

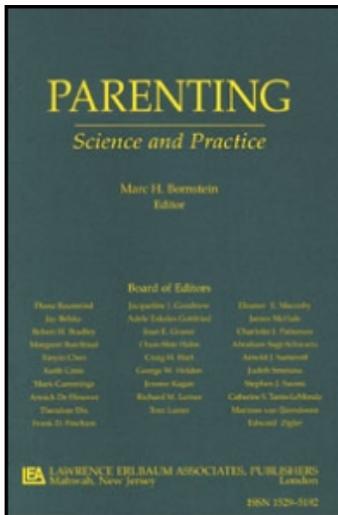
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### The Social Context of Lesbian Mothers' Anxiety During Early Parenthood

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# The Social Context of Lesbian Mothers' Anxiety During Early Parenthood

Abbie E. Goldberg and JuliAnna Z. Smith

## SYNOPSIS

**Objective.** To prospectively explore change in mental health (and, specifically, anxiety) across the transition to parenthood for lesbian mothers. **Design.** Multilevel modeling was used to analyze data from 34 lesbian couples (68 women) at three time points (prenatal, 3 months postbirth, and 3.5 years after birth) to explore the influence of prenatal characteristics on the level of and change in women's anxiety during early parenthood. **Results.** Anxiety increased for all new mothers, but predictors of average anxiety and change in anxiety differed somewhat for biological and nonbiological lesbian mothers. For biological mothers, working more hours and doing more housework prenatally were associated with higher average anxiety postnatally. Among nonbiological mothers, lower perceived infant distress and higher perceived instrumental support were associated with less increase in anxiety over time. **Conclusion.** Early parenthood can be challenging for both biological and nonbiological lesbian mothers, and prenatal and postnatal factors are potentially salient in determining lesbian mothers' adjustment.

## INTRODUCTION

### The Social Context of Lesbian Mothers' Anxiety During Early Parenthood

The transition to parenthood is a time of readjustment as roles are renegotiated and individuals prepare to make room for a new person in their lives (Hyde, Klein, Essex, & Clark, 1995). Women are especially vulnerable to difficulties in adjustment in the postpartum and beyond (Grant, MacMahon, & Austin, 2008). Although fulfilling, parenting demands significant time and energy, particularly during the preschool period (Ralph, Haines, Harvey, McCormack, & Sherman, 1999). Research has generally found that parents experience lower well-being than nonparents, which is often attributed to differences in economic and time constraints (McLanahan & Adams, 1987).

The transition to parenthood may be especially stressful for lesbian couples, who are vulnerable to both the normative stress associated with the birth transition and the stress of parenting in a heterosexist society. Indeed, lesbians' transition to the parenthood experience is shaped by their status as stigmatized minorities, the fact that only one parent is biologically related to the child, and the unique context of coparenting with another woman. Studies of lesbian couples who become parents via insemination suggest that partners may have different experiences of the transition to parenthood, especially given that only one partner carries the child, which may lead to differing perceptions, expectations, and adjustment (Goldberg & Perry-Jenkins, 2007). For example, birth mothers may embrace their maternal role more easily than nonbiological mothers, who lack a well-defined and societally sanctioned relationship with their child (Gabb, 2005). Like new fathers, nonbiological mothers may not feel recognized as full, equal parents; however, unlike new fathers, nonbiological mothers encounter institutionalized forms of nonrecognition and discrimination (e.g., they lack automatic legal rights to their children), which may intensify feelings of vulnerability and invisibility (Goldberg & Perry-Jenkins, 2007). Thus, parenthood may introduce different role-related expectations and stresses in lesbian-mother families.

These stresses, combined with the normative demands of new parenthood, may have implications for lesbians' parental adjustment. Indeed, the stress associated with parenting young children suggests that anxiety in particular is a crucial index of well-being during this time period (Ralph et al., 1999). Unfortunately, anxiety has often been overlooked as a relevant psychological problem in the postpartum (Matthey, Barnett, Howie, & Kavanagh, 2003) despite evidence that postpartum anxiety is at least as common as depression among new parents (Grant, MacMahon, & Austin, 2008). Importantly, although these two clinical syndromes overlap, they are not interchangeable: Some women mainly experience symptoms of worry, stress, and tension in the postpartum (anxiety), whereas others report symptoms of sadness and lethargy (depression) (Hyde et al., 1995; Matthey et al., 2003). Furthermore, the impact of maternal anxiety can extend beyond the mother. For example, high anxiety may interfere with parental sensitivity, which may have negative consequences for parent-child relationships (Kaitz & Maytal, 2005).

The current study examines lesbian mothers' anxiety in early parenthood. Lesbian couples ( $n = 34$ ) who were becoming parents for the first time via insemination were interviewed during the third trimester, 3 months after birth, and 3.5 years after birth. Of interest were

- (1) What prenatal and postnatal characteristics predict average level of and change in anxiety across the first several years of parenthood? and
- (2) To what extent do these factors differ for birth and nonbirth mothers?

### Predicting Parental Adjustment

Bronfenbrenner (1988) emphasized the role of context in development and argued for an interactionist approach that integrates individual and contextual variables in predicting adjustment. According to his ecological framework, development occurs within multiple interacting contexts, with influences ranging from distal, macrolevel settings (e.g., culture) to more proximal settings (e.g., family). Thus, the experiences of lesbians are influenced not only by their own personal psychological resources (e.g., their emotional stability) but also by the overlapping contexts in which they live. Within their immediate family, lesbian mothers are influenced by their children's characteristics, such that women with temperamentally easy children may experience greater well-being (Mulsow, Caldera, Pursley, Reifman, & Huston, 2002). The couple context can also serve as a source of stress and/or support. A strong spousal relationship and an equitable division of labor, for example, are often associated with better parental adjustment among heterosexual couples (Des Rivières-Pigeon, Saurel-Cubizolles, & Romito, 2002; Semyr, Edhborg, Lundh, & Sjogren, 2004). At a broader level, lesbian mothers are also impacted by the support (or lack of support) of family and friends and by the presence (or absence) of state laws and practices that protect (or do not protect) their rights as citizens and parents. Indeed, lesbian mothers, particularly nonbiological lesbian mothers, are vulnerable to nonsupport and lack of recognition from their families of origin, the legal system, and society at large; yet little research has examined the role of support, particularly structural support (i.e., legal recognition), on lesbian mothers' well-being.

Belsky (1984) emphasized the importance of considering parent, child, interpersonal, and social-contextual factors in studying the transition to parenthood. These factors, alone and in combination, have implications for the psychological well-being of parents and, thereby, parent functioning and, in turn, child development. This framework informs the current study, which examines the extent to which parent characteristics (personality), child characteristics (temperament), interpersonal characteristics (relationship quality, the division of labor), and characteristics of the broader context (social support, legal protections) predict lesbians' anxiety across the transition to parenthood.

### Parent Characteristics

Neuroticism, a personality trait characterized by negative affectivity and emotional instability, is regarded as a predisposition for negative feelings such as distress and anxiety (Gillespie & Martin, 2006). Parents who are predisposed to emotional instability may be particularly susceptible to the stresses of the transition to parenthood. Research has found that neuroticism is related to postnatal anxiety in women (Canals, Esparo, & Fernandez-Ballart, 2002) and to postnatal mood in men and women (Dudley, Roy, Kelk, & Bernard, 2001). Furthermore, Matthey, Barnett, Ungerer, and Waters (2000) interviewed heterosexual couples prenatally and 6, 12, and 52 weeks postnatally and found that neuroticism was related to depression for men and women early on but did not predict later adjustment. Thus, although personality factors may be related to average levels of anxiety, change in anxiety may be better predicted by other variables.

### Child Characteristics

It is well established that children's temperament and adaptability (i.e., distress to limits, adjustment to new situations) are associated with parents' mental health (Dudley et al., 2001; Mulsow et al., 2002), although the nature of this relation is not always clear: Child difficultness contributes to parental well-being, but parents with poor mental health also tend to perceive their children as more difficult, suggesting that such reports may in part reflect parental characteristics (Seifer, 2002). One of the aspects of difficult temperament that is most consistently related to parental mental health is distress to limitations: the degree to which the child expresses frustration when goal achievement has been blocked or a desirable object removed (Rothbart, 1981). Parents who perceive their infants as highly distressed to limits experience greater stress (Raikkonen, Pesonen, Heinonen, Komsu, Jarvenpaa, & Strandberg, 2006) and anxiety (Coplan, O'Neil, & Arbeau, 2005). Thus, consideration of distress to limitations may be important in accounting for change in parental anxiety over time.

### Interpersonal Characteristics

*Relationship quality.* Aspects of the couple's relationship may be particularly salient during the transition to parenthood (Belsky, 1984). Perceptions of partner love and support during the prenatal period have been linked to lower levels of depression (Semyr et al., 2004) and anxiety (Rini, Dunkel, Hobel, Glynn, & Sandman, 2006), although McVey and Tuohy (2007) did not find an association between relationship quality and anxiety

in early parenthood. No research has examined the relation between relationship quality and well-being across the transition to parenthood for lesbians. Of interest is whether perceptions of the relationship are associated with change in anxiety over time, such that greater love guards against increases in anxiety.

*The division of housework and child care.* Studies of heterosexual couples suggest that the division of paid and unpaid labor (housework, child care) tends to become more traditional across the transition to parenthood, with women taking on more unpaid labor and men assuming more responsibility for paid work (Kluwer, Heesink, & van de Vliert, 2002). Furthermore, inequities in the division of housework (Bird, 1999) and child care (Des Rivieres-Pigeon et al., 2002) have been linked to stress and depression in women, although some studies (e.g., Semyr et al., 2004) have found no such relation. Although lesbian parents tend to share labor more equally than heterosexual parents (Patterson, Sutfin, & Fulcher, 2004), birth mothers may perform more child care whereas nonbirth mothers spend more time in paid work (Gabb, 2005; Goldberg & Perry-Jenkins, 2007). Given that lesbians are known to place a strong emphasis on egalitarianism in their relationships and to strongly value an equal division of labor (Patterson, 1995), perceived inequity in the division of labor (as well as increased inequity over time) may be associated with a difficult adjustment to parenthood.

### Social-Contextual Characteristics

*Social support.* Perceived availability of social support from outside the couple (i.e., family and friends) is an established predictor of well-being for women during the transition to parenthood (Semyr et al., 2004). Perceived support has also been linked to well-being among lesbians specifically (Oetjen & Rothblum, 2000). Some research distinguishes between emotional support (supportive behaviors that communicate acceptance and caring) and instrumental support (practical assistance) (Collins, Dunkel-Schetter, Lobel, & Scrimshaw, 1993; Jordan, 1989). In several studies, instrumental support proved more important than emotional support in maintaining new mothers' well-being. For example, Collins et al. (1993) found that women who perceived high instrumental support during pregnancy were at lower risk for postpartum depression, whereas emotional support was unrelated to depression. In another study, mothers identified instrumental support as most helpful in the postpartum, whereas fathers identified emotional support as most helpful (Jordan, 1989). Finally, Leathers, Kelley, and Richman (1997) found that perceptions of higher instrumental support were related to higher well-being in

fathers; however, for mothers, greater instrumental support was associated with *poorer* well-being. The authors note that this finding is inconsistent with the literature and suggests that depressed women may elicit more help from others. Given the importance of social support during times of transition, this study examines the extent to which instrumental and emotional support are related to anxiety for birth and nonbirth lesbian mothers.

*Legal recognition.* An additional source of social-contextual stress for non-biological mothers is the absence of widespread recognition and cultural legitimacy regarding their parental role. Family, friends, and the larger society may fail to recognize lesbian parent families as consisting of two active coparents. Scholars have suggested that providing legal recognition for non-biological mothers (i.e., in the form of second parent adoptions, which allow women to adopt their partner's child without requiring the birth mother to give up her legal rights) may have positive effects on individual and family functioning by reducing stress associated with lack of parental rights (Pawelski et al., 2006). About half of U.S. states have granted second parent adoptions to lesbians (Pawelski et al., 2006); however, no research has examined the impact of such supports on lesbian mothers' well-being.

### The Current Study

This study examines the extent to which parent and child characteristics, interpersonal characteristics, and social contextual characteristics predict level of and change in lesbians' anxiety during early parenthood (across the first 3.5 years). Predictors were measured prenatally (Time 1) and, where appropriate, postnatally (Time 2). We examine the extent to which parent characteristics (neuroticism, initial work hours), child characteristics (target child temperament, addition of a second child), interpersonal characteristics (prenatal relationship quality, prenatal division of housework, change in housework over time, postnatal division of child care), and extradyadic social contextual factors (prenatal perceived instrumental and emotional support, legal recognition of the nonbirth mother) are related to lesbian mothers' anxiety in early parenthood.

## METHOD

### Participants

The sample consisted of 68 women in 34 committed, cohabiting lesbian relationships who were interviewed three times during their first transition

to parenthood: 1 month before the due date (Time 1, or T1), 3 months after the birth of their first child (Time 2, or T2), and when their child was 3.5 years old (Time 3, or T3). At the time of the first interview, birth and nonbirth mothers averaged 35 and 38 years old, respectively. Couples had been in their relationship for an average of 6.5 years ( $SD = 2.50$  years). Most (94%) participants were European American, and, on the whole, the sample was highly educated and financially stable. Among birth mothers, the highest degree attained was a high school diploma for 4 (10%), an associate's degree for 4 (10%), a bachelor's degree for 5 (12.5%), a master's degree for 15 (37.5%), and a PhD/MD/JD for 6 (15%). Among nonbirth mothers, the highest degree attained was a high school diploma for 2 (5%), an associate's degree for 5 (12.5%), a bachelor's degree for 7 (17.5%), a master's degree for 9 (22.5%), and a PhD/MD/JD for 11 (27.5%). At T1, birth and nonbirth mothers' average salaries were \$35,500 ( $SD = \$28,900$ ) and \$50,000 ( $SD = \$54,500$ ).

All of the couples in the study had used alternative insemination to become pregnant. Ten couples had chosen known donors: the man who donated the sperm was a friend or acquaintance. Of these 10, three couples reported their child had "rare" contact with the donor (several times a year), four couples reported that their child had "occasional" contact with him (every few months), and three indicated that their child had "regular" contact with him (monthly). In no cases was the donor regarded as a third parent: He was typically described as a family friend, someone with an "unclelike" relationship to the child. Of the remaining 24 couples, 20 had unknown donors and four had donors whose contact information would be released to them when their child turned 18.

## Procedures

All 34 couples were recruited during the pregnancy. Both partners were interviewed separately over the telephone at T1, T2, and T3 and completed a mail packet of questionnaires at each time point. Thirty-one couples participated in all time points; two couples were interviewed at T1 and T3 only, and one couple participated in T1 and T2 only. Many recruitment efforts were used. Study information was posted in the offices of gynecologists and midwives in Massachusetts and included in gay community newsletters. Calls for participants were posted on national Web sites and in newsletters pertaining to lesbian issues to obtain a geographically diverse sample. Consent forms, assuring confidentiality and detailing the conditions of participation, were mailed to couples at T1, and the signed consents forms were returned with the T1 packet.

## Measures

*Anxiety.* Women's anxiety was assessed using the State Anxiety Scale (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) at all three time points. This measure is widely used in perinatal anxiety research. Women were given a list of 20 items (e.g., "I feel nervous and restless; I feel secure") and asked to rate the extent to which each represented their current feelings using a 4-point scale (1 = *not at all* to 4 = *very much so*). Items were summed and averaged to create a mean score for each woman. Content validity is supported by correlations with other anxiety and adjustment measures. Internal consistency reliability estimates for state anxiety range from .86-.95 (Christoforou & Kipper, 2006). Furthermore, the scale appears to be a valid predictor of anxiety in pregnant women (Grant, MacMahon, & Austin, 2008). Alphas for birth and nonbirth mothers, respectively, were .87 and .90 at T1, .90 and .89 at T2, and .93 and .90 at T3.

*Parent characteristics.* At T1, women completed the *Neuroticism* subscale (48 items) of the Personality Inventory-Short Form (NEO-P-SF; Costa & McCrae, 1985). The NEO is based on the five-factor theory of personality and is widely used. Items like "I often get angry at the way people treat me; I am a warm and friendly person" are answered on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). Trait anxiety is one dimension of neuroticism, which raises the issue of whether these measures have shared item content. Given that the study goal is to evaluate the role of predictors above and beyond initial neuroticism/anxiety, overlap between these dimensions is not a major concern. Furthermore, the correlation between them is high ( $r = .67$  and  $r = .69$  for birth and nonbirth mothers, respectively) but not perfect; thus, the two variables are not completely redundant. There is unique variance in each variable not explained by the other. At T1, alphas for birth and nonbirth mothers were .90 and .91.

T1 *work hours* (per week) was included as a control in predicting anxiety.

*Child characteristics.* At T2, women completed the Infant Behavior Questionnaire (IBQ; Rothbart, 1981), a measure of perceived infant temperament. To reduce the number of variables in the model, only one of the subscales used to assess negative affectivity was administered: *distress to limitations* (frustration; 20 items). The scale assesses parents' observations of specific infant behaviors across a range of situations. Women indicated on a 7-point scale how often their infants responded to events

(e.g., being placed in a car seat; waiting for food) during the prior week (e.g., cried, smiled). The subscale has good internal reliability (.75-.81) and shows good concurrent validity with observational ratings of temperament (Rothbart, 1981). Items were averaged to obtain a mean score of distress ( $\alpha = .72$  for birth mothers,  $.85$  for nonbirth mothers).

Eleven couples had had a *second child* since the time of the first interview. Thus, "second child" was considered as a variable (0 = *no second child*, 1 = *second child*).

*Interpersonal characteristics.* Participants responded to 25 items in the Relationship Questionnaire (Braiker & Kelley, 1979) that are distributed across four subscales: love, conflict, ambivalence, and maintenance. Here, the 10-item *love* subscale is used as the indicator of relationship quality. This subscale, which assesses feelings of belongingness, closeness, and attachment, is sensitive to change in relationship quality during the transition to parenthood (Belsky, Rovine, & Fish, 1989). Items such as "To what extent do you have a sense of 'belonging with your partner?'" are answered on a 9-point scale (1 = *not very much* to 9 = *very much*). Items are summed and averaged to obtain a mean score. At T1, the alphas for love were  $.77$  and  $.71$  for birth and nonbirth mothers, respectively.

Women's reports on the Who Does What? questionnaire (Atkinson & Huston, 1984) of their proportional contribution to 14 *household tasks* (e.g., laundry, cooking) were assessed at all 3 time points. Women indicated their perceived proportional contribution to each task on a 5-point scale: 1 = *usually/always my partner* (0-20% contribution) to 5 = *usually/always me* (80-100% contribution). The alphas for birth and nonbirth mothers were, respectively,  $.60$  and  $.62$  at T1,  $.63$  and  $.68$  at T2, and  $.66$  and  $.63$  at T3. However, alphas from household task measures may not be relevant because individual items may not be expected to be internally consistent (Grote, Clark, & Moore, 2004). Items were summed and averaged to create a mean score. Prenatal perceived contribution to housework and change in perceived housework contribution over time (T1 to T3) were examined as predictors. Level and change in perceived contribution to household tasks were estimated using a dyadic, longitudinal hierarchical linear model (HLM). The Bayesian estimates of each individual's level and change derived from the unconditional HLM model of partners' reports of contribution to housework across the three time points were then used as Level-2 predictors of women's anxiety.

*The division of child care tasks* measure (Barnett & Baruch, 1987; Crouter, Perry-Jenkins, Huston, & McHale, 1987) is a modification of Crouter et al.'s (1987) "Skill with Baby Questionnaire," which uses Barnett and Baruch's (1987) method of having parents rate their personal proportional

contribution. Women rated their perceived contribution to 15 tasks (e.g., feeding the baby, getting up at night) using a 5-point scale: 1 = *usually/always/my partner* (0–20% contribution) to 5 = *usually/always me* (80–100% contribution). Items were summed and averaged to obtain a mean score. The alphas were .84 and .80 at T2 and .93 and .90 at T3 for birth and non-birth mothers, respectively. Similar to housework, perceived proportional contribution to childcare at T2 and change in child care over time (T2 to T3) were examined as predictors. Again, level and change in contribution to child care were estimated using a dyadic, longitudinal hierarchical linear model. The Bayesian estimates of each individual's level and change derived from the unconditional HLM model of partners' reports of child care across the two time points were then used as Level-2 predictors of women's anxiety.

*Social-contextual characteristics.* Emotional support and instrumental support was measured using the Social Network Inventory (Daugherty, Salloway, & Nuzzarello, 1988). At T1, women were asked to list the "people in their life": the people that they most often "see, talk to, or visit" (up to 10 persons). Then they were asked to indicate which persons they talk to about problems in the following areas: (1) social/relational; (2) financial; (3) family; (4) relationship with partner; (5) health; and (6) sexual. They were also asked to indicate which of these individuals they would "turn to for help with an intimate problem" and which of these individuals they would "expect to call or check in with them" if they knew they were having problems. Counts (0 or 1) for each item were summed and then averaged across individuals listed to form a total mean score for emotional support. Instrumental support was measured similarly: Women were asked to indicate which of the listed individuals they would ask for (1) money, (2) time, and (3) child care. Counts (0 or 1) for each item were summed and averaged across individuals to form a total mean score for instrumental support.

A total of 26 nonbiological mothers had adopted their first child (the target child); eight had not. Thus, *presence of a second parent adoption* was coded for each couple as 0 (*no adoption, nonbiological mother legally vulnerable*) or 1 (*second parent adoption*).

### Analytic Strategy

When individuals are nested in couples, their outcome scores are likely to be correlated, resulting in a problem of data interdependency (Sayer & Klute, 2004). One solution to this problem is to use a modeling strategy that estimates the extent of this shared variance and provides correct

standard errors for testing the regression coefficients relating predictors to outcome scores. We used the multilevel modeling program HLM6 (Raudenbush, Bryk, & Congdon, 2004) to estimate the parameters in the models. We adapted the multivariate outcomes two-level HLM for change that allows modeling of separate equations for both members of the dyad as detailed by Raudenbush, Brennan, and Barnett (1995). This strategy has several advantages. First, it adjusts the outcomes for measurement error by estimating the residuals, which represent measurement error or the deviation of each person's observed score from that predicted by the regression trajectory. Second, it estimates the shared variance arising from the dependence of the outcome scores between members of the couple. Third, it provides separate equations for each member of the couple, allowing the magnitude and direction of coefficients to vary across couples. Finally, multilevel analysis of longitudinal data can easily handle missing data in the outcome. Because multilevel models do not assume equal numbers of observations, participants with missing data on the outcome variable do not cause special problems. Although the sample is only 34 couples, there are 62 responses ( $n = 31$  couples) at three time points and 6 responses ( $n = 3$  couples) at two time points; none were omitted on account of missing predictor variables. Furthermore, the repeated measures design gives greater power to detect effects.

For each couple, each partner had a score on anxiety, measured at three time points: 1 month before the due date, 3 months after birth, and 3.5 years after birth. The interval between T1 and T3 was 43 months (1 month prebirth + 42 months postbirth). The Level 1 model is:

$$Y_{ij} = [\beta_1 \text{Bio} + \beta_2 \text{BioTime}] + [\beta_3 \text{Nonbio} + \beta_4 \text{NonbioTime}] + r_{ij} \quad (1)$$

where  $Y_{ij}$  is the scale score (anxiety)  $i$  for couple  $j$  on the outcome with  $i = 1, \dots, 3$  data points and  $j = 1, \dots, 34$  couples. The variables "Bio" (biological mothers) and "Nonbio" (nonbiological mothers) are dummy coded to indicate to which partner a given score belongs. The intercepts  $\beta_1$  (for birth mothers) and  $\beta_3$  (for nonbirth mothers) are the predicted outcome scores at the *midpoint* of the transition to parenthood: 21.5 months postbirth. The *rate of change* (slope) in anxiety for birth mothers is represented by  $\beta_2$ , and  $\beta_4$  represents the rate of change in anxiety for nonbirth mothers. The errors are represented by the  $r$ s and are assumed to have a constant variance,  $\sigma^2$ .

The inclusion of three time points permits the analysis of linear rates of change in anxiety. The Level-1 model defines four parameters that

characterize participants' average trajectories over time: the average *level* of anxiety (at the midpoint of the transition) for biological and nonbiological mothers, and the average *rate of linear change* in anxiety for biological and nonbiological mothers. The Level-1 unconditional model was initially used to examine whether average levels of anxiety and change in anxiety over time were significantly different than zero; then, the model was tested to see if there was a significant level of variability in these indicators of change for individual partners. If the unconditional model reveals significant variability in levels and rates of change in anxiety, it is appropriate to move to a Level-2 predictor model, where partners' average levels on the outcome variables as well as change trajectories become the dependent variables.

Assuming variability in maternal anxiety levels and rates of change, we proceed to examine correlations among the hypothesized predictors and the outcome variables. Specifically, correlations among and between parent characteristics (neuroticism, work hours), child characteristics (temperament, second child), interpersonal variables (love, division of labor), social context variables (support, second parent adoption), and anxiety are examined. (It should be noted that because the midpoint of the transition, 21.5 months postnatally, occurred after T2, 3 months postnatally, it is not problematic to use T2 variables to predict average anxiety; also, temperament and presence of a second child are time invariant, so it is not problematic to use them to predict a change trajectory that began, but did not end, prior to their measurement.) Variables that are highly correlated to the outcomes are retained in the HLM model and included as predictors at Level 2.

Then, after running the HLM model, in an effort to present as parsimonious a final model as possible, the coefficients for each of the predictors are tested (via contrasts) to determine whether they are significantly different for birth and nonbirth mothers. If a model in which coefficients for birth and nonbirth mothers are constrained to be equal fits equally well (according to a  $\chi^2$  difference test) as one that allows the coefficients to vary, the former is retained. A model comparison test is performed to determine if this model is a better fit to the data than the unconstrained model.

## RESULTS

Table 1 includes descriptive statistics for predictor and outcome variables. Multivariate analyses of variance (MANOVA) were used to determine whether birth and nonbirth mothers differed on sets of dependent variables (e.g., housework at T1, T2, and T3). Nonbirth mothers

**TABLE 1**  
Means and Standard Deviations for Descriptive, Predictor, and Outcome Variables

	Biological Mother		Nonbiological Mothers		Follow-up Univariate ANOVA	Multivariate MANOVA
	M	SD	M	SD		
Personal Income	( <i>n</i> = 30)		( <i>n</i> = 30)			<i>F</i> (4,55) = 13.22, <i>p</i> < .001
Time 1 Work Hours	\$35,500	\$28,900	\$50,000	\$54,493	<i>F</i> (1,58) = 7.24, <i>p</i> < .01	
Time 2 Work Hours	33.79	15.25	49.06	11.90	<i>F</i> (1,58) = 19.42, <i>p</i> < .001	
Time 3 Work Hours	20.06	16.42	35.84	14.29	<i>F</i> (1,58) = 20.23, <i>p</i> < .001	
	24.35	17.46	46.63	11.60	<i>F</i> (1,58) = 47.21, <i>p</i> < .001	
Time 1 Housework	( <i>n</i> = 29)		( <i>n</i> = 29)			<i>F</i> (3,54) = 1.42, <i>p</i> > .10
Time 2 Housework	3.05	.48	3.02	.86	<i>F</i> (1,56) = 2.13, <i>p</i> > .10	
Time 3 Housework	3.22	.47	3.09	.64	<i>F</i> (1,56) = .83, <i>p</i> > .10	
	3.32	.56	2.95	.55	<i>F</i> (1,56) = 4.20, <i>p</i> < .05	
Time 2 Child Care Tasks <sup>a</sup>	( <i>n</i> = 30)		( <i>n</i> = 30)			<i>F</i> (2,57) = 38.83, <i>p</i> < .001
Time 3 Child Care Tasks <sup>a</sup>	3.47	.42	2.64	.38	<i>F</i> (1,58) = 72.48, <i>p</i> < .001	
	3.41	.56	2.77	.42	<i>F</i> (1,58) = 24.71, <i>p</i> < .001	
Neuroticism	( <i>n</i> = 33)		( <i>n</i> = 33)			<i>F</i> (3,62) = 1.20, <i>p</i> > .10
Infant Distress to Limits	2.68	.41	2.49	.44	<i>F</i> (1,64) = .34, <i>p</i> > .10	
Love	3.49	.82	3.73	.93	<i>F</i> (1,64) = .98, <i>p</i> > .10	
	7.94	.64	7.89	.60	<i>F</i> (1,64) = .02, <i>p</i> > .10	
Emotional Support	( <i>n</i> = 33)		( <i>n</i> = 34)			<i>F</i> (2,64) = 2.98, <i>p</i> > .05
Instrumental Support	5.61	1.51	5.39	1.61	<i>F</i> (1,65) = .64, <i>p</i> > .10	
	4.08	1.69	4.56	1.92	<i>F</i> (1,65) = 1.97, <i>p</i> > .10	
Time 1 Anxiety	( <i>n</i> = 30)		( <i>n</i> = 30)			<i>F</i> (3,56) = 1.98, <i>p</i> > .10
Time 2 Anxiety	1.69	.37	1.55	.41	<i>F</i> (1,58) = 1.08, <i>p</i> > .10	
Time 3 Anxiety	1.66	.44	1.69	.42	<i>F</i> (1,58) = .10, <i>p</i> > .10	
	1.88	.50	1.72	.45	<i>F</i> (1,58) = 1.37, <i>p</i> > .10	

<sup>a</sup>Child care tasks done with respect to target child.

worked significantly more hours and had higher incomes than birth mothers,  $F(4, 55) = 13.22, p < .001$ . With regard to unpaid labor, no differences in partners' perceived contribution to housework emerged,  $F(3, 54) = 1.42, p > .10$ , but birth mothers tended to perceive themselves as contributing more to the care of their first child than their partners,  $F(2, 57) = 38.83, p < .001$ . (Among the 11 couples that had second children since the time of the first interview, birth mothers also perceived themselves as performing a greater proportion of the child care than their partners at T3,  $M = 4.19, SD = 1.29$ , compared to  $M = 2.43, SD = .68, t(10) = 3.48, p < .01$ .) No significant differences emerged for birth and nonbirth mothers on parent, child, interpersonal, and social context variables. Furthermore, birth and nonbirth mothers did not differ in their levels of anxiety. Women's average anxiety scores are in the normal range at all three time points, although at T3 birth mothers' average anxiety (which corresponds to a sum of 37.60, or averaged across 20 items, a mean of 1.88) approaches the clinical cutoff, which is a sum of 39, or averaged across 20 items, a mean of 1.95 (Spielberger et al., 1983). Percentages of birth mothers and nonbirth mothers whose scores were above the clinical cutoff are as follows: at T1, 23% (birth mothers) and 8% (nonbirth mothers); at T2, 26% (birth mothers) and 19% (nonbirth mothers); and at T3, 42% (birth mothers) and 28% (nonbirth mothers).

### Level and Change in Anxiety

An unconditional Level 1 model for anxiety was fit with no Level 2 predictors. Analyses revealed that both birth mothers and nonbirth mothers were somewhat anxious midway through the transition,  $\gamma_s = 1.79$  and  $1.65, ps < .001$ , respectively. Birth mothers became more anxious over time,  $\gamma = .01, p < .01$ , but there was no significant change in their partners' anxiety over time,  $\gamma = .003, p = .15$  (Figure 1). Examination of the reliability of the Level-1 coefficients showed them to be fairly reliable: for  $\beta_1, \rho = .78$ ; for  $\beta_2, \rho = .42$ ; for  $\beta_3, \rho = .75$ ; and for  $\beta_4, \rho = .41$ .

There was significant variability in average level of anxiety for both birth and nonbirth mothers,  $\chi^2_s = 235.08$  and  $220.17, ps < .001$ , respectively. There was also significant variability in slope for birth and nonbirth mothers,  $\chi^2_s = 61.85$  and  $61.83, ps < .001$ , respectively. Thus, despite the finding that, on average, nonbirth mothers' anxiety did not change, individual nonbirth mothers' anxiety changed over time but changed differently for different women. Given the presence of variability in level and change in anxiety, it was appropriate to model predictors of both levels and rates of change in anxiety at Level 2.

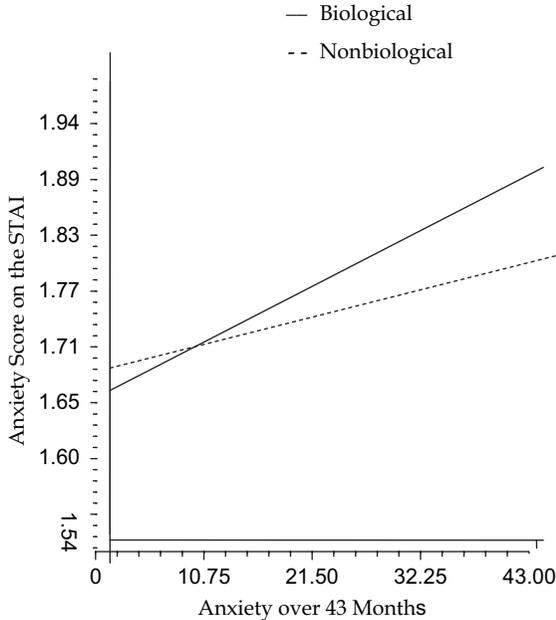


FIGURE 1  
Lesbian mothers' anxiety across 43 months (3.5 years).

### Predictors of Anxiety

First, we conducted ANOVAs to examine the relation between dichotomous predictors (presence of a second child; second parent adoption) and mothers' anxiety. Having a second child was unrelated to anxiety for birth mothers,  $F_s(1, 32) = .02$  (T1 Anxiety),  $.20$  (T2),  $1.60$  (T3),  $ps > .05$ , and non-birth mothers,  $F_s(1, 32) = .52$  (T1),  $.01$  (T2), and  $.67$  (T3),  $ps > .05$ . Having obtained a second parent adoption was also unrelated to anxiety for birth mothers,  $F_s(1, 32) = 1.55$  (T1),  $.00$  (T2), and  $.06$  (T3),  $ps > .05$ , and nonbirth mothers,  $F_s(1, 32) = .16$  (T1),  $.02$  (T2), and  $.05$  (T3),  $ps > .05$ . Thus, these variables are not included as predictors of anxiety in the HLM model.

Second, we examined the correlations between the continuous predictors and the outcome variables in an effort to determine which variables to retain as predictors in the HLM model (Table 2). Significance levels are not reported because of the large number of tests that were performed; rather, we used the relative size of the coefficients as a guide for variable retention. The correlational analyses revealed that the following predictor variables were highly (at least  $.30$ ) related to anxiety: neuroticism (parent); infant temperament (child); T1 housework (interpersonal); and

**TABLE 2**  
**Intercorrelations Among Variables for Biological and Nonbiological Mothers**

	Work Hours	Neuro	Infant Distress	House work	T1 HW	Ch Care	T2 Child Care	Ch CC	Ch CC	Love	Instr Supp	Emot Supp	T1 Anx	T2 Anx	T3 Anx	Work Hours	Neuro	Infant Distress	House Work	T1 House Work	Ch House Care	T2 Child Care	Ch Child Care	Love	Instr Supp	Emot Supp	T1 Anx	T2 Anx	T3 Anx
Work Hours	—	-.29	.18	-.51	.19	-.37	-.41	.07	.04	.01	.04	.01	.16	.05	-.13	-.19	-.22	-.10	.34	-.25	.22	.06	-.12	-.28	-.16	-.27	-.16	.00	
Neuroticism	.31	—	-.29	.05	-.36	-.18	-.14	-.12	-.12	-.11	-.12	-.11	.69	.71	-.65	-.14	.10	.13	.08	.29	.05	.13	.13	.02	-.16	.14	.14	.20	
Infant Distress	.05	.12	—	-.13	-.15	-.24	-.08	-.17	-.38	-.11	-.38	-.11	.42	.48	.30	-.17	.13	.68	.12	.17	-.09	.19	-.09	-.16	-.12	-.07	.15	.41	
T1 Housework	.41	-.26	-.18	—	-.13	.38	.26	.04	.10	-.15	.00	-.15	.00	-.05	-.07	.45	.44	.19	-.80	.22	-.44	.08	.10	.21	.12	.64	.45	.32	
Change in Housework	.33	.24	.12	-.04	—	.23	.20	-.24	.06	.05	-.16	.05	-.16	.05	.02	-.30	-.26	-.08	-.05	.99	.04	-.25	-.27	-.03	-.18	-.08	-.15	-.15	
T2 Child Care	.27	-.10	-.36	.30	-.10	—	.52	-.22	.05	.03	-.18	-.17	-.16	.07	.05	.07	.05	-.06	-.30	.18	-.63	.22	-.00	.22	.22	.23	.18	-.20	
Change in Child Care	.05	.13	.03	.04	.23	-.07	—	.19	-.14	-.01	-.14	-.01	-.07	.00	-.03	.04	-.13	.19	-.32	-.11	-.56	-.54	-.24	-.13	-.22	-.03	-.01	.03	
Love	.23	.07	.25	-.19	.27	-.11	.36	—	.06	.18	.03	-.15	.03	.15	.30	.22	.08	-.07	-.03	.20	.04	.12	.27	.04	.20	-.07	-.14	-.29	
Instrumental Support	.35	.07	.01	-.08	.01	-.10	.41	.13	—	.34	-.17	-.33	-.16	-.01	-.27	-.14	-.14	-.14	-.10	.05	.13	.18	.02	.43	.47	.02	-.06	-.25	
Emotional Support	.40	.13	-.01	-.08	.14	-.10	.47	.38	.74	—	-.01	-.24	.13	-.04	.11	-.14	-.14	-.14	.13	-.10	.02	.02	-.17	.09	.33	.14	.06	-.15	
T1 Anxiety	.12	.69	.06	-.45	.11	-.12	.11	-.17	.06	.00	—	.73	.53	-.18	.18	.27	.08	.18	-.10	.14	.08	-.12	.08	-.12	-.25	.21	.27	.22	
T2 Anxiety	.01	.69	.30	-.22	.17	-.27	.22	-.18	.01	-.04	.78	—	.61	-.22	.17	.45	.04	.09	.17	.08	.19	-.16	-.35	.13	.26	.31			
T3 Anxiety	-.04	.42	.28	-.29	.21	.09	-.08	-.17	.36	-.23	.51	.56	—	-.36	.07	.01	.03	.04	.11	.05	-.22	-.22	-.22	-.22	-.25	.21	.17	.42	

Note: The top right triangle in the first column represents intercorrelations among biological mothers' data; the bottom left triangle in the first column represents intercorrelations among nonbiological mothers' data. In the second column, the top right triangle represents intercorrelations among nonbiological mothers' data and biological mothers' data and the left triangle represents intercorrelations among biological mothers' data and nonbiological mothers' data. Variables that were highly correlated with the outcome (at least .30 correlation to one of the anxiety time points) and that were therefore selected for inclusion in the HLM model are bold.

instrumental support (social context). Because T1 work hours and T1 housework were highly correlated, it is therefore appropriate to also retain T1 work hours as a predictor.

### Model 1: Predictors of Anxiety

First, to assess the unique variance associated with each predictor, each variable was added separately to the unconditional model. Adding neuroticism led to a 71% reduction of the variance in average level of anxiety for birth mothers and 66% for nonbirth mothers. Work hours, when entered alone, was not significant and explained 0% of the variance in average anxiety for birth mothers in the unconditional model; however, when the other predictors were included in the model and hence controlled for, it accounted for 16% of the residual variance. Perceived housework contribution by itself accounted for 14% of the variance in average anxiety for birth mothers. Temperament accounted for 25% of the variance in change in anxiety for nonbirth mothers. Finally, instrumental support by itself accounted for 25% of the variance in change scores for nonbirth mothers.

Second, these variables were entered simultaneously in the explanatory model (Table 3). This revealed that higher levels of neuroticism were associated with higher average levels of anxiety for birth and nonbirth mothers,  $\gamma = .77$ ,  $t(28) = 8.57$ ,  $p < .001$ , and  $\gamma = .65$ ,  $t(28) = 5.79$ ,  $p < .001$ . Working more hours outside the home and perceiving oneself as performing more housework relative to one's partner were both associated with higher average anxiety for birth mothers,  $\gamma = .01$ ,  $t(28) = 4.01$ ,  $p < .01$ , and  $\gamma = .20$ ,  $t(28) = 2.60$ ,  $p < .05$ , respectively. None of the variables predicted change in anxiety for biological mothers. Infant temperament was related to change in anxiety for nonbirth mothers,  $\gamma = .01$ ,  $t(28) = 2.31$ ,  $p < .05$ , such that higher perceived distress was associated with increased anxiety over time. Additionally, instrumental support was related to change in anxiety for nonbirth mothers: Women who perceived less support prenatally experienced greater increases in anxiety,  $\gamma = -.01$ ,  $t(28) = -4.34$ ,  $p < .001$ .

### Model 2: Final Constrained Model

Comparison of the coefficients for birth and nonbirth mothers using multivariate hypothesis testing indicated that the following effects were not significantly different for birth and nonbirth mothers: neuroticism on level of anxiety,  $\chi^2 = .98$ ,  $df = 1$ ,  $p > .10$ ; infant distress on level of

**TABLE 3**  
 Predictors of Change in Anxiety for 34 Inseminating Lesbian Couples, Prenatal to 3 Years Postbirth

Variable	Model 1			Model 2 (Constrained)		
	Biological Mothers	Nonbiological Mothers	Nonbiological Mothers	Biological Mothers	Biological Mothers	Nonbiological Mothers
	Level, SE	Rate, SE	Level, SE	Level, SE	Rate, SE	Level, SE
Intercept	1.668*** (.035)	.005** (.002)	1.600*** (.002)	1.669*** (.035)	.005** (.002)	1.597*** (.043)
T1 Work Hours	.009*** (.002)	-.001 (.001)	-.007 (.004)	.008*** (.002)	-.001 (.000) <sup>a</sup>	-.006 (.004)
Neuroticism	.766*** (.089)	.001 (.004)	.651*** (.112)	.717*** (.077) <sup>a</sup>	-.003 (.003) <sup>a</sup>	.717*** (.077) <sup>a</sup>
Infant Distress	.057 (.054)	.001 (.002)	.020 (.035)	.044 (.034) <sup>a</sup>	.001 (.002)	.044 (.034) <sup>a</sup>
T1 Housework	.195* (.975)	-.005 (.004)	-.156 (.136)	.161* (.061)	-.002 (.003) <sup>a</sup>	.115 (.127)
Instrumental Support	-.042 (.023)	.001 (.002)	.014 (.018)	-.043 (.021)	.001 (.001)	.009 (.019)
% Variance Accounted For (compared to baseline model)				85%	0%	71%
Parameters		35				
$\Delta$ Deviance Statistic from baseline model		46.161			52.962	
$\Delta$ Chi Square		93.839, <i>df</i> = 20, <i>p</i> < .001			6.801, <i>df</i> = 5, <i>p</i> = .235	

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

<sup>a</sup>These coefficients were constrained to be equal for biological and nonbiological mothers.

anxiety,  $\chi^2 = .47$ ,  $df = 1$ ,  $p > .10$ ; neuroticism on change in anxiety,  $\chi^2 = 2.03$ ,  $df = 1$ ,  $p > .10$ ; work hours on change in anxiety,  $\chi^2 = 2.50$ ,  $df = 1$ ,  $p > .10$ ; and perceived contribution to housework on change in anxiety,  $\chi^2 = .72$ ,  $df = 1$ ,  $p > .10$ . Because these variables are related to anxiety outcomes for birth and nonbirth mothers in similar ways, the parameters were constrained to be equal and are not distinguished from each other in Table 3.

As Table 3 (Model 2) reveals, previously significant predictors retained their significance in the constrained model. As expected, the final model provides a better fit to the data than the unconditional model,  $\chi^2 = 87.46$ ,  $df = 15$ ,  $p < .001$ , but does not fit better than the unconstrained final model,  $\chi^2 = 6.80$ ,  $df = 5$ ,  $p > .10$ . The final model explains 85% of the between couple variance in average level of anxiety for birth mothers and 71% for nonbirth mothers. The final model explains 0% of the variance in change in anxiety for birth mothers and 50% for nonbirth mothers.

## DISCUSSION

This project represents the first longitudinal investigation of lesbian mothers' anxiety. Such studies are imperative to enhancing our understanding of how stigmatized and understudied groups such as lesbians navigate key life transitions. The findings highlight the importance of examining parent- and child-level factors, as well as interpersonal and social context variables, in studying the transition to parenthood among lesbian couples.

Women's anxiety increased on average in early parenthood, although different women had different patterns of change. On average, women's anxiety levels were in the normal range; however, by early parenthood, birth mothers' mean anxiety levels approached the clinical range (Grant, MacMahon, & Austin, 2007; Spielberger et al., 1983). These scores are similar to those of heterosexual mothers of young children in the general population (McMahon, Barnett, Kowalenko, Tennant, & Don, 2001). Importantly, the predictors of anxiety differed for birth and nonbirth mothers, suggesting that their experiences, stresses, and needs may differ during this transition. This is supported by evidence that birth and nonbirth mothers take on different roles during this transition and may receive differing levels of societal support for their parental role (Gabb, 2005; Goldberg & Perry-Jenkins, 2007).

Consistent with prior research on heterosexual samples, neuroticism was associated with average anxiety (Canals, Esparo, & Fernandez-Ballart, 2002) such that women who were more neurotic prenatally were also more

anxious during early parenthood. However, neuroticism did not predict increased anxiety in response to the stresses related to the transition to parenthood, which is consistent with prior research that suggests that other factors are more important in predicting long-term parental adjustment (Matthey, Barnett, Ungerer, & Waters, 2000).

Turning to child characteristics, infant temperament emerged as a strong predictor of change in anxiety in early parenthood, such that non-birth mothers who perceived their infants as more distressed to limitations experienced greater increases in anxiety. The fact that nonbirth mothers appear to be more affected by their perception of their children's difficultness than birth mothers parallels prior research that has found that perceived child difficultness affects fathers' stress and well-being more than mothers' (e.g., Perren, von Wyl, Burgin, Simoni, & von Klitzing, 2005). This finding speaks to the differing contexts of these women's lives. As the descriptive data indicate, birth mothers appeared to be responsible for more of the child care, on average, whereas nonbirth mothers were employed in more hours of paid work. Perhaps, in the context of working full-time and retaining greater responsibility for providing financially, a challenging child leads to greater tension and anxiety over time. Birth mothers, in performing a greater proportion of child care, may have adapted to their children's characteristics. These findings point to the need to better understand the relations among in-home and out-of-home work, parental roles, and family dynamics in lesbian two-mother families.

In terms of couple characteristics, it is notable that, inconsistent with the research on heterosexual couples (Kluwer, Heesink, & van de Vliert, 2002), the division of housework was, according to both partners' reports, shared relatively equally; and yet biological mothers who perceived themselves as contributing proportionally more than their partners in the prenatal period tended to report higher anxiety postnatally, which is consistent with research on heterosexual women (Bird, 1999). Perhaps birth mothers are highly sensitive to perceived imbalances in the division of housework, making even small perceived inequities upsetting and stressful. In that housework is often experienced as dull, routine, repetitive, and necessary (Coltrane, 2000), it is possible that birth mothers resent and/or experience tension surrounding their greater perceived contribution in this area. Working more hours outside the home prenatally was also associated with higher postbirth anxiety among birth mothers (despite the fact that, on average, birth mothers worked fewer hours outside the home than nonbirth mothers). Perhaps in the context of anticipating, and then assuming, greater responsibility for child care, working many hours is experienced as stressful.

Despite the fact that birth mothers appear to be performing more child care, this did not appear to be related (negatively or positively) to their anxiety, which may be due to insufficient power. Notably, this lack of relation is inconsistent with some of the research on heterosexual parents, which shows an association between performing high levels of child care and poorer well-being (Des-Rivieres-Pigeon et al., 2002), but is consistent with other studies that find no association between the division of child care and well-being (Semyr et al., 2004). In the context of shared lesbian motherhood, the division of child care may have a different meaning than in the heterosexual context. One difference is that lesbian parenthood via insemination is typically the result of considerable planning and reflects strong commitment and motivation; furthermore, some birth mothers may choose to carry the child precisely because of a greater interest in staying home with the child (Goldberg, 2006). Thus, lesbian birth mothers may feel that they possess greater choice over their contribution to child care than heterosexual women, who often feel obligated to assume primary responsibility for child care (Thompson, 1991). In this context, it is perhaps unsurprising that women who reported that they performed a greater percentage of child care did not experience it as overly stressful.

Contrary to expectation, relationship quality was unrelated to anxiety in our analyses, perhaps because of insufficient power to detect small effects or because of the way that it was operationalized in our study. Importantly, little research has examined the association between relationship quality and anxiety in early parenthood; most studies have examined the influence of relationship characteristics on depression. Rini et al. (2006) found that women who perceived greater partner support during pregnancy showed a reduction in anxiety over time, whereas McVey and Tuohy (2007) found no relation between marital quality and anxiety among new mothers (although marital quality did predict depression). It is clear that more research on both heterosexual and lesbian couples' anxiety is needed, with special attention paid to the role of different dimensions of relationship quality on adjustment. Other aspects of relationship quality (e.g., conflict; relationship satisfaction) that were not assessed here may also be related to anxiety during this transitional period.

With regard to social-contextual factors, perceived instrumental support was related to change in anxiety over time for nonbirth mothers only. This finding may be related to the differing contexts of birth and nonbirth mothers' lives during early parenthood. Birth mothers are working fewer hours outside the home and are taking on more responsibility for home-based, unpaid work. Nonbirth mothers retain greater responsibility for paid work and, thus, as the primary providers, are unable to contribute

equally to child care. In turn, they may be highly sensitive to the availability and helpfulness of individuals outside the family (i.e., people who can babysit), whom they may seek out to help supplement (or indeed replace) their own contribution to child care. Notably, this finding is similar to Leathers, Kelley, and Richman's (1997) finding that instrumental support was important to the adjustment of new fathers but not new mothers. Perhaps the context of nonbirth mothers' lives is similar to that of new fathers, who tend to be employed in paid work at a greater rate than mothers in early parenthood (Coltrane, 2000). Additionally, instrumental support may also be important to nonbirth mothers because it represents tangible and concrete endorsement of their parental role.

Contrary to expectation, official adoption of the child by the nonbirth mother did not affect women's anxiety: Women who did not pursue second parent adoptions (which confer formal legal recognition of and protection for their parental status) did not experience greater anxiety compared to those who had secured such protections. It is possible that there was not enough sensitivity to detect small effects. Alternatively, the relation between legal recognition and anxiety may be moderated or mediated by other variables: For example, legal recognition may be less important in the context of familial recognition of the couple's relationship. It is also possible that legal recognition may not affect general anxiety but anxiety specific to particular domains, such as anxiety related to one's rights as a parent (Pawelski et al., 2006). Connolly (2002) interviewed nonbirth mothers who had acquired second-parent adoptions and found that women felt that these protections gave them more confidence as parents in their interactions with social institutions (e.g., their children's schools), in that they served as a form of legitimization of their parental role. In some cases, the proceedings also served to engender support from family members. Future research should examine how such macrolevel supports affect the daily lives and experiences of lesbian mothers and their children.

As the current study is limited by its reliance on a small volunteer sample, the findings (particularly negative findings) should be viewed with caution. Also, given the sample size, partner effects (e.g., the effects of one's partner's ratings of temperament on one's own anxiety) could not be evaluated. Research with larger samples can test models that include actor and partner ratings of child temperament, social support, and other variables that may influence lesbians' anxiety.

Additionally, this sample is largely European American and middle class. Although the homogeneity of the sample can be viewed as advantageous for detecting statistical relations, as it restricts sources of extraneous variation (e.g., socioeconomic status), it also limits the extent to which

the findings can be generalized to the larger population. The education and income levels of this sample indicate that they have access to social and economic resources that may have a buffering effect against the stresses associated with being a sexual minority (e.g., access to quality child care or living in urban and progressive areas). Lesbians who must contend with the stresses associated with multiple marginalized statuses (as a function of race, sexual orientation, and social class) might experience greater declines in well-being. Furthermore, different factors may protect against or exacerbate anxiety during their transition to parenthood; for example, among lesbians with fewer social, educational, and financial resources, anxiety might be less affected by intrapersonal factors and more affected by macrolevel context factors, such as access to affordable housing and neighborhood climate and safety. Perceived instrumental support might also emerge as critical to both birth mothers' and nonbirth mothers' well-being in working-class samples, as it is an important predictor of mental health across the transition to parenthood among heterosexual, low-income parents (Collins et al., 1993).

In addition, the long time interval between the second and third time points may mean that this study was unable to detect recovery from or decline in anxiety that may have occurred during those months. Such patterns of change may be obscured by the patterns of change in anxiety observed in this analysis. Additionally, this study relies heavily on self-report measures. Future research should employ multiple methods (e.g., observational data) to assess functioning in lesbian-parent families.

Finally, there are a number of factors that might have implications for lesbians' mental health during the transition to parenthood that were not examined in the current study. Internalized homophobia (Szymanski, Chung, & Balsam, 2001) and experiences with heterosexism and discrimination (Meyer, 2003) have consequences for lesbians' mental health: It is possible that these factors might account for some of the unexplained variance in lesbian mothers' anxiety. It is also possible that women's level of involvement with other parents (and with gay parents in particular) might have implications for their adjustment to parenthood.

Despite these limitations, this study identifies factors at multiple levels (i.e., within the individual, the couple, and the larger social context) present in the prenatal and early postnatal period, which are important to lesbian mothers' well-being in early parenthood. First, perceived inequity in the division of housework, but not child care, may be negatively related to birth mothers' anxiety, underscoring the importance of attending to the different meanings that certain behaviors have in different family contexts (i.e., lesbian versus heterosexual). Second, early perceptions of infant distress may have implications for increased anxiety over time

for nonbirth mothers. Third, instrumental support (e.g., efforts to secure potential babysitters and to garner other sources of practical support) may have meaningful implications for nonbirth mothers' adjustment in early parenthood. Future research efforts might explore in more depth the kinds of instrumental supports that lesbian mothers desire and the kinds of supports that they receive (e.g., from their workplaces, family members, and friends).

Early parenthood is stressful for both heterosexual and lesbian mothers. Indeed, in one sample of lesbian mothers, 65% had sought counseling by the time that their children were 5 years old (Gartrell, Banks, Reed, Hamilton, Rodas, & Deck, 2000). Thus, there is a clear need to understand factors related to lesbian mothers' well-being. The current research takes a step in this direction in that it highlights both commonalities and divergences in the parenthood experiences of lesbian and heterosexual parents, sheds light on the differing contexts of lesbian birth and nonbirth mothers' lives in early parenthood, and points to ways in which these differing roles and contexts may impact adjustment during the transition to parenthood.

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