Social Support and Psychological Well-Being in Lesbian and Heterosexual Preadoptive Couples

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Abstract: This study examines predictors of social support and mental health among 36 lesbian and 39 heterosexual couples who were waiting to adopt. Lesbian preadoptive partners perceived less support from family than heterosexual partners but similar levels of support from friends. Lesbian and heterosexual partners reported similar levels of well-being. Aspects of the adoption process were associated with anxiety, whereas couples' conception history was associated with depression. Adoption practitioners should acknowledge these distinct pathways in prevention efforts.

Key Words: adoption, anxiety, depression, infertility, lesbian, social support.

The expectancy period in childbearing, especially during a first pregnancy, represents a major developmental phase for parents: It is considered the initial phase of parenting (Belsky, 1984). Aspects of expectant parents' lives may have implications for their emotional adjustment and for parent-child relationships. Specifically, the psychological resources of the parents-to-be (e.g., personality traits, mental health) and their social-contextual resources (e.g., marital relations, social support) may shape adjustment (Levy-Shiff, Bar, & Har-Even, 1990; Levy-Shiff, Goldschmidt, & Har-Even, 1991). The purpose of this study was to examine predictors of psychological and social-contextual resources among heterosexual and lesbian couples in the expectancy phase of adoption.

Despite its potential importance, the expectancy phase has been almost totally neglected in adoption research (Levy-Shiff et al., 1990; Sandelowski, Harris, & Holditch-Davis, 1991). Furthermore, no studies have examined lesbian adoptive parents' experiences of the expectancy phase, even though 250,000 children are living in households headed by same-sex couples, and of these, 4.2% are either adopted or foster children, almost double the figure for heterosexual couples (Gates & Ost, 2004).

Insofar as preadoptive functioning impacts parental adjustment and the preadoptive phase is an ideal time for prevention efforts, exploration of this phase is warranted.

Theoretical Perspective

Bronfenbrenner (1988) emphasized the role of context in development and argued for an interactionist approach that integrates person and context 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 proximal settings (e.g., family, friends). Individual characteristics therefore interact with setting-level processes to shape adjustment. Belsky (1984) used this contextual perspective to theorize specifically about parental adjustment during the transition to parenthood. In his model, Belsky emphasized intraindividual factors (personality and mental health), relational factors (the partner relationship), and social-contextual factors (extrafamilial forms of social support) in studying parents' adaptation to parenthood. Intraindividual factors such as emotional stability serve as

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psychological resources and may buffer the stress associated with parenting; secondarily, dyadic and extradyadic sources of support can serve as *social-contextual resources* that influence parents' stress directly and indirectly (e.g., by enhancing psychological resources). Given that the transition to adoptive parenthood may be particularly stressful, exploration of prospective adoptive parents' psychological and social-contextual resources is needed.

Indeed, according to family stress theory (McCubbin & Patterson, 1983), families' vulnerability to stress and capacity to adapt to the demands of stressful life transitions is in part a function of their crisis meeting resources. Parents with limited resources may experience the transition to adoptive parenthood as overwhelming and may be vulnerable to poor adjustment; alternatively, possession of significant resources may buffer the stress associated with the transition. Existing research on adoptive parenting and on the transition to parenthood supports the need to understand the stresses specific to these processes and the psychological and social-contextual resources that may impact preadoptive adjustment.

Stresses Associated With Adopting

Because of the complex nature of the adoption process, adoptive parents may face additional psychosocial challenges during the transition to parenthood. Many couples adopt because of infertility, which is linked to increased stress, decreased self-efficacy, and negative perceptions of marital communication (Abbey, Andrews, & Halman, 1992; Andrews, Abbey, & Halman, 1992), particularly among women (Abbey et al.) and partners who blame themselves for the fertility problem (Peterson, Newton, Rosen, & Schulman, 2006). Repeatedly undergoing procedures designed to identify the cause of or to treat infertility may cause distress (Daniluk, 2001), and the hormonal medications commonly prescribed to stimulate ovulation may exacerbate mood instability (Daniluk & Fluker, 1995). Use of assisted reproduction and fertility treatments is not limited to heterosexual couples. In one study, two thirds of both lesbian and heterosexual adoptive parents had attempted the use of assisted reproduction (Shelley-Sireci & Ciano-Boyce, 2002). Besides combating the stresses associated with infertility, adoptive couples may face additional, unforeseen challenges once

they do become parents. For example, adopted children may be exposed to early adverse circumstances and may be at increased risk for adjustment difficulties (Brodzinsky, Smith, & Brodzinsky, 1998). Thus, the adoption process may carry unique stresses and may cause intrapersonal and interpersonal strain.

In light of such stresses, it is important to identify risk and protective factors present prior to the adoption, which may impact adjustment (Belsky, 1984). Indeed, adoptive parents tend to have certain advantages over biological parents. They are often older than biological parents (Brodzinsky & Huffman, 1988), suggesting greater stability with regard to family and career. They tend to have been married longer than biological parents (Hollingsworth, 2000), which may foster greater empathy and communication. Of course, some adoptive parents inevitably fare better than others. Thus, of interest is what factors predict adjustment *among* prospective adopters, as such factors may be key targets for prevention efforts.

Social-Contextual Resources: Social Support

The social-contextual and psychological resources available to adoptive parents may affect their ability to negotiate the challenges of adoptive parenthood. Studies of biological parenting have identified social support as an important resource in the transition to parenthood. Both instrumental support, such as help running errands, and emotional support from family and friends can reduce stress and anxiety during the transition (Bird, Peterson, & Miller, 2002). In one of the few studies on the transition to adoptive parenthood, Levy-Shiff et al. (1991) identified preadoptive social support as a predictor of later family adjustment. This is consistent with cross-sectional research on adoptive parents, which links higher support to less parenting stress (Bird et al.).

One of the most important sources of support across the transition to parenthood is the parents' own family (Bird et al., 2002). Adoptive parents in general may be less likely to receive unqualified support from their families than parents who have biological children, particularly when they adopt across racial lines (de Haymes & Simon, 2003). Thus, couples who pursue international adoption—that is, the adoption of culturally or racially different children—may receive less support from family members in

the preadoptive phase. Related to this, family members may be less sympathetic to couples who did not try to conceive prior to considering adoption, as biology is often regarded as central to kinship and family structures (Hargreaves, 2006).

Lesbian partners may be at even greater risk of having little family support in the preadoptive phase. Sexual minorities in general tend to perceive less support from their families of origin than heterosexuals (Kurdek, 2005). Furthermore, low family support is related to lower mental health among lesbians (Ayala & Coleman, 2000). However, lesbians may compensate for lack of family support by establishing families of creation that consist largely of friends (Weston, 1991). Kindle and Erich (2005) found that although heterosexual adoptive parents relied more on their families than gay and lesbian adoptive parents, there were no differences in overall levels of perceived support.

Many other factors may be related to preadoptive social support systems. For example, extraversion, a stable facet of personality characterized by social skills and emotional stability, is related to social support utilization and network size (Swickert, Rosentreter, Hittner, & Mushrush, 2002). A better understanding of preadoptive social support systems is necessary to identify and focus community and agency efforts to assist adoptive parents during the transition to parenthood.

Psychological Resources

The psychological resources of prospective adoptive parents have implications for their adjustment to parenthood and for family stability. Prenatal psychological adjustment strongly predicts postnatal adjustment in biological parents (Perren et al., 2003), which also has implications for child development. Thus, of interest is what factors are associated with preadoptive mental health.

As with social support, lesbians may be at risk for lower well-being. Specifically, given that lesbians are exposed to heterosexism in their quest to become parents, they may experience poorer well-being in the preadoptive phase. Some studies have found that lesbians in the general population report higher depression than heterosexual women, which is typically attributed to the chronic stress associated with their stigmatized minority status (Cochran, Sullivan, & Mays, 2003). Other studies have found that sexual orientation is unrelated to well-being (Balsam,

Beauchaine, Mickey, & Rothblum, 2005). Alternatively, lesbian adopters' well-being may be similar to that of heterosexual adopters, given how carefully they have been screened and how selective the pool of adoptive parents tends to be (i.e., older, highly motivated to parent; Leon, 2002). Lesbians may also be more likely to be preferential adopters. That is, they may be more likely to turn to adoption first, in that they lack the option of conceiving with a partner (Matthews & Cramer, 2006). Also, having a birth child may be less important to lesbians, who often engage broad definitions of family that are based more on affective ties than biological ties (Weston, 1991). In turn, their path to adoption may be less painful, and they may arrive at adoption with greater psychological resources.

In addition to investigating possible group differences (on the basis of sexual orientation) in mental health, of interest is what factors are associated with adjustment at the preadoptive stage.

Personality

Extraversion is positively related to coping and resilience (Campbell-Sills, Cohan, & Stein, 2006) and may be negatively related to emotional reactivity (Almeida, McGonagle, Cate, Kessler, & Wethington, 2003) and anxiety and depression (Brown, Chorpita, & Barlow, 1998). Thus, it can be conceptualized as a protective factor against poor mental health in preadoptive couples.

Conception and Infertility

Of interest is whether objective and subjective aspects of couples' conception history are related to well-being. Couples who use infertility treatments, in vitro fertilization (IVF), or both may experience poorer well-being than couples who resist medical intervention and turn to adoption sooner. Consequently, the former group may more strongly desire a birth child and thus experience greater loss about their inability to conceive. Other couples may not attempt to have a biological child at all, choosing to adopt for altruistic reasons, health reasons, or age-related reasons (Hollingsworth, 2000) or because they hold expansive definitions of kinship that are not defined by biological ties (Weston, 1991), which may serve a protective function with regard to well-being. Also, experiences with assisted reproduction and fertility treatments have been linked to subjective

impairment in one's sense of self and one's relationships (Andrews et al., 1992). Greater subjective impairment as a result of infertility may in turn be associated with greater depression/anxiety.

Aspects of the Adoption Process

The adoption process itself may place some couples at greater risk of anxiety or depression. Couples who have been waiting longer for a child to be placed with them may experience lower well-being. Indeed, one complication of the transition to adoptive parenthood is the uncertainty in the timing of the process: The wait time for both domestic and international adoptions is quite variable, ranging from as little as a few months to as long as a few years (Levy-Shiff et al., 1990). As the length of the wait time increases, so may couples' anxiety (Sandelowski et al., 1991).

The well-being of couples may also be affected by the type of adoption they are pursuing. Couples pursuing open adoption must wait for a birth mother to choose them and thus may experience feelings of helplessness and fears of rejection (Sandelowski et al., 1991). The unfamiliarity of open adoption may also cause stress for some couples as they wonder about negotiating birth parent relationships (Siegel, 1993). Child placement via the public sector is also characterized by uncertainty, as adoption is not automatic: A period of foster-parenting typically precedes the official adoption. Couples who pursue international adoption may experience less uncertainty than couples who pursue domestic adoption; indeed, many prospective parents choose to adopt internationally specifically to avoid the long wait associated with domestic private adoptions of healthy infants (Grotevant, Dunbar, Kohler, & Esau, 2000). International adoption is characterized by a clearer, more certain path, in that families participate in a home study and then, after a period of waiting, receive a referral for a child. At this point, many families travel overseas to visit with the child whom they will adopt before the actual adoption. In this way, couples who pursue international adoption may feel that it is more likely to guarantee them a child than domestic private adoption, in which placement is contingent on a birth mother choosing them, or public adoption, which involves a period of legal uncertainty before the official adoption.

Social-Contextual Resources

As discussed, social-contextual resources may also impact mental health during this transitional stage. Individuals who perceive high levels of support from family and friends often experience less stress during the transition to biological parenthood (Bird et al., 2002). High levels of partner support are also related to less distress during the transition to biological parenthood (Perren et al., 2003).

The Current Study

Considering the unique challenges that characterize the adoption process, examination of the social-contextual and psychological resources of preadoptive couples is warranted. Our study included lesbian and heterosexual couples who were becoming parents for the first time through adoption (international and domestic, including public sector and private adoption). The experiences of parents who adopt infants/toddlers and those who adopt older children are very different (Brodzinsky et al., 1998). Thus, couples who sought to adopt school-aged children were excluded from the current study. In addition, because of the unique aspects of the first transition to parenthood (Glade, Bean, & Vira, 2005), couples who already had a biological child were excluded.

The following research questions were explored: (a) What factors predict social support from family and friends? Does the degree of perceived support and the factors associated with it vary as a function of sexual orientation? (b) What factors predict well-being (depression and anxiety) in the preadoptive period? Do lesbian couples and heterosexual couples exhibit similar levels of and predictors of well-being?

The effects of demographic variables (age, education, and income) as well as gender (male/female) and sexual orientation (lesbian/heterosexual) were also examined.

Method

Participant Recruitment

Inclusion criteria for the study were the following: (a) couples must be adopting their first child and (b) both partners must be becoming parents for the first time. Adoption agencies throughout the United States were asked to provide study information to

clients who had not yet adopted. Particular effort was made to contact agencies whose Web sites and materials were explicitly inclusive of a variety of family forms. Over 25 agencies agreed to assist. Agencies that declined to assist typically cited (a) staff/time constraints or (b) working with few lesbian clients. Because many same-gender couples may not be "out" to agencies about their sexual orientation (e.g., if adopting internationally), we also enlisted the assistance of gay/lesbian organizations such as the Human Rights Campaign, a large national gay political organization. Given our interest in examining the role of conception-related variables in preadoptive adjustment, gay male couples were excluded from the study.

Procedure

Members of each couple were interviewed separately over the telephone during the preadoption phase.

All couples had completed their home study (an in-depth evaluation and report on the prospective adoptive family that is required of all adoptive parents) and were waiting to be placed with a child. These in-depth, semistructured interviews lasted about 1 hr. Participants were also sent a packet of questionnaires to complete within a week of the interview, which took about 30 min to complete. Partners returned them separately in postage paid envelopes.

Description of the Sample

Descriptive statistics of the major demographic variables and the predictor and outcome variables appear in Table 1. Lesbian and heterosexual couples in the sample lived in similar geographical regions: 32% of lesbians and 21% of heterosexuals lived on the East Coast, 30% of lesbians and 41% of

Table 1. *Means and Standard Deviations for Demographic, Predictor, and Outcome Variables (*N = 75 Couples)

	Total Sample (N = 75)	Lesbian Couples (n = 36)	Heterosexual Couples (n = 39)	Heterosexual Women (n = 39)	Heterosexual Men (n = 39)
Demographics, M (SD)					
Age	38.25 (5.60)	38.75 (6.16)	37.782 (5.18)	37.589 (5.27)	37.974 (4.82)
Income	$55,762 (35,129)	$55,283 (29,376)	$56,697 (40,010)	$49,842 (40,799)	$63,522 (38,519)
Years in relationship	9.127 (4.56)	7.889 (3.68)	10.269 (12.42)		
Psychological, M (SD)					
Anxiety	1.58 (0.40)	1.59 (0.40)	1.59 (0.40)	1.60 (0.45)	1.57 (0.35)
Depression	0.47 (0.34)	0.47 (0.35)	0.46 (0.34)	0.46 (0.31)	0.47 (0.37)
Extraversion	3.33 (0.35)	3.34 (0.38)	3.32 (0.34)	3.35 (0.35)	3.28 (0.34)
Infertility symptoms	2.14 (1.59)	1.51 (1.77)	2.73 (1.14)	2.77 (1.32)	2.69 (0.95)
Social contextual, M (SD)					
Family support	2.94 (0.75)	2.79 (0.80)	3.07 (0.68)	3.25 (0.64)	2.89 (0.66)
Friend support	3.32 (0.47)	3.44 (0.36)	3.20 (0.53)	3.50 (0.34)	2.89 (0.50)
Relationship quality	8.06 (0.62)	8.07 (0.57)	8.06 (0.67)	8.24 (0.50)	7.86 (0.77)
Adoption/conception, no. of couples (%)					
% tried to have bio child	51 (68)	18 (50)	33 (85)		
% tried infertility treatment	32 (43)	13 (36)	19 (49)		
% tried in vitro fertilization	16 (21)	6 (17)	10 (26)		
% domestic adoption	55 (73)	30 (83)	25 (64)		
% international adoption	20 (27)	6 (17)	14 (36)		
Months waiting to adopt, M (SD)	8.93 (9.97)	6.53 (5.60)	11.15 (5.03)		

heterosexuals lived on the West Coast, 20% of both lesbians and heterosexuals lived in the Midwest, 18% of both lesbians and heterosexuals lived in the South. With regard to racial makeup, of the 72 lesbian women, 5 were Latina, 1 was African American, and 1 was biracial; the remainder (90%) were Caucasian. Among the 39 heterosexual women, 2 women were multiracial; the remainder (95%) were Caucasian. Among the 39 heterosexual men, 3 were multiracial, 2 were Latino, and 1 was Filipino; the remainder (85%) were Caucasian. Overall, the sample was fairly well educated. Among the lesbian women, 6 (8%) graduated high school, 7 (10%) had associate's degrees or some college, 20 (28%) had bachelor's degrees, 29 (40%) had master's degrees, and 9 (14%) had PhD/MD/JDs. Among the heterosexual women, 2 (6%) had graduated high school, 2 (6%) had associate's degrees, 13 (33%) had bachelor's degrees, 19 (49%) had master's degrees, and 2 (6%) had PhD/MD/JDs. Among the men, 1 (3%) had graduated high school, 11 (28%) had associate's degrees or some college, 18 (46%) had bachelor's degrees, 5 (13%) had master's degrees, and 4 (10%) had PhD/MD/JDs. These educational levels are higher than national estimates for adoptive couples: Among same-sex adoptive couples, 24% have high school degrees (or less), 22% have some college, 20% have college degrees, and 34% have graduate degrees, whereas among married heterosexual couples, 35% have high school degrees or less, 32% have some college, 19% have college degrees, and 13% have advanced degrees (Gates, Badgett, Macomber, & Chambers, 2007).

Lesbians worked more hours ($M = 39.93$, $SD = 9.92$) than heterosexual women ($M = 35$, $SD = 11.52$), $t(109) = 2.713$, $p < .01$ and fewer hours than heterosexual men ($M = 44.75$, $SD = 5.89$), $t(109) = -3.15$, $p < .01$. Men worked more hours than their wives, $t(38) = 4.81$, $p < .001$.

Measures

Demographic Variables

Age, income, and education were included as controls in predicting social support and well-being. Education was coded from 1 to 6, 1 = *less than high school*, 2 = *graduated high school*, 3 = *associates' degree/some college*, 4 = *college degree*, 5 = *master's degree*, 6 = *PhD/MD/JD*.

Sexual orientation was coded using effects coding (*lesbian* = 1, *heterosexual* = −1) and gender was also coded using effects coding (*female* = 1, *male* = −1); thus, these two variables were centered at 0. Sexual orientation and gender were included in all analyses.

Social-Contextual Variables

Social support from family and friends: Perceived Social Support from Family/Friends (Procidano & Heller, 1983). This is a Likert-type scale designed to assess perceived support from family (20 items) and friends (20 items). Higher values indicate more support. Alphas were .97 for lesbians, .86 for heterosexual women, and .96 for men (family) and .84 for lesbians, .81 for heterosexual women, and .90 for men (friends).

Relationship quality: Relationship Questionnaire (Braiker & Kelly, 1979). This is a Likert-type scale (10 items) that assesses feelings of closeness and attachment (i.e., love). One item, assessing physical intimacy, was omitted because it detracted from the scale's reliability. Higher values indicate more love. Alphas were .77, .72, and .87 for lesbians, heterosexual women, and men, respectively.

Relationship duration. Length of current relationship was measured in years.

Individual/Psychological Variables

Extraversion: NEO Personality Inventory—Revised (Costa & McCrae, 1992). The Extraversion subscale of the NEO Personality Inventory—Revised (50 items), a Likert-type scale, was used as an index of personality. Internal consistency estimates for the facets range from .60 to .90 and the scale has good test-retest reliability. Alphas were .86, .86, and .85 for lesbians, heterosexual women, and men, respectively.

Depression: The Center for Epidemiologic Studies Depression Scale (Radloff, 1977). This is a Likert-type scale that assesses depressive symptoms (20 items). Higher scores indicate more symptoms. It has established validity and good internal consistency. Alphas were .84 for lesbians, .80 for heterosexual women, and .88 for men.

Anxiety: State-Trait Anxiety Inventory (Spielberger, 1983). The state anxiety subscale of the State-Trait Anxiety Inventory (STAI) was used (20 items). The subscale is measured on a Likert scale. Higher scores represent more symptoms. The STAI has good internal consistency and good test-retest

reliability. Alphas were .86 for lesbians, .86 for heterosexual women, and .87 for men.

Impact of infertility. A 6-item scale was created on the basis of the clinical and research literature to assess perceived impact of infertility. Participants completed it if they or their partners had tried to conceive. For each item, they indicated how their lives had been affected ($-3 = impaired$ to $+3 = enhanced$; $0 = no influence$) with regard to: communication with partner, partner relationship, general effectiveness, effectiveness at work, relationships with people with young children, and relationships with family. Low scores indicated more impairment. Couples that did not experience infertility were given a score of 0. Alphas were .86, .63, and .64 for lesbians, heterosexual women, and men, respectively.

Conception/Adoption Variables

Tried to have a biological child. A single item asked whether couples had tried to have a biological child ($0 = did not try$, $1 = tried$).

Use of infertility treatments. A single item asked whether couples had used fertility medications (e.g., Clomid) ($0 = no treatments$, $1 = tried treatments$).

Use of in vitro fertilization. A single item asked if couples had tried IVF ($0 = did not try$, $1 = tried$).

Adoption type. Couples specified the type of adoption they were pursuing: private open domestic, public domestic, or international. We categorized (and dummy coded) the type of adoption pursued as *domestic* (1) versus *international* (0), with domestic including both public sector and private open adoptions. As only 9 of 39 lesbian couples and 3 of 42 heterosexual couples were pursuing public adoptions, we ran analyses that excluded those who were doing public adoptions (i.e., comparing domestic adopters with international adopters). No notable differences on the constructs of interest were found.

Waiting time. Number of months since the home study was conducted.

Analytic Strategy

Because we examined partners who were nested in couples, it was necessary to use a method that would account for the within-couple correlations in the outcome scores. Multilevel modeling (MLM) permits examination of the effects of individual- and dyad-level variables (Lyons & Sayer, 2005), accounts for the extent of the shared variance, and provides accurate standard errors for testing the regression coefficients relating predictors to outcome scores (Goldberg & Sayer, 2006). Specifically, MLM adjusts the error variance for the interdependence of partner outcomes within the same dyad, which results in more accurate standard errors and associated hypothesis tests.

An additional methodological challenge is introduced in the study of dyads when there is no meaningful way to differentiate the two dyad members (e.g., male/female). In this case, dyad members were considered to be exchangeable or interchangeable (Kashy & Kenny, 2000). The hierarchical linear models tested were two-level random-intercept models such that individual partners (Level 1) were nested in couples (Level 2). To deal with intracouple differences, the Level 1 model was a within-couples model that used information from both members of the couple to define one parameter—an intercept or average score—for each couple. This intercept is a random variable that is treated as an outcome variable at Level 2. The Level 2 model was a between-couples model that tested the significance of couple-level predictors such as sexual orientation. The MLM program HLM6 (Raudenbush, Bryk, & Congdon, 2004) was used to estimate the parameters in the models. Separate estimates of the measurement error were provided for lesbian women, heterosexual women, and heterosexual men. All continuous variables were grand mean centered. For all analyses, there were 150 participants nested within 75 couples.

MLM was used to determine mean differences in individual-level predictors as well as in the examination of the outcome variables. We followed the same analytic strategy for each variable. Our first step was to fit a random-intercept model (Kashy & Kenny, 2000; Raudenbush & Bryk, 2002) without predictors (Model 1) in order to determine whether there was sufficient variability to proceed. Our next model (Model 2) added gender at Level 1 (a property of the individual) and sexual orientation (lesbian/heterosexual) at Level 2 (a couple characteristic), allowing us to evaluate the independent effects of gender (male/female) and sexual orientation (heterosexual/lesbian). Because we used effects coding ($-1, 1$), we interpreted the difference between men and women and between heterosexual and lesbian couple to be two times the parameter estimate. A positive estimate means that the average was higher for women

than men or higher for lesbian than heterosexual couples. The average score for lesbian (or heterosexual) couples was obtained by adding (or subtracting) the parameter estimate to the average for the overall sample: $\gamma 00$ (average in outcome) $+ \gamma 11$ (sexual orientation effect) $+ \gamma 01$ (sex effect).

The approach to analyzing outcome variables was similar. First, we ran a model with no predictors to examine couple-level differences in social support and mental health outcomes. Next, we introduced sexual orientation and gender as predictors. Then, we added the other variables of interest. Our strategy was to introduce variables separately and only retain significant effects. Variables were retained in the full models only if they provided significant prediction when tested in isolation. Finally, we tested for interactions between predictors.

Results

Table 1 contains means and standard deviations for all major predictor and outcome variables for lesbians, heterosexual women, and heterosexual men. Given the exploratory nature of this research, we also report marginal (trend) effects.

Demographic and Predictor Variables: Effects of Gender and Sexual Orientation

In preliminary analyses, we examined mean differences by type of couple (lesbian vs. heterosexual) on the demographic and predictor variables. For dichotomous variables, we report the results of chi-square tests of proportions. These analyses revealed that heterosexual couples were more likely to have attempted to have a biological child than lesbian couples, $\chi^2(1, 75) = 10.31$, $p < .001$. However, they were no more likely to have used fertility medications, $\chi^2(1, 75) = 0.40$, $p > .10$ or to have pursued IVF, $\chi^2(1, 75) = 0.90$, $p > .10$. They were, however, more likely to be pursuing international adoption, at the level of a trend, $\chi^2(1, 75) = 3.54$, $p = .05$.

Analyses of variance were used to examine the effects of gender and sexual orientation on demographic and predictor variables that were continuous in nature. Differences by gender and sexual orientation are reported separately. The effects of gender and sexual orientation on age, education, and income (demographic variables), infertility symptoms

and extraversion (psychological variables), love and relationship duration (relationship variables), and length of waiting (adoption variable) were examined. (Findings for social support and well-being are discussed in the context of our research questions.) These analyses revealed two effects for sexual orientation: heterosexual couples had been in their relationships for longer than lesbian couples, $F(1, 74) = 5.39$, $p < .05$, and they had been waiting longer for a child, $F(1, 74) = 4.20$, $p < .05$. Two effects were also found for gender. Women in the sample had more education than men, $F(1, 148) = 4.29$, $p < .05$. Women also reported greater love for their partners, $F(1, 148) = 6.20$, $p = .05$.

The intraclass correlation (ICC), which provides information about the similarity of partners within couples, was computed for each outcome. The ICC was .31 for family support, indicating a moderate relationship between dyad members in terms of their perceptions of support; .06 for friend support, indicating little relationship between dyad members; .72 for depression, indicating a strong relationship; and .59 for anxiety, indicating a moderately strong relationship.

Predicting Family Support

We fit a series of models to predict family support (Table 2). First, we fit a baseline model with no predictors (Model 1), which indicated variability to be explained in family support ($p < .001$). Gender and sexual orientation were added to the model to examine whether men and women or lesbians and heterosexual partners or both perceived different levels of support, with respect to family (Model 2). This revealed that sexual orientation had an effect on family support, $B = -.23$, $t(73) = -3.29$, $p < .01$, such that lesbians perceived less support than heterosexual couples. Gender also predicted family support, $B = .17$, $t(147) = 2.64$, $p < .01$, with women perceiving greater support. Average perceived support was 2.79 for lesbians (i.e., $\gamma 00$ [2.86] $- \gamma 11$ [.23] $+ \gamma 01$ [.17] $= 2.79$), 3.25 for heterosexual women, and 2.92 for men.

As there was significant residual variance, $\chi^2 = 96.32$, $df = 2$, $p < .001$, we proceeded to include additional predictors. First, we added control variables (age, income, and education) to the model with gender and sexual orientation alone. Then, we added the following variables, in isolation: relationship duration, adoption type, whether the couple had

Table 2. *Predicting Family and Friend Support From Gender, Sexual Orientation, and Major Predictors*

	Model 1 β (*SE*)	Model 2 β (*SE*)	Final Model β (*SE*)
Family support			
Intercept	3.02 (0.07)***	2.86 (0.07)***	2.89 (0.07)***
Sexual orientation		−0.23 (0.07)**	−0.19 (0.07)**
Gender		0.17 (0.06)**	0.14 (0.06)*
Relationship duration			0.01 (0.01)
Relationship Duration × Gender			0.03 (0.01)**
Deviance	13729.75	13633.43	13570.66
No. of parameters	2	4	6
Deviance test (Δχ²)		χ² = 96.32, *df* = 2, *p* < .001	χ² = 62.77, *df* = 2, *p* < .001
Friend support			
Intercept	3.22 (0.05)***	3.17 (0.05)***	3.18 (0.044)***
Sexual orientation		0.03 (0.04)	−0.01 (0.04)
Gender		0.30 (0.04)***	0.29 (0.04)***
Extraversion			0.42 (0.13)**
Family support			−0.01 (0.06)
Relationship duration			0.02 (0.01)*
Deviance	4722.14	2432.98	2361.84
No. of parameters	2	4	7
Deviance tests (Δχ²)		χ² = 1989.16, *df* = 2, *p* < .001	χ² = 71.14, *df* = 3, *p* < .001

Note. The betas (β) represent unstandardized coefficients. The change in chi-square test (Δχ²) is based on comparing the deviance statistic of the current model to that of the prior model. We use a chi-square test to test the reduction in deviance.
*p < .05. **p < .01. ***p < .001.

tried to have a biological child, and extraversion. Only relationship duration emerged as important, such that adults who had been in their current relationships longer perceived higher levels of support from their families. Thus, relationship duration was included in a final model with gender and sexual orientation. Finally, interactions between relationship duration and gender and relationship duration and sexual orientation were tested. This revealed a significant interaction between relationship duration and gender, such that women (regardless of sexual orientation) who were in longer relationships perceived more family support, $B = .03$, $t(145) = 2.76$, $p < .01$ (final model).

Predicting Friend Support

We followed a similar strategy to examine friend support (Table 2). Analyses revealed that gender had an effect on level of perceived friend support, $B = .30$, $t(147) = 7.01$, $p < .001$, such that all women perceived more support than men, on average. Sexual orientation, however, did not affect perceived level of friend support. Following the calculation

strategy outlined above, the mean for support was 3.44 for lesbians, 3.50 for heterosexual women, and 2.90 for men.

The same set of predictors was examined for friend support. Family support was also examined as a predictor, given that in the absence of satisfactory family support, lesbians (and heterosexual couples) may seek out kinship networks that consist largely of friends. Relationship duration, extraversion, and family support emerged as significant when tested by themselves in the model with sexual orientation and gender. Relationship duration and extraversion were positively related to friend support, and family support was negatively related to friend support. These three variables were entered into a model with sexual orientation and gender. In this final model, relationship length and extraversion, but not family support, retained their significance. This indicated that family support had no effect over and above relationship length: Relationship length was a more powerful predictor of friend support, and it was strongly associated with both family and friend support. Thus, the final model indicated that relationship duration was positively associated with friend

support such that partners in longer relationships tended to perceive greater support, $B = .02$, $t(72) = 2.45$, $p < .05$. As expected, extraverted partners perceived greater support from friends, $B = .42$, $t(144) = 3.27$, $p < .001$. Gender retained its significance, such that women perceived more support from friends. No interactions emerged.

Predicting Well-Being Outcomes: Depression

Predictors of mental health were examined using the same strategy outlined above. In addition to sexual orientation, gender, and demographic variables, predictors of depression included psychological variables (extraversion and infertility symptoms), social-contextual variables (family/friend support, love,

and relationship length), aspects of the adoption (adoption type and time waiting), and conception (attempts to conceive, use of fertility treatments, and use of IVF).

Table 3 summarizes the estimates from the series of models we fit. Neither sexual orientation nor gender emerged as predictors of depression (Model 2); nevertheless, these variables were included in subsequent models as controls. Next, anxiety was included as a control, given that, consistent with prior research, anxiety and depression were moderately correlated in the sample ($r = .59$, $p < .001$; Model 3). As detailed in Table 3, our final model included gender, sexual orientation, and anxiety as controls, plus variables that emerged as significant when tested in isolation: IVF attempts (conception variable),

Table 3. *Predicting Depression and Anxiety From Gender, Sexual Orientation, and Major Predictors*

	Model 1 β (SE)	Model 2 β (SE)	Model 3 β (SE)	Final Model β (SE)
Depression				
Intercept	0.47 (0.03)***	0.47 (0.04)***	−0.17 (0.12)	0.14 (0.21)
Sexual orientation		0.01 (0.03)	0.01 (0.03)	−0.01 (0.03)
Gender		−0.01 (0.03)	−0.01 (0.03)	−0.10 (0.07)
Anxiety			0.41 (0.07)***	0.42 (0.07)***
Tried in vitro?				0.15 (0.06)*
Infertility sex				0.12 (0.06)*
Family support				−0.09 (0.04)*
Deviance	907.83	907.74	785.05	751.96
No. of parameters	2	4	5	9
Deviance tests (Δχ²)		$\chi^2 = 0.09$, $df = 2$, $p > .500$	$\chi^2 = 122.69$, $df = 1$, $p < .001$	$\chi^2 = 33.09$, $df = 4$, $p < .001$
Anxiety				
Intercept	1.58 (.03)**	1.58 (0.04)***	1.28 (0.05)***	1.58 (0.03)***
Sexual orientation		−0.01 (0.04)	.01 (0.04)	−0.01 (0.03)
Gender		0.01 (0.04)	.02 (0.04)	0.03 (0.04)
Depression			.64 (0.12)***	0.57 (0.12)***
Income				−0.01 (0.01)*
Education				−0.05 (0.03)†
Love				−0.10 (0.06)†
Adoption type				0.10 (0.05)*
Waiting				0.01 (0.01)†
Deviance	1001.92	1001.29	846.67	794.31
No. of parameters	2	4	5	10
Deviance tests (Δχ²)		$\chi^2 = 0.63$, $df = 2$, $p > .500$	$\chi^2 = 154.62$, $df = 1$, $p < .001$	$\chi^2 = 52.36$, $df = 5$, $p < .001$

Note. The betas (β) represent unstandardized coefficients. The change in chi-square test (Δχ²) is based on comparing the deviance statistic of the current model to that of the prior model. We use a chi-square test to test the reduction in deviance.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

infertility symptoms (psychological), and family support (social contextual). Anxiety continued to be related to depression, $B = .42$, $t(142) = 5.98$, $p < .001$; having tried IVF was positively related to depression levels, $\beta = .15$, $t(72) = 2.40$, $p < .05$; higher perceived impairment because of infertility was related to higher depression, $B = -.12$, $t(142) = 1.94$, $p < .05$; and low family support was associated with greater depression, $B = -.09$, $t(142) = -1.85$, $p < .05$.

Predicting Well-Being Outcomes: Anxiety

A model was fit with anxiety as the outcome (Table 3). The same procedure was followed as with depression. Neither gender nor sexual orientation emerged as significant, indicating that levels of anxiety did not differ for lesbian versus heterosexual couples or men versus women (Model 2). Depression was associated with anxiety (Model 3). We focus on the final model (Model 4), which included sexual orientation, gender, and depression as controls, as well as predictors that emerged as significant when tested in isolation: education, income, love, adoption type, and length of waiting. Higher income was linked to less anxiety, $B = -.01$, $t(141) = -2.10$, $p < .05$; partners with more education were somewhat less anxious, $B = -.05$, $t(141) = -1.88$, $p < .10$; greater love for one's partner was associated with somewhat less anxiety, $B = -.10$, $t(141) = -1.60$, $p = .10$; partners who were pursuing domestic adoption reported more anxiety, $B = .10$, $t(71) = 2.05$, $p < .05$; and partners who had waited longer were somewhat more anxious, $B = .01$, $t(71) = 1.63$, $p < .10$.

Discussion

As the first investigation of preadoptive functioning among lesbian and heterosexual couples, our study provides important insight into their experience of the adoption process. Heterosexual couples were more likely to have tried to conceive, and therefore lesbian couples were more likely to be preferential adopters. However, consistent with prior research (Shelley-Sireci & Ciano-Boyce, 2002), lesbians were not less likely to pursue IVF or to use fertility medications, suggesting that some lesbian couples who do attempt to have a biological child tend to exhaust all possible options (for one parent, at least)

before turning to adoption. Lesbians in the sample were less likely to be pursuing international adoption (which may explain the fact that they had also been waiting for a shorter period of time). This finding may be a function of sampling bias, but it may also be because of recent shifts in adoption policies and practices. Some countries now require signed affidavits of heterosexuality or explicitly privilege applications from married couples (e.g., China). Adoptions from countries that were previously popular among lesbians (e.g., Guatemala) have recently been suspended or are slowed (Joint Council on International Children's Services, 2007). Lesbians who do adopt internationally must be secretive about their sexual orientation, which may result in poor preadoptive preparation in that agencies do not know to address the unique issues associated with gay parenthood. Similarly, adoption agencies may address issues that are in fact irrelevant (e.g., issues faced by single parents). Future research should explore this possibility.

Turning to the findings on social-contextual resources, it appears that although family support is often the most relied upon form of support in early parenthood among heterosexual couples (Glade et al., 2005), this support may be less available for lesbians (Kurdek, 2005). However, the finding that women who had been in their relationships longer perceived more support than men suggests that, although lesbians receive less support from their family overall, being in a relationship for a longer duration prior to adopting may help to ensure greater support from biological kin (Connolly, 2005). The length of couples' union is a signal of commitment and may communicate a message of permanency to family members. Alternatively, family support may foster relationship stability (Patterson, Ciabattari, & Schwartz, 1999). Longitudinal studies can help to clarify these relationships.

Being in a longer relationship was also associated with higher levels of perceived support from friends. An indicator of commitment, longer relationships may invite greater recognition and support from friends. Partners in longer term relationships therefore possessed greater social-contextual resources than partners in shorter term relationships, which may facilitate a less stressful transition to parenthood (Belsky, 1984). Individual personality characteristics (i.e., being extraverted) may also increase the availability of support from friends or at least the perception of support (Swickert et al., 2002). Consistent

with evidence that women tend to have more confidants than men (Shumaker & Hill, 1991), women in the sample perceived higher levels of support from friends than men. Sexual orientation, however, did not influence perceived friend support: Lesbians did not make up for lack of family support with support from friends. Future studies should differentiate between instrumental (practical) and emotional support, as this might indicate, for example, that lesbians receive more instrumental support (but no more emotional support) from friends compared to heterosexual couples, postadoption. Adoption professionals who work with lesbian and heterosexual couples in the preadoptive phase should assess a range of types and potential sources of support in order to gain a comprehensive portrait of couples' social resources.

Despite the centrality of biological ties in societal constructions of kinship (Hargreaves, 2006), couples who did not attempt to conceive perceived no less support from family or friends than couples who tried to conceive. Furthermore, our expectation that international adopters might experience less support (especially from family) than domestic adopters because of the cultural or racial differences that accompany international adoptions was not supported. Perhaps more important is the actual race of the child: Qualitative research by de Haymes and Simon (2003) suggested that couples who adopt interracially receive less support from family postadoption.

Interestingly, it was neither sexual orientation nor gender, but rather aspects of the conception and adoption process that emerged as salient predictors of mental health. That neither gender nor sexual orientation had any main effects on well-being may reflect the fact that adoptive parents are all carefully screened and thus represent a fairly homogeneous group with fairly high levels of psychological resources. Furthermore, the finding that sexual orientation did not interact with any of the significant predictors (their effects did not differ as a function of sexual orientation) suggests similar processes in preadoptive lesbian and heterosexual couples, thereby challenging stereotypes of sexual minorities as fundamentally different (e.g., less mentally stable) from heterosexuals. However, further research is needed to determine whether this finding extends beyond this sample.

The findings indicate path-specific influences of social resources on mental health. Conception-related characteristics (i.e., losses because of infertility) were related to more depressive symptoms such as sadness and lethargy, whereas adoption-related factors were related to symptoms of anxiety such as nervousness and tension (Matthey, Barnett, Howie, & Kavanagh, 2003). Thus, depression in this sample was related to unresolved issues from the past, which are largely out of one's control, whereas anxiety was related to issues concerning the stressful present and future, including the adoption process. The findings regarding depression are consistent with prior research, which indicates that objective aspects of infertility (unsuccessful IVF) and subjective aspects of infertility (perceived impairment) are associated with distress (Newton, Sherrard, & Glavac, 1999; Schmidt, 2006). Preadoption preparation programs should assess the residual impact of infertility on depression, given that depression can interfere with effective parenting (Belsky, 1984).

In terms of anxiety, the finding that fewer economic resources was associated with increased anxiety is unsurprising given the expense associated with adoption. As expected, couples who were pursuing domestic adoption, which is characterized by notable uncertainty and lack of control (Daly, 1989), were more anxious than international adopters. Relatedly, couples who had been waiting longer for a child were at somewhat greater risk for anxiety (Sandelowski et al., 1991). As the wait for a child drags on, couples are prone to worry and rumination. Practitioners who work with couples adopting domestically or experiencing long waits, or both, should employ strategies aimed to counteract anxiety (e.g., providing responsive services such as support groups). Finally, feeling supported by people outside of one's partner (i.e., family members) may help to alleviate depressive symptoms, whereas feeling connected to one's partner may be crucial in weathering stress and anticipatory anxiety (although it is important to note that this latter finding emerged at the trend level). Alternatively, perhaps depressed partners perceive and seek out less support from family and anxious partners view their intimate relationships more negatively.

Limitations and Conclusions

Our study is limited in several ways. First, our study relied on cross-sectional data from the preadoptive period. Although this is appropriate in light of the

study aims, future work should examine how the identified predictors relate to social and psychological resources over time. Second, we did not distinguish between emotional and instrumental support. Different findings might be obtained had we differentiated between these aspects of social resources. Third, we did not explore whether couples' perceptions of their adoption workers were related to well-being. Lesbians' perceptions of agency support and/or gay-friendliness may impact their preadoptive functioning. Fourth, the low reliability of the infertility symptoms scale (likely because of the low number of items) for heterosexual couples is a limitation. Findings related to this variable should be viewed with caution. Fifth, this is a fairly small sample that is well educated and affluent. Although such characteristics are typical of many adopters, they are not representative of the entire pool of adopters (Gates et al., 2007). Finally, this study excluded gay men, who are increasingly becoming parents through adoption as well as other means (Matthews & Cramer, 2006).

Despite these limitations, the present study expands our understanding of the preadoptive phase and has implications for preadoptive support of a wide range of couples. First, the findings indicate specific factors that are linked to depression and anxiety during the preadoption period. Professionals who engage couples in the preadoptive phase should consider tailoring their prevention efforts accordingly. For example, infertility issues may be key targets for depressed partners, whereas aspects of the adoption process may be more salient for anxious partners. Indeed, preadoption programs that encourage couples to explore their experiences and concerns regarding infertility and adoption tend to be well received by couples, particularly when they are conducted in a group context (Farber, Timberlake, Mudd, & Cullen, 2003). Second, these findings suggest that social-contextual resources may help to mitigate distress (and enhance psychological resources) in preadoptive parents. A key role for adoption professionals may lie in providing opportunities for social connection and community building. For example, preadoptive parents who participate in informal adoption support groups (e.g., with other waiting parents) find these groups helpful and reassuring, in that they permit discussion and clarification of worries and experiences in a safe and supportive atmosphere (Farber et al.; Wind, Brooks, & Barth, 2005). Adoption preparation classes can also educate applicants about the importance of building and maintaining kin support and can assist applicants in evaluating whether their planned support systems are appropriate and effective.

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