

A comparison of the sexual well-being of new parents to community couples

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Abstract

Background. Changes in sexual well-being are common for new mothers and their partners following the birth of a baby. However, most research has sampled mothers not couples, assessed only one aspect of sexual well-being, and has not included a control sample of couples.

Aim. This study aimed to compare sexual well-being (i.e., sexual frequency, sexual satisfaction, sexual desire, sexual distress) of first-time mothers and their partners in the transition to parenthood (first 12 months postpartum) to community couples who are not actively in this transition. We also compared the sexual well-being within couples (e.g., mothers to their partners).

Methods. Ninety-nine couples in the transition to parenthood completed measures of sexual satisfaction, sexual desire, sexual distress, and sexual frequency at 3-, 6-, and 12-months postpartum, and 104 community couples completed the measures at a single time-point.

Outcomes. Measures included: (i) Global Measure of Sexual Satisfaction Scale; (ii) Female Sexual Function Index and International Index of Erectile Function sexual desire subscale; (iii) Female Sexual Distress Scale-Revised; and (iv) checklist of sexual behaviours.

Results. Compared to community controls, new parents reported lower sexual satisfaction, lower sexual desire, and higher sexual distress at all time-points; however, these group differences became less pronounced by 12-months postpartum. By 6-months postpartum, there was no difference in sexual frequency between postpartum couples and the control group. Mothers experienced persistently lower sexual desire relative to their partners throughout the 12-months postpartum. Between 39% to 59% of mothers reported clinically low sexual desire and 47% to 57% reported significant sexual distress at all time-points. There were no significant differences

reported in sexual satisfaction, sexual desire, or sexual distress between women and their partners in the community sample.

Clinical Implications. Clinicians should be aware that sexual well-being may be compromised in new parents and some of these challenges are still present for new parents at 12-months postpartum. Findings can be used to educate new parents regarding their expectations about postpartum sexual well-being.

Strengths & Limitations. The strengths of the current study are the dyadic approach, assessing multiple aspects of sexual well-being in new parents over time, and the comparison to a community sample. An important limitation was that the control sample was not followed over time.

Conclusion. Education regarding postpartum sexual well-being should be incorporated in routine peri- and post-natal healthcare practices to support new parents in developing realistic expectations about changes during the transition to parenthood, potentially preventing undue distress.

Keywords. *Postpartum Sexuality, Parenthood, Postpartum Sexual Health, Couples*

Introduction

The transition to parenthood (TTP) is often challenging for couples. Although new parents are generally excited at the arrival of their child, the postpartum period—the year following the birth of a child—is accompanied by significant biological, physical, psychological, and social changes^{1,2}. As many as 36% to 58% of new parents experience declines in their sexual well-being (i.e., sexual frequency, sexual satisfaction, sexual desire, sexual distress) relative to pre-pregnancy^{3,4}. Changes in parents' sexual relationships have important consequences for the parents' relationship satisfaction⁵, and can impact the health and well-being of all members of the family, including the child⁶⁻⁸. Although declines in sexual well-being are common during the TTP for both parents, the literature has focused less on partners who did not give birth^{9,10}. Additionally, no previous studies have compared the sexual well-being of postpartum couples at multiple points throughout the TTP to a community sample not currently in this transition. Such a comparison would provide empirical support for long-standing clinical observations regarding the challenges new parents face with regard to their sexual well-being.

Changes to Sexual Well-being in the TTP

Even though all couples are susceptible to fluctuations in sexual well-being over the course of their relationship, those in the TTP are particularly vulnerable given the unique biopsychosocial changes that occur during pregnancy and postpartum^{11,12}. According to the biopsychosocial model applied to sexual well-being in the TTP, biological (e.g., hormonal changes related to breastfeeding, instrumental delivery, perineal trauma), psychological (e.g., postpartum depression) and social (e.g., changing identities, balancing new responsibilities) factors contribute to declines in sexual well-being. While most couples have little or no sex in the first month postpartum^{11,13} – and clinicians often recommend waiting six weeks after

childbirth before resuming vaginal intercourse¹⁴ – by 12 weeks postpartum, 78% to 90% have resumed vaginal intercourse¹⁵⁻¹⁷. Upon resumption of vaginal penetration, 30% to 62% of women experience discomfort or pain, potentially compounding the declines to sexual well-being¹¹. Frequency of other sexual behaviours (e.g., fellatio, cunnilingus, masturbation, vaginal sex) also increase over the first 12 months postpartum and tend to return to pre-pregnancy rates by one year postpartum^{11, 18}.

Sexual satisfaction—one’s subjective evaluation of the positive and negative aspects of their sexual relationship¹⁹—also changes during the TTP. The limited cross-sectional and longitudinal studies sampling first-time parents (typically separately, i.e., in non-dyadic studies), have found that on average, parents reported feeling “discontent” or “partly content” with their sexual relationship, with a greater proportion of new fathers¹ than new mothers feeling sexually-dissatisfied from pregnancy through to 12-months postpartum^{3, 13, 20, 21}.

New mothers and fathers also report differences in their sexual desire during the TTP²². Both mothers and fathers endorse concerns about sexual desire discrepancy, with fathers reporting greater interest in sexual activity, and that these concerns were not likely to be resolved by 12-months postpartum^{3, 23, 24}. Prospective studies sampling new mothers have also observed significant declines in sexual desire at 3-months postpartum relative to pre-pregnancy, which improve over time but persist even at 6-months postpartum^{25, 26}.

For some new parent couples, changes in their sexual relationship are experienced as distressing^{27, 28}. To our knowledge, limited research has been conducted on sexual distress—negative feelings associated with one’s sexual relationship²⁹—in the TTP^{27, 28}. In one study,

¹ The term “father” is used in this article when the study being cited sampled male partners only. The term “partners” is used when the sample of partners to women who gave birth is gender/sex diverse, as in the current study.

nearly 90% of new parents endorsed more than ten sexual concerns in the year following childbirth that they perceived to be moderately distressing²⁷. Although sexual concerns can be a common experience for many couples not in the TTP³⁰, the number of novel sexual concerns that new parents report suggest that this may be a more distressing period³¹.

In summary, past literature suggests that new parents experience challenges with their sexual well-being in the year following the birth of their child. Even though frequency of sexual activity may return to pre-pregnancy levels by 12-months postpartum, other important aspects of sexual well-being do not necessarily follow the same pattern, nor do these patterns look similar for mothers and fathers. Mothers often bare a heavier burden with respect to their recovery from childbirth, childcare, and housework duties, which may account for more adverse impacts to their sexual well-being relative to their partners^{32, 33}.

Current Study

The majority of the extant research is cross-sectional and focuses on mothers' sexual function, neglecting the experience of fathers and the interdependence of couples' sexual well-being^{10, 34}. Our understanding is further limited because few studies have evaluated factors other than frequency of vaginal intercourse, which does not capture the entirety of behaviours that couples engage in thereby underestimating the frequency of sexual behaviours, and is heteronormative (reviewed in ¹¹). Although challenges and stressors in the postpartum period change over time, even fewer studies have sampled changes across the TTP (i.e., across multiple time-points) to offer a comprehensive view of new parents' sexual well-being^{3, 20, 35-38}.

The current study aims to address these gaps by comparing new parents' sexual well-being across 3-, 6-, and 12-months postpartum to a community sample of couples who are not in the TTP (i.e., who have no children or do not have children under the age of one year).

Specifically, we compared mothers to community women and TTP partners to community partners at each time-point in order to better understand the extent to which new parents' sexual well-being may be compromised. In addition, we examined within-couple differences between couple members in the TTP and couple members who are not in the TTP at each time-point. This examination allows us to identify within-couple discrepancies in sexual well-being, which likely impacts both members of the couple. We controlled for the interdependence between partners by sampling couples. Based on prior literature, we hypothesized:

1. Women in the TTP would report lower sexual satisfaction, sexual desire, and higher sexual distress relative to community women at each time-point, and the magnitude of these differences would become smaller over time.
2. Partners of women in the TTP would report lower sexual satisfaction and sexual desire, and higher sexual distress compared to community partners. However, the magnitude of these differences would decrease over the 12-month period.
3. Compared to their own partners, women who gave birth would report higher sexual satisfaction, but lower sexual desire and higher sexual distress than their partners, and these differences would lessen in magnitude over the course of the TTP.
4. Couples in the TTP would report lower sexual frequency than community couples, and this difference would reduce in magnitude over time.
5. There would be no difference in sexual satisfaction among women and men in community couples³⁹. Community partners would have higher sexual desire due to the established discrepancies in sexual desire between men and women^{36, 40, 41}. No a priori hypothesis was formed regarding levels of sexual distress within members of the community couples due to lack of prior research.

Materials and Methods

Participants and Procedure

Couples were recruited separately for the TTP and community samples. The data for the current study were drawn from larger studies (see additional studies using new mothers' data from the TTP sample^{42, 43} and community couples sample^{44, 45}). All couples in the TTP sample and 73% of the community sample were recruited from Canada. Participants from both samples were required to be 18 years or older, fluent in English, and have access to a personal email account. Participants were excluded if they had unmanaged, self-reported medical or psychiatric illnesses. All recruitment materials clearly stated that the study was inclusive of all couples. Once couples in both samples were recruited and informed consent was obtained, participants were emailed links to surveys using the Qualtrics Research Suite survey software and responded to measures assessing their sexual satisfaction, sexual desire, and sexual distress, with only mothers reporting sexual frequency for the couple. Couple members were instructed to complete their surveys independently from each other. Participation was encouraged through phone call reminders from a research assistant if the participant had not completed their survey within one week, and email follow-ups after 2 and 3 weeks³¹. Survey links expired after 4 weeks. The authors' institutional research ethics boards approved the studies.

TTP Sample

Couples in the TTP were recruited between 18 and 22 weeks of pregnancy ($M = 20.73$ weeks; *range*: 18 to 26 weeks, $SD = 1.14$) from the [blinded for peer review] from January 2015 to August 2017 by trained research assistants. Additional inclusion criteria for couples in the TTP sample included women who were primiparous and had an uncomplicated singleton pregnancy, as parents of multiples have a unique experience and may be at a higher risk for mental health

concerns⁴⁶. In line with an apriori power analysis, 906 women were recruited for the larger study. All women from the larger study deemed to be eligible after ethics was approved for the sub-study ($n = 202$) were approached to invite their partner to participate in this sub-study. Eighty-four couples declined or did not respond, and 17 couples were excluded because at least one member did not complete the 3-months survey, resulting in 101 TTP couples enrolled in the current study. Of the participants recruited for the TTP sample, two couples were later excluded because they broke up at 6-months ($n = 1$) and at 12-months ($n = 1$). The final TTP sample included 99 couples (198 individuals), including one same-sex couple (female-female).

Couples in the TTP completed surveys at 3-, 6-, and 12-months postpartum. Those who became pregnant between 6- and 12-months postpartum ($n = 8$) were excluded from the 12-month analyses. Each member of the couple received \$10 CAD in Amazon.ca gift cards for each of the three postpartum surveys they completed.

Community Sample

Community sample couples were recruited via online and radio advertisements, word of mouth, and flyers throughout Canada and the United States from June 2017 to March 2018. As mandatory for the larger study⁴⁵, couples in the community sample were required to be in a committed relationship with each other for a minimum of 6 months, with at least 4 in-person contacts per week in the previous month. Participants were excluded from the community sample if they were currently pregnant, breastfeeding, undergoing hormonal therapy (aside from hormonal contraceptives), had no prior sexual experience, or they reported experiencing clinically significant sexual difficulties or distress (i.e., sexual dysfunction) related to their sexual relationship. Of the 112 community couples that met basic eligibility requirements, couples were excluded for the current study for the following reasons: couples with failed attention checks (n

= 3), couples with child(ren) under 1 year ($n = 2$), male-male couples ($n = 3$). Male-male couples were excluded because they did not receive the Female Sexual Function Index, which included a subscale that assesses sexual desire in women, and thus, would not be a good reference for mothers in the TTP group. The resulting eligible sample included 104 community couples (208 individuals), with six same-sex couples (female-female). Each member of the couple received \$10 CAD (USD equivalent) in Amazon.ca/.com gift cards for participating in the study through completion of a single survey at one time-point.

Measures

Sociodemographics

Participants reported their age, sex, gender, sexual orientation, whether or not they had children, ethnicity, household income, and relationship status and duration.

Sexual satisfaction

Sexual satisfaction was evaluated using the Global Measure of Sexual Satisfaction⁴⁷ (GMSEX). The measure consists of 5 bipolar items (e.g., good/bad, pleasant/unpleasant) rated on the 7-point Likert scale. Total scores range from 5 to 35, with higher scores signifying greater sexual satisfaction. The scale has been validated for both women and men³⁹, and showed strong internal consistency in the current study at 3-months (includes community couples; Cronbach's $\alpha = .91$), 6-months (Cronbach's $\alpha = .89$), and 12-months (Cronbach's $\alpha = .90$).

Sexual desire

Sexual desire in women was measured with two items in the desire domain of the Female Sexual Function Index⁴⁸ (FSFI; e.g., Over the past 4 weeks, how often did you feel sexual desire or interest?, Over the past 4 weeks, how would you rate your level (degree) of sexual desire or interest?). The desire subscale of the FSFI has been validated in a sample of women with female

sexual arousal disorder and women without sexual difficulties⁴⁸, and showed strong internal consistency with our sample at 3-months (includes community couples; Cronbach's $\alpha = .92$), 6-months (Cronbach's $\alpha = .89$), and 12-months (Cronbach's $\alpha = .89$). Sexual desire in men was measured with two items in the desire domain of the International Index of Erectile Function⁴⁹ (IIEF; e.g., How often have you felt sexual desire?, How would you rate your level of sexual desire?). The IIEF desire subscale has been validated in men with erectile dysfunction and age-matched controls⁴⁹, and showed strong internal consistency in the current study at 3-months (includes community couples; Cronbach's $\alpha = .86$), 6-months (Cronbach's $\alpha = .85$), and 12-months (Cronbach's $\alpha = .85$). Both measures were scored using the IIEF protocol to enable comparisons so that all desire scores were on the same scale. The items are rated on a 5-point Likert scale. The two items are summed, scores range from 2 to 10, with higher scores indicating greater sexual desire. An FSFI desire subscale score of 5 or lower is considered clinically significant low desire and differentiates women with and without hypoactive sexual desire disorder⁵⁰. There is no recommended cut-off for the desire subscale for men using the IIEF.

Sexual distress

The well-validated 13-item Female Sexual Distress Scale-Revised (FSDS-R) was used to assess sexual distress⁵¹. This measure is valid in both men and women^{51, 52}, and showed strong internal consistency in our sample at 3-months (includes community couples; Cronbach's $\alpha = .93$), 6-months (Cronbach's $\alpha = .91$), and 12-months (Cronbach's $\alpha = .91$). The scale uses a 5-point Likert scale, and total scores range from 0 to 52, with higher scores associated with higher levels of distress (e.g., frustration, guilt) in regard to their sex lives. Clinically significant sexual distress in women is indicated by a score of 11 or higher on the scale²⁹. In men, a cut-off score of 19.5 or above has been suggested as clinically significant distress; however, this should be

interpreted cautiously because far less research on sexual distress has been conducted with men⁵². Partners' scores on the FSDS-R were evaluated with the cut-offs associated with their reported gender/sex.

Sexual frequency

Sexual frequency was assessed on a 7-point Likert scale; participants reported how often they engaged in a checklist of nine sexual behaviours (e.g., vaginal intercourse, oral sex, manual stimulation, etc.) during the previous four weeks⁴². A summary score was created by summing the six interpersonal sexual behaviours (e.g., giving/receiving oral sex, giving/receiving manual stimulation of genitals). Total scores ranged from 0 to 36, with higher scores indicating increased frequency of various sexual behaviours. This measure displayed good internal consistency in our sample at 3-months (includes community couples; Cronbach's $\alpha = .90$), 6-months (Cronbach's $\alpha = .81$), and 12-months (Cronbach's $\alpha = .86$).

Data Analysis

Statistical analyses were conducted with SPSS version 25.0 (SPSS Inc, Chicago, IL, USA). The between-subjects variable—*Group*—differentiated couples in the TTP from community couples, whereas the within-subjects variable—*Role*—differentiated the woman who gave birth and the woman in the community group who completed the screening, from their partners. We conducted three separate 2 (Role: woman/partner) X 2 (Group: TTP/community) mixed multivariate analyses of covariance (MANCOVAs) to compare the sexual well-being (sexual desire, sexual satisfaction, sexual distress) of couples in the TTP at each postpartum time-point (i.e., 3-, 6-, and 12-months) to the community group. Including role as a within-subjects factor allowed us to account for the interdependence of couples' responses. Univariate analyses of covariance (ANCOVAs) and follow-up pairwise comparisons were conducted to

examine observed group and role by group interaction effects. A Bonferroni-Holm correction ($p = .017$) was applied to all significance tests to account for the multiple comparisons^{53, 54}. Our primary aim was to examine if women and partners in the TTP differed from community women and partners in their sexual well-being, which was contingent on a main effect of group or a significant interaction between role and group at each time-point. Our secondary aim was to examine if sexual well-being differed within-couples, that is between women and partners in the TTP and between women and partners in the community sample. Main effects of role were not interpretable due to the inclusion of same-sex couples, nor were they of primary interest for the current study aims. Effect size estimates are reported as partial eta squared (η_p^2). Frequency of sexual activity was a couple-level variable (i.e., only the woman in the couple reported on this variable), as such three separate ANCOVAs were conducted to compare sexual activity at 3-, 6-, and 12-months postpartum. Prior to running the analyses described above, group differences in sociodemographic variables (see Table 1) were examined using either chi-square or *t*-tests.

Results

Participant demographics for all study variables can be found in Table 1. The TTP and community groups did not differ significantly with respect to their age, partner gender, or relationship duration. The two groups significantly differed as a function of their sexual orientation, ethnicity, income, and relationship type (see Table 1). Given the relatively small sample size, we conducted separate MANCOVAs for each of the significant sociodemographic variables. The pattern of results remained the same when controlling for the sociodemographic variables, except for income. Therefore, income was retained as a covariate in the analyses reported below.

Sexual well-being for couples at 3-months postpartum compared to community couples

Comparison of couples in the TTP at 3-months postpartum to community couples revealed significant multivariate effects for group, $F(3, 191) = 25.30, p < .001, \eta_p^2 = .28$, as well as a significant group by role interaction, $F(3, 191) = 11.05, p < .001, \eta_p^2 = .15$. Using the Bonferroni-Holm corrected p -value (0.017), there was no significant main effect of income, $F(3, 191) = 2.85, p = .04, \eta_p^2 = .04$, role $F(3, 191) = 3.35, p = .02, \eta_p^2 = .05$, or significant interaction between income and role, $F(3, 191) = 1.92, p = .13, \eta_p^2 = .03$. Follow-up ANCOVAs examining the effect of group showed that, overall, couples in the TTP reported lower sexual satisfaction, $F(1, 193) = 44.11, p < .001, \eta_p^2 = .19$, lower sexual desire, $F(1, 193) = 56.34, p < .001, \eta_p^2 = .23$, and higher sexual distress, $F(1, 193) = 22.06, p < .001, \eta_p^2 = .10$, compared to community couples (see Table 2). In addition, a separate ANCOVA revealed that couples in the TTP reported less frequent sexual activity, $F(1, 197) = 14.70, p < .001, \eta_p^2 = .07$, compared to community couples. Follow-up ANCOVAs examining the role by group interaction effect, revealed significant effects for sexual satisfaction, $F(1, 193) = 22.26, p < .001, \eta_p^2 = .10$ and sexual desire, $F(1, 193) = 20.08, p < .001, \eta_p^2 = .09$, but not for sexual distress, $F(1, 193) = 2.80, p = .10, \eta_p^2 = .01$, suggesting that both partners at 3-months postpartum reported higher sexual distress compared to community couples. Pairwise mean comparisons revealed that compared with community women, women in the TTP reported lower sexual satisfaction ($p < .001, d = 1.35$) and lower sexual desire ($p < .001, d = 1.60$). Partners of women in the TTP reported lower sexual desire² ($p = .009, d = 0.47$), but not sexual satisfaction (after correcting for multiple comparisons; $p = .03, d = 0.60$) compared to community partners. Women in the TTP also reported lower sexual satisfaction ($p < .001, d = 0.65$) and sexual desire ($p < .001, d = 1.25$)

² When comparing the TTP partners to control partners without children ($n = 74$) and to control partners who were cohabitating ($n = 76$) there were no significant differences in sexual desire ($ps = .10$ and $.03$), respectively after applying the Bonferroni-Holm correction for multiple comparisons.

compared to their own partners, whereas community couples did not differ significantly in their sexual satisfaction or sexual desire ($ps > .10$, $ds < 0.19$; see Table 3 for descriptive statistics).

Regarding clinically significant problems with low desire and significant sexual distress, 58% of women in the TTP ($n = 57$) at 3-months postpartum and 10% of women in the community sample ($n = 10$) reported clinically low sexual desire. In addition, 55% of women ($n = 55$) and 8% of partners ($n = 8$) in the TTP, and 21% of women ($n = 22$) and 6% of partners in the community sample ($n = 6$) reported clinically significant sexual distress.

Sexual well-being for couples at 6-months postpartum compared to community couples

Comparison of couples in the TTP at 6-months postpartum to community couples revealed a significant multivariate effect for group, $F(3, 190) = 26.68$, $p < .001$, $\eta_p^2 = .30$, and a significant group by role interaction, $F(3, 190) = 5.15$, $p = .002$, $\eta_p^2 = .08$. There were no significant multivariate effects of income, role, or an interaction between income and role (all $F_s(3, 190) < 2.10$, $ps > .10$, $\eta_p^2 < .03$). Follow-up ANCOVAs examining the effect of group, showed that at 6-months postpartum, overall, couples in the TTP reported lower sexual satisfaction, $F(1, 192) = 52.47$, $p < .001$, $\eta_p^2 = .22$, and sexual desire, $F(1, 192) = 55.11$, $p < .001$, $\eta_p^2 = .22$, and higher sexual distress, $F(1, 192) = 22.06$, $p < .001$, $\eta_p^2 = .11$. However, there was no difference in frequency of sexual activity, $F(1, 199) = 0.06$, $p = .81$, $\eta_p^2 < .001$ (see Table 2). Follow-up ANCOVAs to examine the role by group interaction effect were significant for sexual desire, $F(1, 192) = 14.78$, $p < .001$, $\eta_p^2 = .07$, but not sexual satisfaction or sexual distress, $F_s(1, 192) < 3.19$, $ps > .08$, $\eta_p^2 < .02$ (see Table 3), suggesting that both partners at 6-months postpartum reported lower sexual satisfaction and higher sexual distress compared to community couples. Pairwise mean comparisons to understand the significant interaction for sexual desire revealed that compared with community women, women in the TTP reported lower

sexual desire ($p < .001$, $d = 1.41$). Partners of women in the TTP also reported lower sexual desire³ ($p = .006$, $d = 0.51$) compared to community partners. In addition, women in the TTP reported lower sexual desire ($p < .001$, $d = 1.07$) compared to their own partners (see Table 3 for descriptive statistics). Because sexual well-being was only assessed at one time-point for the community sample, the results for community couples are identical to those reported at 3-months, such that community women and their partners did not differ significantly in their sexual satisfaction or sexual desire ($ps > .10$, $ds < 0.19$). At 6-months postpartum, 55% of women in the TTP ($n = 54$) reported clinically low sexual desire. Additionally, 57% percent of women ($n = 56$) and 11% of partners in the TTP ($n = 11$) reported clinically significant sexual distress.

Sexual well-being for couples at 12-months postpartum compared to community couples

Comparison of couples in the TTP at 12-months postpartum to community couples revealed significant multivariate effects for income, $F(3, 173) = 4.29$, $p = .006$, $\eta_p^2 = .07$, group, $F(3, 173) = 16.49$, $p < .001$, $\eta_p^2 = .22$, and a significant group by role interaction, $F(3, 173) = 5.30$, $p = .002$, $\eta_p^2 = .08$. There was no significant multivariate effect of role or the role by income interaction, (all F s (3, 171) < 1.53 , $ps > .21$, $\eta_p^2 < .03$). Follow-up ANCOVAs examining the effect of group, showed that, overall, couples in the TTP reported lower sexual satisfaction, $F(1, 175) = 42.31$, $p < .001$, $\eta_p^2 = .20$, and sexual desire, $F(1, 175) = 22.92$, $p < .001$, $\eta_p^2 = .12$, and higher sexual distress, $F(1, 175) = 11.42$, $p = .001$, $\eta_p^2 = .06$. There was, again, no difference in frequency of sexual activity, $F(1, 185) = 3.04$, $p = .08$, $\eta_p^2 = .02$. Follow-up ANCOVAs to examine the role by group interaction effect was significant for sexual desire, $F(1, 175) = 13.25$, $p < .001$, $\eta_p^2 = .07$, but not sexual satisfaction $F(1, 175) = 0.24$, $p = .62$, $\eta_p^2 = .001$ or sexual

³ When comparing TTP partners to community partners without children ($n = 74$) there was no difference in sexual desire ($p = .08$).

distress, $F(1, 175) = 0.001, p = .98, \eta_p^2 < .001$. Thus, both partners at 12-months postpartum reported lower sexual satisfaction and higher sexual distress compared to community couples. Pairwise mean comparisons revealed that compared with community women, women in the TTP reported lower sexual desire ($p < .001, d = 1.18$). There was no difference in sexual desire between partners of women in the TTP and community partners, ($p = .18, d = 0.29$). Women in the TTP also reported lower sexual desire ($p < .001, d = 1.02$) than their own partners (Table 2). Community women and their partners did not differ significantly in their sexual satisfaction or sexual desire as noted above ($ps > .10, ds < 0.19$). At 12-months postpartum, 39% of women in the TTP ($n = 39$) reported clinically low sexual desire, and 47% of women ($n = 47$) and 12% of partners in the TTP ($n = 12$) reported clinically significant sexual distress.

Discussion

This study compared the sexual well-being of women and their partners in the TTP to a community sample of couples who were not in the TTP. In line with our hypotheses, couples in the TTP reported lower sexual satisfaction, lower sexual desire, and higher sexual distress compared to community couples at 3-, 6-, and 12-months postpartum. These group differences tended to become less pronounced—though still significant—as couples in the TTP reached 12-months postpartum. By 6-months postpartum, sexual frequency in TTP couples was similar to community couples and this effect was maintained at 12-months. Further, women in the TTP reported lower sexual satisfaction than their partners at 3-months postpartum, and lower sexual desire than their partners at 3-, 6- and 12-months postpartum. This study is the first to our knowledge to compare sexual well-being for both parents across multiple time-points to a community sample not in the transition to parenthood.

Couples in the TTP reported lower sexual satisfaction, lower sexual desire, and higher sexual distress than community couples throughout the year following childbirth, despite engaging in sexual activity at a similar frequency to community couples by the 6-month time-point. These differences are possibly due to the unique demands and shared experiences of new parenthood. The birth of a baby, on average, adds more than thirty hours of work per week for new parents⁵⁵. This additional time spent child-rearing may result in less couple-focused time and communication, which may in turn impact their time, energy, and interest in sexual activity⁵⁶. Indeed, studies of new mothers and fathers have found that sex was of lower priority in the postpartum period due to increased fatigue and time spent caring for their child compared to pregnancy^{9, 57, 58}. Additionally, studies have determined that perceived closeness with one's partner (i.e., feelings of intimacy, feeling supported, and mutual understanding) is an especially important determinant of sexual satisfaction⁵⁹ and sexual desire⁶⁰. As such, when new parents' focus and time are increasingly dedicated to their child and there is less opportunity for connection with their partner⁹, their sexual well-being may suffer⁶¹. Further, for both new mothers and fathers, increased reports of stress are associated with lower sexual satisfaction and sexual desire^{58, 62}.

More specifically, women in the TTP reported significantly lower sexual well-being (i.e., lower satisfaction, lower sexual desire, and higher sexual distress) compared to community women. In addition, many women in the TTP reported clinically low sexual desire (i.e., between 39% to 59%) and clinically significant sexual distress (i.e., between 47% to 57%) throughout the TTP. In contrast, at some time-points partners in the TTP did not differ from community partners in reports of their sexual satisfaction at 3-months postpartum and in their sexual desire at 12-months postpartum. Biopsychosocial factors that uniquely impact women in the TTP may

contribute to more persistent or marked declines in sexual well-being. Women who gave birth experience significant biological changes during pregnancy and childbirth (e.g., hormonal changes related to breastfeeding, perineal trauma during childbirth) that can negatively impact physical and emotional recovery^{11, 63}. However, research suggests that these biological factors (e.g., pain severe enough to limit vaginal penetration) resolve in the majority of women by 6-months postpartum^{2, 25, 64}. Thus, there may be psychosocial factors persisting at 6- to 12-months postpartum that are associated with lower sexual well-being throughout the TTP. For example, after giving birth many women report body image concerns, which has been linked with lower sexual well-being in new mothers^{12, 57, 65, 66}. Women have also reported that they prioritize different things following childbirth, such as wanting to spend time on their own after continuous daily physical contact with their child, as well as anxiety during sexual activity due to concerns about waking the child, both of which may contribute to lower sexual desire^{2, 57}.

Consistent with our predictions, we observed that women in the TTP reported lower sexual satisfaction than their partners at 3-months postpartum, and they reported lower sexual desire than their partners across 3-, 6-, and 12-months postpartum. Partners may differ in their expectations around sex contributing to differences in sexual satisfaction early in the TTP. Indeed, a study of new fathers' expectations of sexuality at three to six months postpartum found that they did not expect to engage in sexual behaviour in the first few months after childbirth⁹. Additionally, while both partners in the TTP experience new and consistent stressors, heightened stress during this time has been associated with lower sexual desire in women, but not their partners⁶². Such findings are consistent with Basson's⁶⁷ model of sexual function in women and Baumeister's⁶⁸ research, which suggest that women's sexual well-being is more susceptible to contextual and relational factors than men's.

In line with our hypotheses, community couples not in the TTP reported no significant differences between partners in sexual satisfaction and sexual desire. Interestingly, we did not find the commonly documented sex/gender difference in sexual desire^{40, 41}. The gender difference in sexual desire has been demonstrated to be smaller in magnitude for those in committed mixed-sex relationships, than when considering solitary sexual activity (e.g., masturbation) or sexual activity with an unfamiliar other, where men report higher levels of desire^{41, 69}. One other possibility for the absence of the expected desire discrepancy is that participants in our community sample were screened to not have clinically significant difficulties in sexual desire.

Limitations and Future Directions

Our sample was relatively young and homogenous with respect to ethnicity, relationship type, and sexual orientation. Thus, the data from this study may not be generalizable to more diverse populations. Geographic regions of the two samples also varied; the TTP sample was recruited in-person from a local hospital in Canada whereas the control sample was recruited online across Canada and the United States. Despite these differences in recruitment strategies, the only demographic difference that was significantly associated with our models was higher income reported by the TTP sample, which we subsequently controlled for in our analyses. Although the results in the current study remained the same after controlling for income, it is possible that other unassessed factors that relate to income may be relevant. For example, prior research suggests that higher expectations for sexual fulfillment is associated with both a higher household income and lower sexual satisfaction⁷⁰. Additionally, while couples were instructed to complete their surveys independently of one another, participation was entirely online, and we are unable to ascertain that participants followed this instruction. The same community sample

data were used for comparison at each of the three postpartum time-points, which did not account for potential changes couples may experience over time. Previous research suggests that sexual desire, satisfaction, and frequency, peak at the beginning of a relationship and often decline as relationships progress^{22, 71, 72}. Longitudinal data should be collected for community couples in a future replication study in order to compare the magnitude of potential declines. The study results support the importance of continued research that includes both members of the TTP couple, specifically with regard to psychosocial factors that may impact the sexual well-being of both partners, including elucidating those factors that may have a stronger impact on the partner who gave birth.

Conclusions

The present study highlighted that the TTP is associated with poorer sexual well-being among new parents as compared to community couples, with mothers also reporting more disruptions relative to their own partners. Our findings may aid in the development of psychoeducational information for new parent couples' sexual well-being. Sharing information regarding postpartum sexual well-being may support new parents by normalizing their experiences and promoting the development of more realistic expectations about changes during the TTP. Unmet expectations across the TTP have previously been linked to lower relationship satisfaction⁷³, which is in turn associated with sexual satisfaction⁷⁴. A better understanding of adverse changes in the sexual well-being of new parents will also encourage clinicians to focus on helping new parents promote their sexual well-being to buffer against declines (e.g., increasing dyadic empathy⁷⁵, self-expansion activities⁷⁶). The results also highlight which specific factors are most problematic across the TTP (i.e., sexual desire), and are an important reminder to clinicians that challenges to new parents' sexual well-being do not necessarily

resolve by the end of the first postpartum year and should continue to be queried. Interventions should thus be incorporated into routine peri and post-natal healthcare practices that extend throughout the first year postpartum, as parents have the most contact with these healthcare professionals during the TTP⁷⁷.

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Table 1.

Sample Characteristics

	TTP (n = 99)	Community (n = 104)	p-value*
Age (y), M (SD), range (y)			
Women	29.5 (3.6), 18-38	30.0 (8.7), 19-61	.56
Partners	31.6 (4.0), 19-43	32.1 (10.0), 19-64	.66
Partner Sex/Gender, n (%)			.11
Male	97 (98.0%)	95 (91.3%)	
Female	1 (1.0%)	6 (5.8%)	
Non-binary	1 (1.0%)	3 (2.9%)	
Sexual Orientation, n (%)			
Women			< .001
Heterosexual	93 (93.9%)	67 (64.4%)	
Bisexual	4 (4.0%)	17 (16.3%)	
Other†	2 (2.0%)	20 (19.2%)	
Partners			<.001
Heterosexual	95 (96.0%)	80 (76.9%)	
Bisexual	2 (2.0%)	11 (10.6%)	
Other†	2 (2.0%)	13 (12.5%)	
Couples with children, n (%)			< .001
Yes⁴	99 (100%)	30 (28.8%)	
No	0 (0%)	74 (71.2%)	
Ethnicity/Culture, n (%)			
Women			.004
Caucasian/European/White	89 (89.9%)	74 (71.2%)	
Asian American/Canadian Asian	4 (4%)	5 (4.8%)	
African American/Canadian	1 (1%)	3 (2.9%)	
Other‡	5 (5.1%)	22 (21.2%)	
Partners			.041
Caucasian/European/White	85 (87.6%)	74 (71.2%)	
Asian American/Canadian Asian	2 (2.1%)	5 (4.8%)	
African American/Canadian	1 (1.0%)	3 (2.9%)	
Other‡	9 (9.3%)	22 (21.2%)	
Combined annual income, n (%)			<.001
\$0-\$39,999	5 (5.1%)	42 (40.4%)	
\$40,000-\$79,999	25 (25.3%)	34 (32.7%)	
>\$80,000	69 (69.7%)	28 (26.9%)	

⁴ Differences between community couples with and without children were examined for each of our outcome variables. No significant differences were observed.

Relationship type, n (%)			< .001
Dating	0 (0%)	23 (22.1%)	
Cohabiting	7 (7.1%)	27 (26.0%)	
Engaged	5 (5.1%)	3 (2.9%)	
Married/Common-law	86 (86.8%)	49 (47.1%)	
Other[#]	1 (1.0%)	2 (1.9%)	
Relationship Duration (months), M (SD)	81.2 (43.3)	74.9 (85.2)	.51

Note. TTP = transition to parenthood.

*Independent samples *t*-test or chi-square test.

†Other self-identified sexual orientations included the following: asexual, bi-curious, demi-sexual, gay, hetero-flexible, lesbian, pansexual, queer, unlabeled.

‡Other ethnicities included the following: Ashkenazi, biracial/multiracial, Caribbean, East Indian, First Nations Canadian, Hispanic/Latino/Latina, Inuit, Middle Eastern/Central Asian, Portuguese.

Other relationship types included the following: “dating more than one partner” or unspecified other.

Table 2

Descriptives and follow-up ANCOVAs for the main effect of group for sexual satisfaction, sexual desire, sexual distress, and sexual frequency for couples in the TTP and community couples.

Variable/Group	Time-point	N	Mean	SD	F	η_p^2
Sexual Satisfaction						
TTP	3-mths	92	26.24	6.36	44.11*	.19
	6-mths	91	25.80	6.19	52.47*	.22
	12-mths	74	25.91	6.34	42.31*	.20
Community	n/a	104	31.50	3.93		
Sexual Desire						
TTP	3-mths	92	6.06	1.62	56.34*	.23
	6-mths	91	6.08	1.74	55.11*	.22
	12-mths	74	6.45	1.79	22.92*	.12
Community	n/a	104	7.72	1.85		
Sexual Distress						
TTP	3-mths	92	12.19	8.91	22.06*	.10
	6-mths	91	12.12	8.83	22.06*	.11
	12-mths	74	11.20	8.57	11.42*	.06
Community	n/a	104	6.70	7.16		
Sexual Frequency						
TTP	3-mths	96	9.46	6.47	14.70*	.07
	6-mths	98	13.60	8.17	0.06	< .001
	12-mths	84	11.13	7.38	3.04	.02
Community	n/a	104	13.74	5.83		

Note. TTP = transition to parenthood; n/a = not applicable

* $p < .001$.

Possible range of scores: Sexual Satisfaction (5-35), Sexual Desire (2-10), Sexual Distress (0-52), Sexual Frequency (0-36).

Table 3

Descriptives, follow-up ANCOVAs, and pairwise comparisons for the group by role interaction for sexual satisfaction, sexual desire, and sexual distress for women and their partners in the TTP sample at 3-, 6, and 12-months postpartum and women and their partners in the community sample.

Variable/Group	Time-point	N	Women		Partners		Follow-up ANCOVA	
			Mean	SD	Mean	SD	F	η_p^2
Sexual Satisfaction								
TTP	3-mths	92	24.15 _{ab}	6.99	28.33 _b	5.73	22.26*	.10
	6-mths	91	25.71	6.09	25.88	6.09	0.70	.004
	12-mths	74	26.03	6.41	25.78	6.26	0.24	<.001
Community	n/a	104	31.64 _a	3.55	31.36	4.31		
Sexual Desire								
TTP	3-mths	92	5.04 _{cc}	1.53	7.07 _{dc}	1.71	20.08*	.09
	6-mths	91	5.14 _{fh}	1.81	7.01 _{gh}	1.67	14.78*	.07
	12-mths	74	5.54 _{ij}	1.81	7.36 _j	1.77	13.25*	.07
Community	n/a	104	7.56 _{cfi}	1.61	7.87 _{dg}	1.70		
Sexual Distress								
TTP	3-mths	92	13.72	10.03	10.65	7.79	2.80	.01
	6-mths	91	13.32	9.29	10.92	8.37	3.19	.02
	12-mths	74	11.09	8.48	11.31	8.66	0.001	<.001
Community	n/a	104	6.25	6.63	7.15	7.70		

Note. TTP = transition to parenthood; n/a = not applicable. For the outcome variables, means with the same subscript letter indicate a significant difference corresponding to the effects reported in the results section (e.g., the subscript 'a' indicates a significant difference between TTP women's sexual satisfaction at 3-months postpartum and community women's sexual satisfaction).

* $p < .001$

Possible range of scores: Sexual Satisfaction (5-35), Sexual Desire (2-10), Sexual Distress (0-52).