please Note. Dashed lines represent nonsignificant paths for couples' intentions. All paths are taken from a model that accounted for the significant paths between the addition of new siblings and child well-being at age 5. There were no significant paths between: 1) mothers' race/ethnicity, 2) SES, 3) child well-being at baseline, or 4) change in the parental relationship status and teachers reports of child well-being. Nonsignificant paths were omitted in the interest of improving Model Fit and parsimony, but Appendix C. provides output for the full model (including nonsignificant paths).

Couples' intentions and teachers' reports of child well-being: Mediating mechanisms

Figure 3.3 considers the same conceptual diagram as Figure 3.2 but predicts teachers' rather than mothers' reports of child well-being. Although many of the mediating mechanisms operate in similar ways, subtle nuances emerge concerning the counterintuitive findings discussed previously (i.e., the negative linkages between both or only mothers' intending the birth and child well-being and negative linkages between father involvement and child well-being). I discuss these discrepancies here and their implications in greater detail in the conclusion.

Unlike mothers' reports of child well-being, Figure 3.3 finds no significant direct effects of 1) couples' intentions, 2) mothers' depressive symptoms at birth, and 3) father involvement on child well-being on entering kindergarten. However, the linkages between mother involvement and a positive co-parental relationship dynamic on child well-being are more robust and observed regardless of whether the mother or teacher is reporting on child well-being. Interestingly, when teachers' reports are used, mother involvement and a positive co-parental relationship dynamic have equal "effects" (B = 0.20*) on child well-being whereas the path for mother involvement was much more pronounced than the effect of positive co-parental relationship dynamic when mothers' reports were considered.

Once again, both parents (rather than neither parent) intending the birth has positive indirect effects on child well-being by increasing mother involvement (0.20* X 0.20* = 0.04), fostering positive co-parental relationship dynamics (0.34*** X 0.20*** = 0.06), and reducing mothers' depressive symptoms (-0.25*** X -0.17** X 0.20* = 0.008), which is consistent with hypotheses. Although both parents intending the birth (rather than neither) reduces fathers' depressive symptoms, fathers' depressive symptoms closely following the birth were not associated with child well-being on entering kindergarten. When teachers' reports are used, I

find no significant differences in mothers' depressive symptoms or mother involvement when only the mother versus neither parent intended the birth. However, fathers are more involved when only the mother (rather than neither parent) intended the birth (*B* = 0.14*). Further, only the mothers' (rather than neither parents') intending the birth indirectly increases child well-being by fostering a more positive co-parental relationship dynamic (0.27*** X 0.20*** = 0.05). A similar story emerges when differentiating couples where only the father (versus neither parent intended the birth), though the effects/pathways are less pronounced.

Although model fit statistics for this sample are weaker than those reported in the "mother sample", fit statistics suggest this model is a reasonably good-fitting model as the RMSEA approaches the criteria for a good model fit (<0.05), and the estimated model does 83% better in describing the patterns existing in these data than when a null model assuming all factors are unrelated.

Table 3.4. Direct and Total Effects for All Characteristics significantly associated with Teachers' Reports of Child Well-Being on Entering Kindergarten (standardized)

	Total Effects	*Direct Effects*
Focal Independent Variable: Couples' Intentions		
(Neither parent intended)		
Both intended	0.13†	0.01
Only the mother intended	0.00	-0.06
Only the father intended	-0.03	-0.05
Proposed Mediating Mechanisms		
Mothers' depressive symptoms	-0.04**	--
Sociodemographic Controls and Stability Indicators		
(No new sibling)		
New full sibling	0.18*	0.18**
New step (or half) sibling	-0.01	-0.01
Unweighted n	650	

† p<0.10, * p< 0.05, ** p<0.01, ***p<0.001

Table 3.4 mirrors Table 3.3 with the "teacher sample" and reports total and direct effects for couples' intentions and all factors having either significant direct or indirect linkages with teachers' reports of child well-being with a particular focus on pathways that were not discussed in Figure 3.3. Although couples' intentions were not directly associated with child well-being, the total indirect effect of both (rather than neither) parents intending the birth on child well-being was positive (B = 0.13†). This suggests that overall, both parents' intending the birth improves child well-being by increasing mother involvement, fostering a positive co-parental relationship dynamic, and reducing mothers' depressive symptoms, which was consistent with hypotheses. In addition, although there was not a significant direct effect for mothers' depressive symptoms on teachers' reports of child well-being, there is evidence that mothers with fewer depressive symptoms are more involved, which in turn increases child well-being (B= -0.04**), which was consistent with hypotheses. Lastly, teachers' reports of child well-being suggest firstborn children who experience the birth of a new full sibling report higher levels of socio-emotional adjustment than their counterparts who do not have a new sibling. Since the linkages between 1) mothers' SES at birth, 2) experiencing a change in the parental relationship status, and 3) mothers' race/ethnicity and child well-being on entering kindergarten are not significant these pathways were not estimated (see Appendix C for output taken from the full model).

DISCUSSION

The current study sought to integrate three prominent themes in research on unintended childbearing and child outcomes: 1) the robust finding that unintended childbearing is consistently associated with negative outcomes across multiple domains (for review see Shah et al., 2011), 2) the assertion that parents' mental health and investment serve as important mediating mechanisms for this association (see Barber et al., 1999; Bronte-Tinkew et al., 2009;

East et al., 2012; Miller et al., 2009), and 3) consideration of couples' intentions provides a more nuanced understanding of how intentions are associated with maternal and child health (Hohmann-Marriott, 2009; Martin et al., 2007; Moore et al., 2009; Saleem & Surkan, 2014). Drawing on the unique strengths of the ECLS-B data and SEM techniques, this chapter makes at least four noteworthy contributions to research linking unintended childbearing and child well-being that are detailed below.

First and foremost, I demonstrate that couples' intentions influence child well-being through all three proposed mediating mechanisms (i.e., parental investment, parental mental health, and co-parental relationship dynamics). In most cases, indirect effects were consistent with hypotheses (i.e., intended childbearing increased child well-being via more parental involvement, fewer depressive symptoms for parents, and fostering a positive co-parental relationship dynamic). However, fathers' involvement and mental health were not strongly associated with child well-being, suggesting the effects of couples' intentions on child well-being operate primarily through mothers. Stated differently, the inclusion of fathers' perspectives provides a more detailed, accurate understanding of how intentions influence child well-being via mothers' involvement and mental health; however, including fathers' perspectives on mediating mechanism such as father involvement and fathers' mental health is less insightful. This finding aligns well with the cultural depiction of mothers as the "primary parent," and the finding that mother involvement is a more salient predictor of child well-being than father involvement (see Pleck & Masciadrelli, 2004). According to this finding, initiatives aimed at men to reduce unintended childbearing might have positive effects on child well-being by promoting higher levels of involvement and better mental health for birth mothers rather than by fostering higher levels of father involvement.

Secondly, findings also suggest consideration of *couples'* rather than *individuals'* intentions provides key insights that further our understanding of how intentions influence child well-being. Results concerning the indirect pathways between couples' intentions, parental mental health, and investment are consistent with prior work that focused solely on mothers' intentions in cases where both parents (rather than neither) intended the birth. However, comparing couples where only the mother (rather than neither) parent intended the birth provides a somewhat different story. Most notably, when both mothers and fathers intend the child (rather than neither), there are quite pronounced protective effects on child well-being via higher levels of mother involvement, better co-parental relationship dynamic, and fewer depressive symptoms for mothers. Yet, these protective effects are much less pronounced when only the mother intended the birth and often only marginally significant. Bear in mind analyses solely focusing on mothers' intentions would not distinguish between couples where both parents and only the mother intending the birth. Thus, when only mothers' perspectives are considered, researchers run the risk of underestimating the positive effects of intending a birth via mother involvement, fewer depressive symptoms, and a positive co-parental relationship dynamic for some women belonging to couples where both parents intended the birth.

Consideration of both mother and teacher reports of child well-being provided novel insights, making the third noteworthy contribution to prior work as well – particularly in rationalizing counterintuitive or unexpected findings. For instance, contrary to hypotheses, I found a mother's intending the birth had negative, direct effects on mothers' reports of child well-being, and this effect was more pronounced when both parents intended the birth. This effect was quite robust given the inclusions of new constructs and paths as well, which suggests it was not driven by omitted variable bias. However, when teachers' reports of child well-being

were considered, there was no direct effect of couples' intentions on child well-being. This suggests the unexpected negative, direct effects of a mother's intending the birth might be a result of high expectations for children that result in harsher evaluations at age 5 by mothers; I return to this below. Similarly, analyses drawing on mothers' reports of child well-being provided weak evidence that father involvement undermined child well-being. Although a similar finding has been reported and discussed by others in a number of contexts (Cabrera, 2012; Jaffee, Moffitt, Caspi, & Taylor, 2003), this finding was not consistent with my hypotheses that father involvement was a viable mechanism for improving child well-being. However, consideration of teachers' reports of well-being found no evidence of this effect. Taken together, comparing and contrasting mother and teacher reports of child well-being concluded the most robust mediating mechanisms were mother involvement, a positive co-parenting relationship dynamic, and mothers' depressive symptoms. It is also interesting to note that when mothers' reports are assessed, mother involvement emerges as the single most salient factor improving child well-being whereas teachers' reports suggest mother involvement and positive co-parental relationship dynamics play an equally important role in child well-being.

Lastly, partitioning out the salience of direct versus indirect effects of couples' intentions provided novel insights that improve our understanding of how intentions are tied to well-being roughly five years after the birth. Ultimately, there is substantially weaker evidence that couples' intentions influence child well-being directly – which is not entirely surprising given measurement concerns over binary reports of intended versus unintended childbearing (see Augstine et al., 2009). In contrast, there was compelling evidence that couples' intentions influenced child well-being indirectly by fostering a positive co-parental relationship dynamic (using both mother and teacher reports), encouraging higher levels of mother involvement (using

both mother and teacher reports), and reducing depressive symptoms among mothers (using both mother and teacher reports). Although couples' intentions were associated with fathers' depressive symptoms and involvement as well, this did not translate into a significant effect on child well-being for both mother and teacher reports. Taken together, these findings suggest mothers' intentions, mental health, and involvement are more consequential for child well-being than fathers'.

In sum, results provided partial support for hypotheses. I found couples' intentions were either 1) not directly associated with child well-being (teacher reports) or 2) strongly associated with child well-being in the opposite direction (mother reports). In reflection, it is not terribly surprising that hypotheses concerning direct effects of intentions were not supported given the sample. Arguably, this sample is not very diverse and relatively privileged, making it quite distinctive from the wealth of research finding pronounced negative effects of mothers' intentions on child well-being. Further, contrasting mother and teacher reports of child well-being suggested the direct effects of couples' intentions on child well-being were *not* robust across reporters. This suggests relatively advantaged mothers who intended the birth might have high and somewhat unattainable expectations for their children. High expectations for children emerge as a salient theme in Lareau's (2011) discussion of concerted cultivation among middle-class parents. Accordingly, it seems reasonable to expect relatively advantaged mothers who intended their birth might hold somewhat unrealistic expectations for their children and evaluate them more harshly.

In contrast to hypotheses for direct effects, I found consistent support for most hypotheses concerning the indirect effect of couples' intentions. Both parents or only the mother intending the birth – rather than neither parent – has positive, indirect effects on child well-being

by 1) fostering higher levels of mother involvement, 2) reducing mothers' depressive symptoms, and 3) fostering a positive co-parental relationship dynamic. I did not find support for hypotheses that only a father's intending the birth improved child well-being through any mechanisms (aside from a marginal effect of fostering a positive co-parental relationship dynamic). Also, contrary to hypotheses, when mothers' reports of child well-being were considered, I found that father involvement had a negative (rather than the expected positive) association with child well-being. Although this finding was not expected, it too, was not robust to multiple reporters of child well-being, and it is plausible fathers are more involved with difficult kids (or that mothers might enlist fathers' help with children they deem more difficult). Lastly, results were in line with the expectations that a mother's intending the birth had more positive consequences for child well-being than a father's intending the birth. Indeed, only the mother (but not only the father) intending the birth, compared to neither parent, was associated with better child outcomes and operated through a number of mediating mechanisms (discussed at length above).

Although the present study enhances our understanding of couple dynamics in fertility intentions and how they influence child well-being, it is not without its limitations. Most notably, analyses were limited to a rather select sample that were overwhelmingly married at the time of birth, white, and college educated. This is problematic as relatively privileged parents are less likely to experience an unintended birth and may have greater resources to cope with such a birth. Previous chapters also faced similar challenges; however, they are more pronounced in these analyses as valid data from both mothers and fathers was required at baseline and the 2-year follow-up in addition to mothers' data on entering kindergarten. Indeed, mothers' race/ethnicity and SES at birth had virtually non-existent linkages with subsequent child well-being, which is not consistent with prior work. I expect having minimal sociodemographic variation within the

sample contributed to these null effects as this sample was already select at baseline (i.e., high nonresponse rates among fathers) and became even more select when further restricted to those having valid data at three time points. In addition, analyses were only able to support a very crude measure of family instability. Although sensitivity analyses concerning family instability (reported in Appendices 3D and 3E) did not alter substantive conclusions, it is possible the most unstable couples, or those with the poorest relationship quality, were not included in the analytical sample due to attrition. As such, consideration of time-varying indicators of relationship status would provide a more nuanced, detailed portrait of how instability influences child well-being. Inconsistencies across survey instruments prohibited consideration of more nuanced indicators of investment to assess factors such as parenting quality and parenting stress and forced me to rely on a rather simplistic indicator of the co-parental relationship dynamic. Lastly, there are substantial measurement concerns with current methods of assessing intentions – though Santelli and colleagues (2009) concluded unwanted and mistimed childbearing loaded quite well on a single factor and had similar meanings across women's race/ethnicity and poverty status.

In spite of these limitations, the present study demonstrates consideration of *couple* rather than *individual* intentions provides important nuances in our understanding of how intentions are linked with child well-being. Some prior work suggested a father's intending a birth could buffer the negative effects of a mother not intending the birth during the pregnancy (Hohmann-Marriott, 2009; Martin et al., 2007). However, I find less support for this in these analyses considering child well-being at later ages. Rather, the current analyses suggest a father's not intending the birth when the mother does somewhat diminishes the positive effects of her intending the birth. This suggests the buffering effects of a father intending the birth when the mother does not are

less pronounced (and in most cases non-existent) when considering child well-being at later ages and positive influences via parental investment, mental health, and the co-parenting relationship dynamic. Although scholars have noted patterns of convergence in parenthood and parenting for mothers and fathers (Doucet, 2013), time use data consistently demonstrates increases in father involvement have not offset mothers' entry into the labor force and that mothers spend more time in childrearing tasks than fathers (for example see Sayer et al., 2004). Indeed, even Townsend's (2002) qualitative piece on fatherhood suggested fathering was an indirect act largely facilitated by mothers. Accordingly, it is not entirely surprising the protective effects of fathers intending the birth when mothers do not appear to wane after the child's birth. This is further evidenced as I find minimal differences in comparing couples where only the father versus neither parent intended the birth approximately two years after the birth. It is also important to note that while couples' intentions are associated with fathers' well-being and involvement those factors do not translate into large, positive changes in child well-being, at least among this limited sample.

These findings also have implications for future research. Given the lack of significant pathways between fathers' mental health and involvement, future work could retain a more diverse sample by focusing primarily on mothers' well-being and parental investment as mediating mechanisms. In doing so, more nuanced, detailed indicators of parenting quality and stress about parenting could be incorporated, which would make a notable contribution. In addition, work focusing on relationship stability and transitions is warranted. The present study focused primarily on parental well-being, co-parenting dynamics, and investment as mediating mechanisms – arguably, at the expense of household and family compositional changes, as the most unstable families are likely those in which both parents did not participate in multiple

waves of data collection. Lastly, future work could focus solely on mothers' reports of child well-being and include multiple domains of child well-being such as cognitive development, social development, and behavioral problems. It is possible couples' intentions might have different effects and/or operate through more or less strongly through various mechanisms depending on the outcome of interest.

In terms of practice and policy, two notable implications are particularly salient. First and foremost, programs designed to focus just on reducing women's unintended childbearing while ignoring men's unintended childbearing are limited. Rather, programs aimed at reducing both women's and men's risk of unintended childbearing might have more pronounced effects in improving child well-being. Indeed, results provided evidence that the protective effects of a mother intending the birth were somewhat diminished if the father did not also intend the birth – particularly in terms of fostering greater mother involvement and better maternal mental health. As such, this suggests efforts to decrease *both* mothers' *and* fathers' unintended childbearing are a viable approaches to increase child well-being. Secondly, contrasting the current study's findings with other work on couples' intentions and maternal health during pregnancy suggests the protective effects of fathers intending the birth when mothers do not intended the birth do not extend beyond the pregnancy (i.e., receiving prenatal care and not smoking or drinking during pregnancy – see Hohmann-Marriott, 2009; Martin et al., 2007). Accordingly, some programs should acknowledge that encouraging responsible fatherhood is more difficult in certain circumstances. For instance, at times (though less often), a father might have intended the birth when the mother did not. In this situation, an emphasis on helping fathers become a steady source of social support for mothers both during the pregnancy and after the birth might

contribute to higher levels of maternal well-being and involvement which in turn have positive implications for child well-being.

Ultimately, this chapter clearly demonstrates consideration of couples' intentions provide a more accurate, nuanced understanding of how intentions are associated with child well-being. Further, it is apparent that couples' intentions have rather strong influences on child well-being by influencing mother involvement, mothers' depressive symptoms, and the co-parental relationship dynamic. Consideration of both mothers' and teachers' reports suggested specifically, that both parents' (rather than neither) intending the birth had the most pronounced positive effects on child well-being by increasing mother involvement, reducing mothers' depressive symptoms, and fostering a more positive co-parental relationship. The protective effects of a mother intending the birth were somewhat reduced if the child's father did not intend the birth. Lastly, I found minimal support for the notion that a father's intending the birth when the mother did not buffered the negative the negative effects of unintended childbearing after the birth. Collectively, the current study provides a more holistic picture of how both mothers' and fathers' intentions influence parental investment, well-being, and relationship dynamics, which all have implications for child well-being.

CHAPTER V: CONCLUDING REMARKS AND IMPLICATIONS

As early as the late-1970s and early 80s family demographers advocated couples – rather than individuals – were the appropriate unit of analysis in assessing the linkages between childbearing desires and fertility outcomes in the US context (see Beckman et al., 1983; Fried & Udry, 1979; Thomson et al., 1990; Thomson, 1997). However, research focusing on intentions has overwhelmingly focused on mothers at the expense of fathers. This focus on mothers, rather than fathers, is likely driven in by data limitations. For instance, Joyner and colleagues (2012) demonstrated there were notable concerns with male fertility data quality, and Martin (2007) noted household surveys often systematically undercounted young disadvantaged men with weak ties to households. This matter is further complicated as the ECLS-B are the *only* survey data in the US that ask both men and women about fertility intentions where mother-father reports can be linked to produce couple estimates. Not surprisingly then, research considering *couples'* intentions is particularly scarce.

To the best of my knowledge there are six papers that explicitly focus on retrospective reports of American couples' fertility intentions (see Hohmann-Marriott, 2009; Korenman et al., 2002; Martin et al., 2007; Moore et al., 2009; Saleem & Surkan, 2014; Williams, 1994).[16] Although these pioneers in couple-level work on unintended childbearing have made notable contributions to research on intentions more broadly, there are notable gaps in this limited work on couples' intentions. With the exception of Williams (1994), each of these pieces has treated couples' intentions as a focal independent variable meaning that we do not readily understand what factors influence couple's intentions, or more specifically disagreement in couples'

[16] Research focusing on couples' childbearing desires in developing countries is much more common (e.g., Bankhole & Singh, 1998; Becker, 1999; Derose & Ezeh, 2005).

intentions. Williams (1994) focused on predicting couple-level fertility intentions, but she did so using mothers' proxy reports of fathers' intentions and her conclusions are arguably dated as data from the 1980s were used. The second, and largest, body of work on couples' intentions considers the linkages with maternal health during pregnancy and/or subsequent fertility behaviors (see Hohmann-Marriott, 2009; Korenman et al., 2002; Martin et al., 2007; Moore et al., 2009). Korenman and colleagues (2002) were the first to consider this relationship, and their analyses concluded that children intended by both parents fared better than their counterparts where at least one parent did not intend the birth, using mothers' proxy reports to construct couples' intentions. Hohmann-Marriott (2009) and Martin and colleagues (2007) made use of mothers' and fathers' own reports of their own intentions to construct couple-level indicators of fertility intentions and found some evidence that a father's intending the birth (when the mother did not) was associated with healthier pregnancies when neither the mother nor father intended the birth. Lastly, Moore et al. (2009) considered the linkages between couples' intentions and subsequent high-risk fertility, finding when only fathers' intended the birth, mothers were at a greater risk of having a subsequent, high-risk birth. Saleem and Surkan (2014) were the first to consider the influences of couples' intentions on child well-being at later ages, and though their analyses are primarily descriptive, findings suggested couples' intentions were associated with child outcomes on entering kindergarten.

In sum, this small body of work explicitly focusing on couples' retrospective reports of fertility intentions suggests discordance exists in a substantial share of couples' intentions and consideration of both parents' intentions has implications for mother and child well-being during the pregnancy as well as child well-being at later ages. However, the many limitations of these studies point to the need for additional research in this emerging area. For instance, 1) a better

understanding of what factors are associated with couples' intentions, 2) consideration of the linkages between couples' intentions and broad indicators of parental well-being, and 3) a careful consideration of how and why couples' intentions are associated with child well-being at later ages, would make substantial contributions to current research on unintended childbearing and individual well-being.

This dissertation was designed to address these limitations explicitly and makes a number of noteworthy contributions to current research on unintended childbearing. The first chapter was primarily descriptive in that it identified which sociodemographic characteristics were associated with couples' intentions and considered measurement implications of using mothers' reports of fathers' intentions as a proxy to construct couple-level fertility intentions. The second chapter focused on the linkages between couples' intentions and parental mental and physical health. By focusing on broader indicators of parental well-being (i.e., depressive symptoms and self-rated health) rather than maternal health behaviors during pregnancy, I was able to consider gender differences (or similarities) in how couples' intentions were associated with well-being and test if the associations between couples' intentions and parental well-being remained constant or waned with the passage of time. The third and final empirical application sought to explain why couples' intentions were associated with child well-being on entering kindergarten by focusing on parental investment, parental well-being, and the co-parental relationship dynamic as important mediating mechanisms.

KEY FINDINGS

Predicting couples' agreement and the accuracy of proxy reports

Specifically, the first empirical application demonstrated there were both costs and benefits associated with using fathers' own reports of intentions. Although three out of four mothers

provided "accurate" proxy reports of fathers' intentions, this was among a relatively privileged sample. Moreover, a mother's own intentions were the most salient factor influencing her proxy reports such that when mothers' reports were inaccurate they were more likely to assume fathers shared their intentions. Based on sensitivity analyses that assessed the sample selection biases stemming from low response rates among fathers and careful consideration of the accuracy of mothers' proxy reports, I argued the utility of fathers' versus mothers' reports of fathers' intentions varied depending on the research question at hand. If researchers are primarily interested in how couples' intentions influence *mothers'* well-being or *mother-child* relationships, I recommend using mothers' own proxy reports (and conducted sensitivity tests doing so). Consideration of proxy reports allows the researcher to retain a more representative sample, and arguably, a mother's perceptions of the fathers' intentions likely influence both her well-being and actions regardless of whether they are consistent with a father's reports of his own intentions. Alternatively, if the focus is on *fathers*, the *father-child* relationship, or *couples*, I recommend using fathers' own reports as mothers' proxy reports underestimated both fathers' unintended childbearing and couple disagreement in intentions (accordingly I did not conduct sensitivity analyses on applications emphasizing father involvement or couple dynamics).

Separately, the first application also demonstrated one in four (27%) couples reported discordance in mothers' and fathers' intentions and less than half (45%) of firstborn children were intended by both parents. As such, consideration of couples' intentions demonstrates there are relatively high levels of disagreement in mothers' and fathers' intentions and that current prevalence estimates focusing on individuals' unintended childbearing underestimate the share of children who are not intended by at least one parent. Given differences in gender socialization and the social construction of gender (i.e., that girls/women are expected to invest more in

relationships and are the "primary" parent, see Francis-Connolly, 2003; Maccoby, 1998), we might expect that mothers are more likely to intend a birth than fathers. Consistent with these perspectives, when couples disagree on intentions, a larger share of mothers (rather than fathers) intended the birth. Multivariate analyses demonstrated sociodemographic characteristics differed substantially across patterns of agreement and disagreement, which I term "intention scenarios." However, certain characteristics appeared more salient in distinguishing between intention scenarios. For instance, in differentiating couples where only the mother (rather than both parents) intended the birth, relationship status at birth was the most influential factor contributing to couples' intentions. In contrast, mothers' age at birth was more important when distinguishing couples where only the father (rather than both parents) intended the birth. Lastly, there were substantial differences in the racial/ethnic, age, and relationship status of women in couples where neither rather than both parents intended the birth, demonstrating (as would be expected) that more disadvantaged mothers were more likely to report that neither intended the birth. There was also evidence that among partnered parents, relationship conflict was associated with lower odds that both parents intended the birth whereas longer relationship duration increased the odds of both parents intending.

Linking couples' intentions to parents' mental and physical health

The second chapter found consideration of couples' (rather than individuals') intentions provided a more nuanced understanding of how intentions were linked with parental well-being. Specifically, in this chapter, I sought to understand 1) whether and how an individual's intentions alongside their partner's intentions were associated with mental and physical health, 2) if couples' intentions had similar influences on mothers' and fathers' well-being, and 3) if the linkages between couples' intentions and parental well-being persisted or waned over time. Prior

research suggested 1) the "other" parent's intending the birth buffers the negative impact of unintended childbearing on well-being, 2) intentions are more consequential for mothers' well-being whereas couple dynamics are more salient for fathers' well-being, and 3) that the effects of couples' intentions persist over time. Drawing on prior research, I tested whether and how couples' intentions were associated with parental well-being, if gender differences existed, and how couples' intentions were associated with change in parental well-being over time. Overall, I found compelling evidence that couples' intentions influenced both mothers' and fathers' mental health closely following the birth. Although there was some evidence of corresponding "effects" on self-rated physical health (more notably among mothers), these linkages were less robust than for mental health after controlling for sociodemographic characteristics and health behaviors during the pregnancy.

Interesting gender-specific patterns emerged in considering the linkages between couples' intentions and depressive symptoms closely following the birth. For mothers, her own intentions were more consequential for her mental health than the father's intentions (or disagreement between mothers' and fathers' intentions). As long as the mother intended the birth, she did not report higher depressive symptoms. Alternatively, fathers' depressive symptoms were influenced by his own intentions, mothers' intentions, and couple disagreement in intentions. There was initial evidence in supplemental analyses that the other parent's intending the birth could buffer the negative effects of unintended childbearing on mental health, but these associations were not robust given the inclusion of sociodemographic characteristics. Consideration of the lasting "effects" of couples' intentions on parental well-being demonstrated couples' intentions had implications for parental well-being both two and four years after the birth. Lastly, in spite of gender-specific patterns in the linkages between couples intentions and

parental well-being, few "effects" of couples' intentions operated differently for mothers versus fathers. Belonging to a couple where neither parent intended the birth had a stronger negative association with mothers' well-being compared to fathers (for both mental and physical health). In contrast, for fathers belonging to a couple where neither parent intended the birth decreased the likelihood of reporting an improvement in self-rated health but had no significant "effect" for mothers.

Examining and explaining the linkages between couples' intentions and child well-being

The third and final empirical application extended Saleem and Surkan's (2014) analyses linking couples' intentions to child well-being at kindergarten by considering *how* and *why* couples' intentions were influential. The ECLS-B provide a unique opportunity to compare and contrast both reports of child well-being from multiple reporters (mothers and teachers), and I made use of this opportunity. Saleem and Surkan (2014) demonstrated couples' intentions were associated with teachers' reports of child well-being on entering kindergarten. However, their analyses did not consider what factors explained or contributed to this relationship. Drawing on the substantial body of research that found unintended childbearing reduced child well-being, in part, through less parental investment and increased maternal depressive symptoms (see Barber et al., 1999; East et al., 2012; Miller et al., 2009), I considered the direct effects of couples' intentions on child well-being as well as indirect effects via parental investment, parental well-being, and the co-parenting relationship dynamic.

Ultimately, results provided compelling evidence that couples' intentions influenced child well-being indirectly through mothers' depressive symptoms, mother involvement, and the co-parenting relationship dynamic (regardless of whether the mother or teacher was reporting on child well-being). Couples' intentions also influenced fathers' mental health and involvement,

but these factors were not associated with child well-being. Most surprising, though, is that couples' intentions did not directly influence child well-being in a consistent and expected manner. Both parents intending the birth (rather than neither parent) had quite pronounced effects on child well-being by fostering higher levels of mother involvement, reducing mothers' depressive symptoms, and facilitating a more positive co-parental relationship dynamic. Similar pathways emerged when distinguishing couples where only the mother (rather than neither parent) intended the birth, but effects were considerably weaker and at times only marginally significant. Lastly, there was considerably less support for the notion that only the father intending the birth buffered the negative effects of a mother not intending the birth – which was a key finding from some of the recent work focusing on couples' intentions and maternal and child health during pregnancy (see Hohmann-Marriott, 2009; Martin et al., 2007). Rather, this suggests when examining parental involvement after the birth and child well-being at later ages, a mother's intending the birth can buffer the negative effects of a father not intending the birth. Pronounced differences existed in direct effects of couples intentions on child well-being when mothers' versus teachers' reports were considered. Surprisingly, a mother's intending the birth had a direct negative association with child well-being after parsing out the positive, indirect effects above (which were larger than the direct effect and resulted in a total positive effect). However, a similar effect was not observed when teachers' reports of child well-being were analyses. This suggests that among a relatively privileged sample, the reports of mothers who intend the birth might be negatively biased. Perhaps the mothers in this sample, who are fairly advantaged overall (but particularly among those in which both mother and father agree about intentionality), have very high expectations for their children and evaluate them more harshly.

Indeed, this finding is reminiscent of some of Lareau's (2011) qualitative insights concerning concerted cultivation.

Arguably, the third chapter takes a relatively holistic approach to understanding how couples' intentions are associated with parental well-being, family processes, and child well-being. Consistent with the previous applications, analyses demonstrate a focus on couples rather than individuals provides important nuances that enhance our understanding of unintended childbearing and individual well-being. Couples' intentions clearly have implications for both mothers' and fathers' well-being (which was consistent with the second application), which in turn has implications for parental involvement and child well-being, mirroring prior work focusing on individuals (see Barber et al., 1999; Miller et al., 2009). The inclusion of men's perspectives provides nuanced insights in understanding how intentions (of both partners) influence child well-being. However, it is interesting that, among this sample, fathers' intentions only influence child well-being through mothers' mental health, involvement, and co-parenting – not fathers' mental health or involvement. Stated differently, although fathers' intentions do have implications for child well-being, they operate primarily through mothers' involvement and mental health. This suggests 1) work focusing solely on mothers' intentions and child well-being might underestimate the positive effects of a mother's intending the birth on child well-being if the father also intended the birth and 2) programs in place to reduce unintended childbearing among fathers might have the largest effects via positive influences on both mother and child well-being.

CHALLENGES AND LIMITATIONS

Throughout this dissertation, I have frequently cited the limited availability of data on fathers and concerns over the "missing men bias." The ECLS-B are the *only* data that can facilitate

direct reports of couples' intentions (i.e., using data from mother and fathers) in a nationally representative panel, but these data have high non-response rates among fathers, particularly nonresident fathers – which is a prevalent challenge in many data collection efforts (see Martin, 2007; Sorenson, 1997; Stykes et al., 2013). In spite of these challenges, a number of scholars have asserted that incorporating fathers' own perspectives into research on families is an important step in moving the field forward (see Goldscheider & Kaurman, 1996; Greene & Biddlecom, 2000; Santelli et al., 2003). Specifically, regarding intentions, Augustine and colleagues' (2009) qualitative accounts suggested consideration of fathers' childbearing intentions provided novel insights and could enhance our understanding of unintended childbearing. In addition survey research on fathers' intentions has linked fathers' intentions with parental warmth and involvement (see Bronte-Tinkew et al., 2007, 2009) and demonstrated the same sociodemographic that are associated with unintended childbearing among women appear to operate similarly for men as well (see Lindberg & Kost, 2013). Taken together this work suggests that although consideration of fathers' perspectives raises unique data challenges, the inclusion of men can make noteworthy contributions to our understanding of unintended childbearing and well-being.

Given low response rates among men in the ECLS-B, all three empirical applications were comprised of a limited and relatively advantaged sample. In analyses explicitly focusing on mothers' well-being (rather than family processes, couple dynamics, or child well-being), I contrasted the more restrictive sample with a broadly representative sample (by using mothers' proxy reports of fathers' intentions), and these sensitivity analyses largely concluded couples' intentions do in fact matter for parental well-being – though sociodemographic characteristics do a better job explaining some of this effect among a more diverse sample of mothers. It is

unfortunate mothers who are most likely to experience an unintended birth are underrepresented in each of the analytic samples, and the results presented herein are not broadly generalizable. However, I assert consideration of couples' intentions does provide a better understanding of couple dynamics in intentions, family processes, and their linkages with well-being, providing a noteworthy complement to prevalence estimates of unintended childbearing. For example, if we were to just use mother's own reports of unintended childbearing, we would underestimate the proportion of births unintended by at least one parent by approximately 50%. Similarly, if we relied on mother's reports of their partners' intentions, we would incorrectly specify fathers' intentions for one in four couples and underestimate disagreement in couples' intentions.

A second challenge facing practically all survey research on intentions concerns retrospective, binary reports of unintended childbearing. Scholars have long puzzled over concerns about social desirability and recall biases in standard survey measures of unintended childbearing (see Casterline et al., 2007; Crissey, 2005). However, in a recent methodological piece, Santelli and colleagues (2009) conducted confirmatory factor analyses and demonstrated that – although not perfect –questions assessing both the timing and wantedness of a birth loaded onto a single construct akin to intentions. Although traditional approaches to intentions have been validated among a diverse sample of women, similar measurement questions have not been considered in looking at men's reports of intentions. An emergent body of research has voiced valid concerns over binary (or categorical) conceptualizations of intentions, demonstrating qualitative accounts suggest parents voice both positive and negative feelings about a birth and that intentions likely fall along a continuum (see Augustine et al., 2009; Edin & Kefalas, 2005). These qualitative accounts underscore that survey research on intended versus unintended childbearing is admittedly simplistic. However, differentiating between intended and unintended

births has consistently been linked to parent and child well-being. Although binary (or categorical) discussions of intentions are certainly not perfect, they retain a certain level of both face validity and reliability and are particularly useful in describing and assessing the linkages between unintended childbearing and well-being.

In addition to these broad challenges, there are more detailed limitations regarding each chapter's analyses which I discuss in turn. Below I focus on the most salient limitations of each chapter, as a thorough discussion of the limitations was presented in each chapter's discussion. The ECLS-B only asked about intention status of the focal birth at the baseline data (which itself was 9 months after the birth). Thus, I am unable to establish a temporal order (or construct lagged indicators) to better specify the associations between sociodemographic characteristics and couples' intentions in the first chapter. This is particularly problematic for analyses examining couple dynamics (i.e., relationship quality, conflict, and duration). For instance, it is plausible that couples reporting higher levels of conflict are both 1) less likely plan births together (and agree and intend the birth) and 2) having a birth that was neither jointly planned nor intended increases relationship conflict. Separately, the second empirical chapter arguably draws on less-sophisticated methodological techniques to assess change in parental well-being over time. Diagnostic analyses demonstrated changes in mothers' well-being were best modeled with a latent growth curve approach. However, given the limited time points for fathers' data and my emphasis on gender differences (or similarities), I opted to rely on auto-regressive techniques to assess changes in well-being over time. Admittedly, a more advanced statistical technique could provide a more nuanced depiction of how well-being changes over time emphasizing differences within and between individuals. Yet, the auto-regressive approach suggests the linkages between couples' intentions and parental well-being at later time points are not a mere

representation of lower well-being at the baseline (or selection on lower well-being) and that couples' intentions are associated with changes in well-being over time. Lastly, the third application was only able to include crude instability flags denoting changes in relationship ties between the child's parents. I did not have adequate cell sizes to differentiate between positive, negative, and null changes in relationship ties between the parents, which could have implications for well-being. Given this limitation, I conducted two separate sets of sensitivity analyses (which were reported in the appendices) that were limited to children who 1) experienced no change in their parent's relationship status over time and 2) were born to partnered parents and only flagged dissolution as a form of instability. These sensitivity analyses suggested relationship instability was not particularly salient for child well-being in this sample, and a crude indicator of instability was not particularly problematic in this case. However, it is also possible relationship instability comes into play earlier (perhaps through fathers' initial survey nonresponse or failure to participate in multiple waves of data collection), which would likely mean analyses requiring the use of fathers' data in the ECLS-B underestimate the effects of relationship instability on child well-being.

IMPLICATIONS: FUTURE RESEARCH AND PRACTICE

Each of the empirical applications makes noteworthy contributions to research on unintended childbearing. Yet, at the same time, in some instances, they raise important questions. For instance, the first application found a high prevalence of unintended childbearing among a privileged sample. This raises questions concerning measurement of intentions. Indeed, alternative specifications of unintended childbearing would provide a novel complement to this project. It is unlikely most datasets would have adequate cases to disaggregate between mistimed and unwanted childbearing at the couple level. Future work could consider modeling couples'

intentions as: both wanted (including mistimed); only mother wanted; only father wanted; and neither wanted. Prior research confirmed that unwanted and mistimed births were quite distinct as their linkages with both sociodemographic characteristics and health behaviors during pregnancy varied considerably (see D'Angelo, Gilbert, Rochat, Santelli, & Herold, 2004). Relatedly, while consideration of couples' ambivalence – rather than intentions – was beyond the scope of this study, there is work suggesting having conflicting or ambiguous feelings about pregnancy and births may influence behaviors as well. For instance, Yoo and colleagues (2014) demonstrated ambivalence in intentions was a multi-faceted construct and consideration of distinct forms of ambivalence provided key insights regarding young women's contraceptive use. Consideration of ambivalence, rather than intentions, would make a notable contribution as ambivalence, arguably, aligns more closely with qualitative accounts stressing that intentions fall along a continuum rather than dichotomy.

I also expect making use of mothers' proxy reports to construct couples' intentions indirectly would make notable contributions to current work, while being mindful of the limitations of this approach (i.e., underestimated fathers' unintended childbearing and disagreement in couples' intentions). For instance, replicating the second application with a sole focus on mothers' well-being (rather than gender differences) would allow researchers to consider alternative dimensions of well-being, such as anxiety about parenting, and at the same time retain a more representative sample of mothers. Further, a sole emphasis on mothers would also facilitate the use of more advanced methodological techniques to model changes in well-being over time. Similarly, replicating the third application with mothers' proxy reports of fathers' intentions would provide a better understanding of how couples' intentions influence child well-being via mothers' well-being and mental health, among a more representative sample

of children and with a wider range of measures of maternal behaviors and well-being. Given the minimal "effects" of father involvement and mental health on child well-being, a sole focus on mediating mechanisms through mothers is warranted. In this instance, "inaccuracies" in mothers' proxy reports of child well-being might not actually bias results as couples' intentions appear to operate primarily through maternal well-being and involvement. Lastly, future research could draw on other datasets with only single-reporter information on intentions, such as the NSFG and NLSY79. For instance, using the NSFG's detailed relationship histories and mothers' reports of fathers' intentions could allow consideration of how couples' intentions influence single mothers' entry into unions with either the biological or a social father after the birth. Separately, researchers could make use of the longer panel structure of the NLSY79 to consider the linkages between couples' intentions and parental investment after age five, thus understanding how couples' intentions influence child well-being at later ages.

In addition to informing future research, all three applications raise important policy implications. Notably, the first application demonstrated we might need to reevaluate the share of children who are potentially affected by unintended childbearing. The third empirical chapter complements prior work (Korenman et al. 2002) by demonstrating that as long at least one parent does not intend the birth, children experience poorer outcomes. Consideration of both parents' intentions in the current work suggested over half of firstborn children were not intended by at least one parent – and this was the case among a privileged sample. In contrast, nationally representative estimates focusing solely on women suggest that just over a third of births are unintended (Mosher et al., 2012). Separately, over one fourth of couples experienced disagreement in intentions. Programs that are currently in place to build healthy, stable relationships could potentially be effective in reducing disagreement in couples' intentions by

encouraging partners to actively discuss their childbearing desires. Separately, the second application raises two particularly salient policy implications. For starters, a sole focus on reducing unintended childbearing among women is arguably limited and narrow in scope. The second (and third) application demonstrated a father's not intending the birth could have negative effects on maternal well-being, even when she herself intended the birth. In addition, the negative effects of unintended childbearing persist over time. Programs and policies should bear this in mind and focus on improving parents' mental and physical health in the years after the birth as well. Lastly, the third application suggested a father's intending the birth when the mother did not intend the birth did not buffer the negative effects of mothers' unintended childbearing in the subsequent years. This suggests programs designed to promote responsible fatherhood should also acknowledge that at times, though admittedly less often, fathers (rather than mothers) intend the birth. Under these circumstances, programs should aim to help fathers become a steady source of social support for the mother after the birth. Hopefully in doing so, fathers will be able to improve both mother and child well-being.

CONCLUSION

This dissertation demonstrates consideration of couples' intentions provides a more nuanced understanding about how unintended childbearing influences families and individuals. Indeed, "intention scenarios" are quite distinct, with different predictors across different scenarios. Further, consideration of the partner's intentions as well has implications for both mother and father well-being above and beyond a sole focus on individual's unintended childbearing. Lastly, couples' intentions have pronounced effects on child well-being via mother involvement, mothers' mental health, and the co-parental relationship dynamic. Although consideration of couple rather than individual intentions provides important insights, it also has its own unique set

of challenges. Most notably, limited data opportunities to consider fathers' intentions and sample selection biases stemming from high non-response rates among fathers are a pressing concern. Accordingly, researchers seeking to conceptualize intentions as a couple-level construct should be mindful of both the costs and benefits of using fathers' direct versus mothers' proxy reports of fathers' intentions. In spite of these challenges, consideration of couples' intentions provides a noteworthy complement to the well-established research on individual intentions – especially by furthering our understanding of how both parent's intentions influence family dynamics and well-being.

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APPENDIX A: SUPPLEMENTAL ANALYSES FOR CHAPTER II

Table A1.1. Predicting Fathers' Participation in Survey (odds ratios)

	Reference Category of Couple's Intentions[1]		
	(Both intended birth)	(Mom intended, dad did not)	(Dad intended, mom did not)
Intercept	5.26***	5.38***	4.25***
Both intended birth[2]	--	--	--
Mom intended, dad did not	1.02	--	--
Dad intended, mom did not	0.77†	0.76	--
Neither intended	0.85	0.83	1.09
Mother's Race/ethnicity[3]			
(White)			
Black	0.73*		
Hispanic	0.89		
Asian	0.90		
Mother foreign-born	0.72*		
Mother's age (years)[3]	1.01		
Mother's Education[3]			
(At least a Bachelor's)			
Some college	0.81		
High school (or GED)	0.65**		
Less than high school	0.63**		
Relationship to Bio. Father at Birth[3]			
(Married)			
Cohabiting	0.56***		
Not living together	0.12***		
Log likelihood		-1609.67	
N		3,050	

Please note † ($p<0.10$), * ($p<0.05$), ** ($p<0.01$), *** ($p<0.001$).

1. Only non-redundant contrasts are shown. Hence, there is no Odds ratio for "both intended birth" in columns two or three as these contrasts are provided when "both intended birth" is the contrast group.

2. Based on mothers' reports of fathers intentions.

3. Odds ratios do not vary across reference categories for couple's intentions.

Table A1.2. Effect of Father's Survey Participation on Couples' Intentions, based on Mothers' Reports (relative risk ratios)

	Father's participation in Baseline Survey
(Both Intended)	
Mother intended, father did not	1.08
Father intended, mother did not	0.79
Neither intended	0.86
(Mother Intended, father did not)	
Father intended, mother did not	0.73
Neither intended	0.79
(Father Intended, mother did not)	
Neither intended	1.08

Please note models account for mothers' racial/ethnic status, nativity status, age at birth, educational attainment at birth, and relationship ties to the biological father at the time of birth. Also, only non-redundant contrasts are shown.

APPENDIX B: SUPPLEMENTAL ANALYSES FOR CHAPTER III

Table A2.1 Descriptive Statistics for Mothers, by Mothers' Proxy Reports of Couples' Intentions

	Total Sample		*Both Intended*		*Mother intended, Father did not*		*Father intended, mother did*		*Neither Intended*	
	Raw N[1] or μ	% or std. dev	Raw N[1] or μ	% or std. dev	Raw N[1] or μ	% or std. dev	Raw N[1] or μ	% or std. dev	Raw N[1] or μ	% or std. dev
Parental Well-being										
Depressive Symptoms*	16.7	(0.11)	15.6	(0.15) [bcd]	16.9	(0.41) [acd]	18.1	(0.49) [ab]	18.0	(0.25) [ab]
Good/very good Health*	2,100	71.0	1,100	76.3 [d]	150	69.5	200	69.9	700	63.7 [a]
Sociodemographic Characteristics										
Race/ethnicity*										
White	1,500	61.9	800	69.3 [bcd]	100	53.2 [a]	100	43.8 [ad]	500	57.2 [ac]
Black	550	14.0	150	6.8 [bcd]	50	21.3 [a]	100	27.9 [ad]	250	19.8 [ad]
Hispanic	550	20.6	250	20.1	50	21.1	50	24.5	200	20.3
Asian	500	3.5	300	3.8 [d]	50	4.4	50	3.8	100	2.7 [a]
Foreign-born*	850	19.9	500	22.4 [d]	50	22.4	100	20.6	200	15.5 [a]
Educational Attainment*										
At least a bachelor's degree	900	27.4	650	41.2 [bcd]	50	20.5 [ad]	50	13.8 [a]	150	11.9 [ab]
Some college experience	800	27.8	350	25.9 [b]	50	40.7 [acd]	100	27.1 [b]	300	28.6 [b]
High school diploma/GED	800	26.7	300	20.7 [cd]	50	24.9 [d]	100	31.2 [a]	350	34.5 [a]
No degree	550	18.1	200	12.2 [cd]	50	13.9 [cd]	50	27.9 [ab]	300	25.0 [ab]
Relationship Status at Birth*										
Married to bio father	1,750	58.6	1,150	81.2 [bcd]	100	45.0 [ad]	150	42.1 [ad]	350	31.9 [abc]
Cohabiting with bio father	600	19.1	150	10.6 [bcd]	50	26.7 [a]	100	26.7 [a]	300	28.2 [a]
Not living with bio father	750	22.3	150	8.2 [bcd]	50	28.3 [ad]	100	31.2 [ad]	450	39.9 [abc]
Age at birth (in years)*	25.0	(0.18)	27.6	(0.25) [bcd]	26.3	(0.46) [ac]	22.4	(0.33) [abd]	21.6	(0.18) [abc]
Health During Pregnancy										
Adequate prenatal care*	2,250	73.1	1,150	77.1 [cd]	150	69.9	200	69.3 [a]	750	68.7 [a]
Smoke/drank during pregnancy	400	14.5	150	10.7 [d]	50	15.5	50	12.1 [d]	200	20.5 [ac]
Total	3,050		1,450	50.6	200	6.0	300	9.2	1,100	34.2

1. Unweighted frequencies might not sum appropriates as frequencies are weighted to nearest 50 per NCES restricted data agreement.

Table A2.2. Cross-sectional Analyses Examining the Linkages between Couples' Intentions and Depressive Symptoms, Using Mothers' Proxy Reports

	Model 1		*Model 2*		*Model 3*	
	B		B		B	
(Both intended)						
Intended birth, partner did not	1.30	**	0.79	†	0.74	†
Did not intend birth, partner did	2.56	***	1.82	**	1.81	**
Neither parent intended birth	2.44	***	1.52	***	1.44	***
Sociodemographic Characteristics						
(White)						
Black			0.18		0.39	
Hispanic			-0.77	†	-0.58	
Asian			0.89	†	0.98	*
Foreign-born			-0.85	*	-0.78	†
(At least a bachelor's degree)						
Some college experience			0.53	*	0.53	*
High school diploma/GED			1.10	**	1.01	**
No degree			1.16	**	0.99	*
(Married to "other" bio parent)						
Cohabiting with "other" bio			0.39		0.24	
Not living with "other" bio			1.14	**	1.03	*
Age at birth (in years)			-0.01		-0.02	
Health During Pregnancy (mothers only)						
Adequate prenatal care					0.00	
Smoke/drank during pregnancy					1.17	**
Constant	15.63	***	15.83	***	15.86	***
F Statistic	21.02	***	10.43	***	8.98	***
R^2	0.04		0.07		0.08	
N (unweighted)	3,050		3,050		3,050	

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Table A2.3. Cross-sectional Analyses Predicting the Odds of Good/Very Good Self-Rated Health, Using Mothers' Proxy Reports

	Model 1		*Model 2*		*Model 3*	
	OR		OR		OR	
(Both intended)						
Intended birth, partner did not	0.70	†	0.90		0.92	
Did not intend birth, partner did	0.72	†	1.11		1.12	
Neither parent intended birth	0.54	***	0.88		0.91	
Sociodemographic Characteristics						
(White)						
Black			1.21		1.08	
Hispanic			0.78		0.71	*
Asian			0.65	*	0.62	**
Foreign-born			1.01		0.96	
(At least a bachelor's degree)						
Some college experience			0.50	***	0.50	***
High school diploma/GED			0.47	***	0.50	***
No degree			0.33	***	0.37	***
(Married to "other" bio parent at birth)						
Cohabiting with "other" bio			0.78	†	0.83	
Not living with "other" bio			0.69	*	0.73	†
Age at birth (in years)			1.02	†	1.02	*
Health During Pregnancy (mothers only)						
Adequate prenatal care					1.03	
Smoke/drank during pregnancy					0.57	**
Constant	3.22	***	3.27	**	3.16	**
F Statistic	8.69	***	7.99	***	7.43	***
N (unweighted)	3,050		3,050		3,050	

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Table A2.4. Analyses Predicting the Odds of Good/Very Good Self-Rated Health 2 Years after the Birth, Using Mothers' Proxy Reports

	Model 1 OR		*Model 2* OR		*Model 3* OR	
(Both intended)						
Intended birth, partner did not	0.66	†	0.83		0.82	
Did not intend birth, partner did	0.70	†	1.13		1.11	
Neither parent intended birth	0.59	***	0.92		0.96	
Sociodemographic Characteristics						
(White)						
Black			0.90		0.78	
Hispanic			0.93		0.91	
Asian			0.48	***	0.49	***
Foreign-born			0.95		0.92	
(At least a bachelor's degree) [1]						
Some college experience			0.48	***	0.56	**
High school diploma/GED			0.30	***	0.33	***
No degree			0.22	***	0.30	***
(Married to "other" bio parent at birth)						
Cohabiting with "other" bio			0.83		0.95	
Not living with "other" bio			1.03		1.16	
Age at birth (in years)			1.01		1.01	
Health During Pregnancy (mothers only)						
Adequate prenatal care					0.80	
Smoke/drank during pregnancy					0.77	
Baseline, self-rated health [1]					4.50	***
Constant	3.31	***	4.61	***	1.95	
F Statistic	6.40	**	9.06	***	14.37	***
N (unweighted)	2,800		2,800		2,800	

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

1. Taken from baseline, 9-month data.

Table A2.5. Analyses Predicting Mothers' Depressive Symptoms 4 Years after the Birth, Using Mothers' Proxy Reports

	Model 1 B		Model 2 B		Model 3 B	
(Both intended)						
Intended birth, partner did not	0.83		0.47		0.17	
Did not intend birth, partner did	1.75	**	1.17	*	0.67	
Neither parent intended birth	1.49	***	0.74	†	0.31	
Sociodemographic Characteristics						
(White)						
Black			0.15		0.28	
Hispanic			-1.23	**	-0.77	†
Asian			0.75		0.48	
Foreign-born			-0.37		-0.12	
(At least a bachelor's degree)[1]						
Some college experience			0.23		0.00	
High school diploma/GED			1.50	***	0.94	***
No degree			1.84	***	1.17	**
(Married to "other" bio parent at birth)						
Cohabiting with "other" bio at birth			1.04	*	0.71	
Not living with "other" bio at birth			0.76		0.31	
Age at birth (in years)			0.02		0.03	
Former Health Behaviors						
Adequate prenatal care					0.01	
Smoke drank during pregnancy					0.63	
Depressive symptoms at baseline [1]					0.34	***
Constant	16.23	***	15.12	***	9.55	***
F Statistic	8.64	***	8.43	***	14.81	***
R^2	0.02		0.05		0.17	
N (unweighted)	2,450					

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

1. Taken from baseline, 9-month data.

Table A2.6. Cross-sectional, Multinomial Analyses Considering Drinking Behaviors at Baseline, for Mothers and Resident Fathers

	(No Drinks in a Typical Week)											
	1-3 Drinks in a Typical Week				4-6 Drinks in a Typical Week				7 or More Drinks in a Typical Week			
	Mothers		*Fathers*		*Mothers*		*Fathers*		*Mothers*		*Fathers*	
	RRR		RRR		RRR		RRR		RRR		RRR	
(Both intended)												
Intended birth, partner did not	0.93		1.42		0.88		0.73		0.87		1.07	
Did not intend birth, partner did	1.07		1.00		1.27		0.63	†	1.26		1.12	
Neither parent intended birth	1.28		1.20		2.02	**	1.13		2.68	*	1.11	
Sociodemographic Characteristics												
(White)												
Black	0.51	*	1.17		0.73		0.68		0.35		0.47	†
Hispanic	0.81		0.73		0.61		1.10		0.31		0.88	
Asian	0.57	*	0.78		0.47	*	0.43	**	0.04	**	0.34	**
Foreign-born	0.45	**	0.73		0.28	***	0.57	*	0.72		0.19	***
(At least a bachelor's degree)												
Some college experience	0.89		0.89		0.59	*	0.63	*	1.06		0.57	**
High school diploma/GED	0.59	*	0.66	†	0.43	**	0.33	***	0.59		0.49	*
No degree	0.26	***	0.57	†	0.20	**	0.38	***	0.09	*	0.62	
(Married to "other" bio parent)												
Cohabiting with "other" bio	1.06		0.57	*	1.16		1.03		1.43		1.27	
Not living with "other" bio	0.82		0.31	*	1.08		0.42		1.15		0.61	
Age at birth (in years)	1.05	**	1.00		1.12	***	1.00		1.17	***	1.04	*
Health During Pregnancy (mothers only)												
Adequate prenatal care	0.79		--		0.70		--		1.17		--	
Smoke/drank during pregnancy	1.75	**	--		2.61	***	--		4.45	***	--	
Constant	0.15	***	0.53		0.02	***	0.83		0.00	***	0.23	*
Model X^2	338.83	***	242.28	***	338.83	***	242.28	***	338.83	***	242.28	***
N (unweighted)	2,050		1,900		2,050		1,900		2,050		1,900	

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Table A2.7. Analyses Predicting the Odds of Smoking at Baseline, for Mothers and Resident Fathers

	Model 1			
	Mothers		*Fathers*	
	OR		OR	
(Both intended)				
Intended birth, partner did not	1.24		1.12	
Did not intend birth, partner did	1.11		1.13	
Neither parent intended birth	1.86	*	1.39	
Sociodemographic Characteristics				
(White)				
Black	0.62		1.50	
Hispanic	0.47	*	1.01	
Asian	0.17	**	2.37	**
Foreign-born	0.28	**	0.38	**
(At least a bachelor's degree) [1]				
Some college experience	2.47	**	2.75	**
High school diploma/GED	4.16	**	3.65	**
No degree	3.83	**	6.22	***
(Married to "other" bio parent at birth)				
Cohabiting with "other" bio	1.61	†	1.56	†
Not living with "other" bio	0.53	†	1.03	
Age at birth (in years)	0.96	†	0.94	**
Health During Pregnancy (mothers only)				
Adequate prenatal care	1.05		--	
Smoke/drank during pregnancy	16.04	***	--	
Constant	0.10	**	0.23	*
Model X^2	621.07	***	161.65	***
N (unweighted)	2,050		1,850	

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

1. Taken from baseline, 9-month data.

APPENDIX C: SUPPLEMENTAL ANALYSES FOR CHAPTER IV

Table A3.1. Distribution of Observed Characteristics, Teacher Sample

	Raw N[1]	μ or %
Couples' Intentions		
Both intended	300	52.5
Only mother intended	100	17.0
Only father intended	50	8.5
Neither parent intended	150	22.0
Mothers' Characteristics		
Race/ethnicity[2]		
White	400	77.3
Black	50	5.5
Hispanic	100	13.8
Asian	150	3.4
Foreign-born	200	15.3
Age at birth	650	26.5
Educational Attainment at Birth		
College degree	300	42.4
Some college experience	150	30.3
High school diploma (incl. GED)	100	18.7
No degree	50	8.7
Relationship Ties to Father at Birth		
Married	550	78.9
Cohabiting	100	13.2
Not in a union	50	7.9
Parental Relationship Dynamic 2 Years after Birth		
Positive relationship	400	59.1
Instability Flags (over course of entire panel)		
Child *ever* experienced change in parental relationship status	50	12.3
No younger sibling	200	27.2
Only full, younger sibling	450	70.4
At least one half/step sibling	¥	2.4
Total n (unweighted)	650	

¥ denotes sample size that rounds to 0 rather than 50 per ECLS-B restricted data notation requirements.

Table A3.2. Standardized Factor Loadings for Latent Constructs in the Teacher Sample

	Standardized value		*Weighted μ*
	Loading	Var.	
Child Well-being			
How often does the child behave in the following ways? (on entering kindergarten: range 1-5)			
Shows eagerness to learn new things	0.83	0.30	4.31
Pays attention well	0.78	0.37	4.00
Is liked by others (accepted by peers)	0.61	0.62	4.48
How often does your child behave in the following ways? (at baseline: range 0-3)			
Goes from whimpering to intense crying easily	0.46	0.78	2.00
Demands attention and company constantly	0.39	0.84	1.09
Is unable to wait for food/toys without crying	0.40	0.83	1.43
Mother Involvement (at age 2)			
How often do you do the following things with your child in a typical week? (range 1-4)			
Read books to your child	0.74	0.44	3.49
Tell stories to your child	0.40	.83	2.84
Sing songs to your child	0.39	0.84	3.70
Father Involvement (at age 2)			
How often do you do the following things with your child in a typical week? (range 1-4)			
Read books to your child	0.72	0.47	2.71
Tell stories to your child	0.67	0.54	2.31
Sing songs to your child	0.52	0.72	2.89
Mothers' SES (at baseline)			
Relationship ties to birth father (range 1-3)	0.73	0.46	[1]
Age at birth (continuous indicator)	0.86	0.26	[1]
Educational Attainment (range 1-4)	0.75	0.43	[1]
Mothers' Depressive Symptoms (at baseline)			
How often during the past week have you felt the following ways? (range 1-4)			
Bothered by things that don't usually bother you	0.53	0.70	1.30
Did not feel like eating	0.35	0.87	1.26
Could not shake off the blues	0.71	0.48	1.18
Had trouble keeping your mind on what you were doing	0.55	0.69	1.44
Felt depressed	0.84	0.28	1.29
Felt everything was an effort	0.55	0.68	1.48
Was fearful	0.58	0.65	1.23
Had restless sleep	0.38	0.85	1.60
Talked less than usual	0.61	0.62	1.24
Felt lonely	0.66	0.55	1.27
Felt sad	0.76	0.40	1.35
Could not get going	0.53	0.71	1.44

Table A3.2. Factor Loadings for Latent Constructs in Teacher Sample (cont.)

	Standardized value		*Weighted μ*
	Loading	Var.	
Fathers' Depressive Symptoms (at baseline)			
How often during the past week have you felt the following ways? (range 1-4)			
Bothered by things that don't usually bother you	0.38	0.84	1.21
Did not feel like eating	0.21	0.95	1.21
Could not shake off the blues	0.68	0.52	1.17
Had trouble keeping your mind on what you were doing	0.50	0.74	1.37
Felt depressed	0.73	0.46	1.27
Felt everything was an effort	0.53	0.71	1.48
Was fearful	0.44	0.79	1.14
Had restless sleep	0.42	0.81	1.61
Talked less than usual	0.60	0.63	1.27
Felt lonely	0.61	0.61	1.18
Felt sad	0.79	0.37	1.24
Could not get going	0.45	0.79	1.35
Covariance			
Error child-wellbeing (kindergarten) with baseline	0.06€	0.07	
Error mother involvement with father involvement	0.55	0.09	
Error mothers' depressive symptoms with fathers' depressive symptoms	0.26	0.07	
Model Fit Statistics			
$X^2(593)$	1539.37	***	
RMSEA	0.04		
CFI	0.86		
N (unweighted)	650		
ρ child well-being on entering kindergarten	0.77		
ρ child well-being at baseline	0.55		
ρ mother involvement	0.60		
ρ father involvement	0.69		
ρ mothers' SES at baseline	0.74		
ρ mothers' depressive symptoms	0.92		
ρ fathers' depressive symptoms	0.90		

All loadings and correlations are statistically significant (at p<0.001) unless otherwise noted. € denotes nonsignificant loading or correlation.

1. Please see distributions in Table 3.1 for a more meaningful depiction of the sample distributions. Model fit improved by collapsing these indicators into a latent construct for the structural model.

Stata Output from Full Structural Model Predicting Mothers' Reports of Child Well-being (displayed in Figure3.1)

	Standardized	Linearized Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Structural							
Pos. co-parental dynamic <-							
(neither int.)							
Both int		.3234244	.0567013	5.70	0.000	.2107602	.4360886
Only mom int		.2056675	.0414497	4.96	0.000	.1233077	.2880272
Only dad int		.0888442	.0501494	1.77	0.080	-.0108015	.18849
_cons		.6810263	.1082243	6.29	0.000	.4659869	.8960657
CWB_mom <-							
Pos. co-parental dynamic		.1040747	.0693597	1.50	0.137	-.0337416	.2418909
MI		.5231091	.1057297	4.95	0.000	.3130265	.7331918
FI		-.1916034	.091954	-2.08	0.040	-.3743141	-.0088927
CESD_D		.0595094	.0703922	0.85	0.400	-.0803584	.1993773
CESD_M		-.2615304	.0710754	-3.68	0.000	-.4027557	-.1203052
(neither int.)							
bothi		-.2135828	.0872838	-2.45	0.016	-.3870139	-.0401517
momi		-.117851	.0721629	-1.63	0.106	-.2612371	.0255352
dadi		.0024031	.0585384	0.04	0.967	-.1139114	.1187177
(mom white)							
mom_black		.0782826	.0450198	1.74	0.086	-.0111707	.1677359
mom_hisp		.152884	.0735243	2.08	0.040	.0067929	.2989752
mom_asian		-.0217923	.0528991	-0.41	0.681	-.1269017	.083317
foreign_born		-.0444854	.0749554	-0.59	0.554	-.1934201	.1044494
Change in parental rel.		-.1002156	.0788352	-1.27	0.207	-.2568595	.0564282
(no new sibling)							
new_fullsib		.0586963	.0639149	0.92	0.361	-.0683013	.1856939
new_hssib		.1148774	.0593281	1.94	0.056	-.0030063	.2327611

```
                    CWB_lag |   .2009163   .0865695     2.32   0.023     .0289046     .372928
                      SES_M |   .0310092   .1193167     0.26   0.796    -.2060706     .268089
--------------------------+-----------------------------------------------------------------
MI <-                     |
                    CESD_M |    -.09218   .0603101    -1.53   0.130    -.2120149    .0276548

                (neither int.)
                     bothi |   .2367704   .0777741     3.04   0.003      .082235    .3913058
                      momi |   .1081258   .0666742     1.62   0.108    -.0243543    .2406059
                      dadi |   .0375171   .0615879     0.61   0.544    -.0848568    .1598909
--------------------------+-----------------------------------------------------------------
FI <-                     |
                    CESD_D |  -.0726469   .0608991    -1.19   0.236     -.193652    .0483582

                (neither int.)
                     bothi |   .2193662   .0668564     3.28   0.001      .086524    .3522084
                      momi |   .1545721   .0613806     2.52   0.014     .0326102     .276534
                      dadi |   .1278178   .0603901     2.12   0.037     .0078239    .2478117
--------------------------+-----------------------------------------------------------------
CESD_D <-                 |
                (neither int.)
                     bothi |   -.178733   .0528501    -3.38   0.001    -.2837451   -.0737209
                      momi |   .0387005   .0639483     0.61   0.547    -.0883634    .1657643
                      dadi |   .0269688   .0529971     0.51   0.612    -.0783353     .132273
--------------------------+-----------------------------------------------------------------
CESD_M <-                 |
                (neither int.)
                     bothi |  -.2606878   .0539498    -4.83   0.000     -.367885   -.1534907
                      momi |  -.1234715   .0754691    -1.64   0.105    -.2734269    .0264839
                      dadi |  -.0072594   .0610033    -0.12   0.906    -.1284718    .1139529
--------------------------+-----------------------------------------------------------------
```

Standardized covariance of errors can be interpreted as a correlation (see Acock, 2013)

```
--------------------------+-----------------------------------------------------------------
          cov(e.MI,e.FI)|   .5870831   .0654643     8.97   0.000      .457007    .7171592
  cov(e.CESD_D,e.CESD_M)|   .2961628    .058807     5.04   0.000     .1793146    .4130109
    cov(bothi,mom_black)|   -.224855    .045401    -4.95   0.000    -.3150658   -.1346442
     cov(bothi,mom_hisp)|   -.129257    .060045    -2.15   0.034    -.2485651   -.0099489
    cov(bothi,mom_asian)|  -.0524703   .0233056    -2.25   0.027    -.0987782   -.0061625
 cov(bothi,foreign_born)|   -.021889   .0513606    -0.43   0.671    -.1239414    .0801635
        cov(bothi,SES_M)|   .5529233   .0420509    13.15   0.000     .4693691    .6364774
```

cov(momi,mom_black)	-.1033778	.0511034	-2.02	0.046	-.2049192	-.0018364
cov(momi,mom_hisp)	-.0465494	.0512689	-0.91	0.366	-.1484196	.0553207
cov(momi,mom_asian)	.0256808	.0268477	0.96	0.341	-.027665	.0790266
cov(momi,foreign_born)	.0864887	.0534048	1.62	0.109	-.0196255	.192603
cov(momi,SES_M)	.3734021	.0481524	7.75	0.000	.2777243	.4690799
cov(dadi,mom_black)	-.0770485	.0436747	-1.76	0.081	-.1638291	.0097322
cov(dadi,mom_hisp)	.0541766	.0617336	0.88	0.383	-.0684866	.1768399
cov(dadi,mom_asian)	.0143987	.0253626	0.57	0.572	-.0359963	.0647937
cov(dadi,foreign_born)	.0273918	.0515695	0.53	0.597	-.0750757	.1298594
cov(dadi,SES_M)	.1332346	.0499352	2.67	0.009	.0340144	.2324549
cov(mom_black,SES_M)	-.333126	.0734034	-4.54	0.000	-.478977	-.1872751
cov(mom_hisp,SES_M)	-.2994819	.0577049	-5.19	0.000	-.4141403	-.1848236
cov(mom_asian,SES_M)	.058695	.0258143	2.27	0.025	.0074025	.1099875

Stata Output from Full Structural Model Predicting Teacher's Reports of Child Well-being (displayed in Figure3.1)

	Standardized	Linearized Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Structural							
Pos. co-parental dynamic <-							
(neither int.)							
bothi		.3490215	.0628289	5.56	0.000	.2241622	.4738808
momi		.2272567	.0566166	4.01	0.000	.1147431	.3397703
dadi		.1479737	.0559777	2.64	0.010	.0367299	.2592176
_cons		.6131259	.1238424	4.95	0.000	.3670151	.8592368
CWB_teach <-							
Pos. co-parental dynamic		.197232	.0630055	3.13	0.002	.0720218	.3224423
MI		.1838376	.1120796	1.64	0.105	-.0388971	.4065723
FI		-.0557745	.0839704	-0.66	0.508	-.2226481	.1110991
CESD_D		.0963264	.0781702	1.23	0.221	-.0590205	.2516733
CESD_M		-.0804356	.065622	-1.23	0.224	-.2108455	.0499743
(neither int.)							
bothi		-.001453	.0788011	-0.02	0.985	-.1580537	.1551476
momi		-.0791035	.0752285	-1.05	0.296	-.2286043	.0703973
dadi		-.0562634	.0638977	-0.88	0.381	-.1832468	.0707199
(mom white)							
mom_black		.0333534	.0551301	0.60	0.547	-.0762061	.1429128
mom_hisp		.0307771	.0584257	0.53	0.600	-.0853316	.1468859
mom_asian		.0274761	.0359044	0.77	0.446	-.0438763	.0988285
foreign_born		-.0849002	.0617127	-1.38	0.172	-.2075412	.0377408
Change in parental rel.		-.0882911	.0755839	-1.17	0.246	-.2384982	.0619159
(no new sibling)							
new_fullsib		.1890396	.0634521	2.98	0.004	.0629418	.3151373

new_hssib	.0093422	.0755421	0.12	0.902	-.1407819	.1594663
CWB_lag	.1483068	.1821094	0.81	0.418	-.2135974	.510211
SES_M	.0804466	.1115889	0.72	0.473	-.1413128	.302206
MI <-						
CESD_M	-.1695629	.0593364	-2.86	0.005	-.2874815	-.0516443
(neither int.)						
bothi	.209725	.0828351	2.53	0.013	.0451077	.3743423
momi	.1267116	.0829402	1.53	0.130	-.0381145	.2915378
dadi	-.0247059	.0758611	-0.33	0.745	-.1754638	.1260521
FI <-						
CESD_D	-.0333522	.0802041	-0.42	0.679	-.1927411	.1260366
(neither int.)						
bothi	.2689262	.066187	4.06	0.000	.1373935	.4004589
momi	.1529426	.0726411	2.11	0.038	.0085836	.2973016
dadi	.121872	.0656953	1.86	0.067	-.0086836	.2524276
CESD_D <-						
(neither int.)						
bothi	-.1715818	.0565334	-3.04	0.003	-.28393	-.0592336
momi	.098592	.0734548	1.34	0.183	-.047384	.244568
dadi	.0414296	.0603912	0.69	0.495	-.0785852	.1614444
CESD_M <-						
(neither int.)						
bothi	-.2535711	.0711735	-3.56	0.001	-.3950134	-.1121287
momi	-.0982243	.086298	-1.14	0.258	-.2697235	.0732749
dadi	-.0117158	.060187	-0.19	0.846	-.1313248	.1078933
cov(e.MI,e.FI)	.1829684	.0654445	2.80	0.006	.0529112	.3130256
cov(e.CESD_D,e.CESD_M)	.0147945	.0064652	2.29	0.025	.0019461	.0276428
cov(bothi,mom_black)	-.0335702	.0081245	-4.13	0.000	-.0497159	-.0174245
cov(bothi,mom_hisp)	-.0268652	.0111174	-2.42	0.018	-.0489586	-.0047717
cov(bothi,mom_asian)	-.0042249	.001908	-2.21	0.029	-.0080167	-.0004331
cov(bothi,foreign_born)	.0008327	.0089193	0.09	0.926	-.0168926	.018558

cov(bothi,SES_M)	.1388659	.0262851	5.28	0.000	.0866298	.1911021
cov(momi,mom_black)	-.013637	.0060452	-2.26	0.027	-.0256507	-.0016234
cov(momi,mom_hisp)	-.0075957	.0077954	-0.97	0.333	-.0230874	.0078959
cov(momi,mom_asian)	.0027311	.0019396	1.41	0.163	-.0011234	.0065855
cov(momi,foreign_born)	.0204004	.008072	2.53	0.013	.004359	.0364418
cov(momi,SES_M)	.0645376	.0140478	4.59	0.000	.0366205	.0924547
cov(dadi,mom_black)	-.0059786	.0037789	-1.58	0.117	-.0134884	.0015313
cov(dadi,mom_hisp)	.0080507	.007356	1.09	0.277	-.0065678	.0226692
cov(dadi,mom_asian)	.0005332	.0012268	0.43	0.665	-.0019048	.0029712
cov(dadi,foreign_born)	.008833	.0070901	1.25	0.216	-.005257	.0229231
cov(dadi,SES_M)	.0190035	.0085952	2.21	0.030	.0019224	.0360846
cov(mom_black,SES_M)	-.0438335	.0155999	-2.81	0.006	-.0748351	-.012832
cov(mom_hisp,SES_M)	-.0478815	.0150593	-3.18	0.002	-.0778087	-.0179543
cov(mom_asian,SES_M)	.0045731	.0022597	2.02	0.046	.0000825	.0090637

Structural Output for Model of Mothers' Report of Child Well-being (limited to those whose parental relationship did not change)

	Coef.	Linearized Std. Err.	t	P>|t|	[95% Conf.	Interval]
Structural						
Pos. co-parental dynamic						
(neither int.)						
bothi	.3642508	.0655076	5.56	0.000	.2340886	.4944131
momi	.2998669	.0650527	4.61	0.000	.1706086	.4291253
dadi	.1615322	.1012314	1.60	0.114	-.0396124	.3626768
_cons	.3286007	.0514781	6.38	0.000	.2263148	.4308866
CWB_mom <-						
Pos. co-parental dynamic	.0397117	.0606536	0.65	0.514	-.0808057	.160229
MI	.3621005	.1246687	2.90	0.005	.1143864	.6098145
FI	-.1216642	.0696682	-1.75	0.084	-.2600934	.0167649
CESD_D	.183526	.1619377	1.13	0.260	-.1382408	.5052927
CESD_M	-.4924044	.2056035	-2.39	0.019	-.9009341	-.0838747
(neither int.)						
bothi	-.1900631	.0856951	-2.22	0.029	-.3603374	-.0197887
momi	-.1301812	.106512	-1.22	0.225	-.3418183	.0814558
dadi	-.0704583	.1023257	-0.69	0.493	-.2737772	.1328606
(mom white)						
mom_black	.140109	.1013037	1.38	0.170	-.0611793	.3413972
mom_hisp	.2730566	.1262707	2.16	0.033	.0221594	.5239539
mom_asian	.0272752	.1431278	0.19	0.849	-.2571168	.3116672
foreign_born	-.1399016	.1119169	-1.25	0.215	-.362278	.0824748
(no new sib)						
new_fullsib	.0503367	.0767918	0.66	0.514	-.102247	.2029204
new_hssib	.2089665	.2080527	1.00	0.318	-.2044298	.6223628

CWB_lag	.1609547	.1273494	1.26	0.210	-.0920858	.4139953
SES_M	.1001749	.13442	0.75	0.458	-.1669148	.3672646
MI <-						
CESD_M	-.1935591	.1443894	-1.34	0.183	-.4804579	.0933396
(both int.)						
bothi	.3033339	.1121957	2.70	0.008	.0804034	.5262643
momi	.1154549	.1275953	0.90	0.368	-.1380741	.368984
dadi	.0958566	.1382409	0.69	0.490	-.1788251	.3705383
FI <-						
CESD_D	-.1059339	.2270144	-0.47	0.642	-.5570066	.3451388
(both int.)						
bothi	.4289049	.1182084	3.63	0.000	.1940273	.6637825
momi	.38127	.1311289	2.91	0.005	.1207197	.6418204
dadi	.3720279	.1780944	2.09	0.040	.018158	.7258977
CESD_D <-						
bothi	-.0880659	.030073	-2.93	0.004	-.1478202	-.0283115
momi	.0059945	.046263	0.13	0.897	-.0859291	.097918
dadi	-.0068869	.0418875	-0.16	0.870	-.0901165	.0763426
CESD_M <-						
bothi	-.1711235	.0403951	-4.24	0.000	-.2513877	-.0908593
momi	-.138157	.0666344	-2.07	0.041	-.2705582	-.0057558
dadi	-.0197482	.0736675	-0.27	0.789	-.1661239	.1266275

Structural Output for Model of Mothers' Report of Child Well-being (limited to those whose parents were living together at baseline where instability only flags dissolution of the parental relationship)

Standardized	Coef.	OIM Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
pos_prel <-						
(neither int)						
bothi	.2860492	.0450963	6.34	0.000	.1976621	.3744364
momi	.1712166	.0432209	3.96	0.000	.0865052	.2559279
dadi	.0765874	.0408418	1.88	0.061	-.0034611	.1566359
_cons	.7738127	.0860894	8.99	0.000	.6050805	.9425448
CWB_mom <-						
pos_prel	.1038271	.0490347	2.12	0.034	.0077209	.1999334
MI	.3466692	.0844352	4.11	0.000	.1811793	.5121591
FI	-.0973261	.0784872	-1.24	0.215	-.2511582	.056506
CESD_M	-.2025431	.0503181	-4.03	0.000	-.3011648	-.1039213
(neither int.)						
bothi	-.2079847	.0635805	-3.27	0.001	-.3326002	-.0833691
momi	-.0992822	.0583445	-1.70	0.089	-.2136353	.015071
dadi	-.0643273	.0548248	-1.17	0.241	-.1717819	.0431274
(mom_white)						
mom_black	.0006952	.046317	0.02	0.988	-.0900845	.0914748
mom_hisp	.0834102	.0489442	1.70	0.088	-.0125186	.1793391
mom_asian	-.1626912	.0489327	-3.32	0.001	-.2585975	-.0667849
dissolution	-.0688797	.0462202	-1.49	0.136	-.1594696	.0217102
CWB_lag	.1443055	.0736824	1.96	0.050	-.0001093	.2887203
MI <-						
(neither int.)						
bothi	.2070154	.0595608	3.48	0.001	.0902783	.3237524
momi	.1006442	.0565919	1.78	0.075	-.0102739	.2115624
dadi	.0495309	.0532031	0.93	0.352	-.0547453	.1538071

```
FI <-                 |
             (neither int.)
                bothi |   .1438612   .0556852     2.58   0.010     .0347201    .2530023
                momi |   .1219335   .0523498     2.33   0.020     .0193298    .2245371
                dadi |   .1183504   .0492017     2.41   0.016     .0219168    .2147841
---------------------+------------------------------------------------------------------
CESD_D <-             |
              (neither int.)
                bothi |  -.1920526   .0497857    -3.86   0.000    -.2896309   -.0944744
                momi |  -.0576811   .0474836    -1.21   0.224    -.1507472    .0353851
                dadi |  -.0462352   .0445557    -1.04   0.299    -.1335627    .0410923
---------------------+------------------------------------------------------------------
CESD_M <-             |
               (neither int.)
                bothi |  -.2061883   .0492652    -4.19   0.000    -.3027463   -.1096304
                momi |  -.0910638   .0469998    -1.94   0.053    -.1831817    .0010542
                dadi |   .0071524   .0442023     0.16   0.871    -.0794826    .0937874
---------------------+------------------------------------------------------------------
```