What to expect when you're expecting: Perinatal sexual education is linked with couples' sexual well-being in pregnancy and the postpartum

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Abstract

Up to 88% of expectant and new parents report problems with their sexual well-being, yet less than 30% of individuals receive information about potential sexual problems from healthcare professionals. Lack of information may contribute to difficulty adjusting to sexual challenges, and in turn, to poorer sexual well-being. The current study examined: 1) the amount of perinatal sexual health information individuals receive/access; 2) gaps between desired and received information; 3) barriers to accessing information; and 4) links between the quantity of information received/accessed and sexual well-being outcomes in one sample of pregnant couples (N = 102) and another sample of couples in the postpartum (N = 102). Results revealed that most participants reported receiving/accessing little-to-no sexual health information, despite most participants wanting to receive a variety of information related to their perinatal sexuality. On average, expectant and new parents were indifferent regarding how easy/comfortable they felt discussing their sexuality with healthcare professionals. Overall, when gestational parents received/accessed more pregnancy-related sexual health information and when either parent received/accessed more postpartum-related sexual health information, both members of the couples reported greater sexual well-being. Access to information might not only address couples' needs and concerns but may bolster sexual well-being during a vulnerable period.

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Introduction

The perinatal period—pregnancy and up to one year postpartum—is often an exciting, yet challenging time for couples. For example, changes to couples' sexual well-being (i.e., sexual frequency, sexual desire, sexual satisfaction, and sexual distress) are common for both members of the couple (Fitzpatrick et al., 2021). Indeed, a recent review of cross-sectional and longitudinal research revealed that up to 88% of gestational parents[1] and up to 47% of non-gestational parents report problems with their sexual well-being (e.g., low sexual desire) that begin in pregnancy and worsen as it progresses (Fitzpatrick et al., 2021). In the postpartum period, up to 83% of birthing parents and up to 45% of non-birthing parents report problems with their sexual well-being that persist even at 12- and 24-months postpartum (Dawson et al., 2021; Fitzpatrick et al., 2021; Rosen et al., 2021; Schwenck et al., 2020). Challenges to sexual well-being are likely influenced by biological (e.g., hormonal), psychological (e.g., mood), and social (e.g., parenting roles and division of labour) changes that accompany the perinatal period (Fitzpatrick et al., 2021).

Sexual well-being includes distinct but related facets that capture physical behaviour (i.e., sexual frequency), as well as cognitive-affective experiences of an individual's sexual life including a balance between positive (sexual satisfaction, sexual desire) and negative aspects (sexual distress; Martin & Woodgate; 2017; Rosen et al., 2021). These facets of sexual well-being show unique and variable patterns of change throughout pregnancy and the postpartum. A

[1] For inclusivity and clarity with respect to studies conducted in pregnancy versus the postpartum, we use the terms "gestational parent" to describe the pregnant partner and "birthing parent" to describe the partner who gave birth. We use the terms "non-gestational parent" or "non-birthing parent" to refer to the partner who is not pregnant and did not give birth, respectively.

recent longitudinal study established trajectories of sexual well-being from mid-pregnancy to 12-months postpartum and found significant variability within and between dyads, as well as across the facets of sexual well-being (Rosen et al., 2021). Throughout the perinatal period, 33% of couples maintained relatively high sexual frequency (i.e., how often they engaged in sexual activity), though most couples fell into the low sexual frequency class (67%); importantly, sexual frequency declined for all couples across this period. With respect to sexual desire, most couples (39%) fell into a discrepant desire class in which gestational or birthing parents had lower sexual desire (i.e., interest in sexual activity) and their partner had higher sexual desire. The remaining couples were classified as both partners having moderate (36%) or even high (25%) sexual desire throughout the perinatal period. Most couples maintained high sexual satisfaction (i.e., one's overall appraisal of their sexual relationship; 64%), though over a third were captured in a trajectory characterized by low sexual satisfaction (36%). Lastly, though most couples appeared to have low sexual distress (i.e., feeling bothered about sexual problems; 76%), a discrepant distress class (24% of couples) also emerged with gestational or birthing parents having high sexual distress and their partners having low sexual distress. Research examining other sexual outcomes including sexual function (Dawson et al., 2020), dyspareunia (i.e., pain during intercourse; Rosen et al., 2022), and postpartum sexual concerns (Allsop et al., 2022) have also observed significant heterogeneity in patterns of change over time. This heterogeneity underscores the importance of examining multiple facets of sexual well-being in *both* pregnancy and the postpartum, because not all aspects of sexual well-being follow the same trajectory within couples or show the same degree of change across the perinatal period.

The Importance of Perinatal Sex Education

Despite the high prevalence rates of problems with sexual well-being in pregnancy and the postpartum for birthing parents and their partners, a minority of birthing parents (i.e., 7% to 29%) report receiving any information from healthcare professionals about potential sexual challenges during this period (Barrett et al., 2000; Bartellas et al., 2000; Woolhouse et al., 2014). Information that is shared between healthcare professionals and gestational or birthing parents appears to be "glossed over" (Woolhouse et al., 2014), focusing solely on contraception and safe resumption of vaginal intercourse in the postpartum (Barrett et al., 2000). While a combination of cultural and social factors may contribute to birthing parents feeling uncomfortable initiating discussions related to sexual well-being with healthcare professionals (reviewed in McBride & Kwee, 2017), the lack of information provided does not seem to be the result of couples declining information about changes to their sexual well-being when it is offered (Woolhouse et al., 2014). One recent study examining gaps between desired and received postpartum health care information revealed that sexual health remains a key area that birthing parents report wanting, but not receiving, information about (Guerra-Reyes et al., 2017). Previous research assessing the quantity and content of perinatal sexuality information received by birthing parents is dated (Barrett et al., 2000; Bartellas et al., 2000), despite considerable research attention and new evidence about factors influencing perinatal sexuality in recent years (for a review see Fitzpatrick et al., 2021). Moreover, previous research focuses solely on experiences of the gestational or birthing parent, neglecting partners and the interpersonal context. Indeed, no studies to our knowledge have assessed how much information about sexuality non-gestational/birthing parents receive in pregnancy or the postpartum.

A lack of evidence-based information about sexuality from healthcare professionals may encourage expectant and new parent couples to seek information from potentially less reliable

sources (e.g., peers, media), which could contribute to gaps in knowledge or harmful misinformation perpetuating sexual problems. Unsurprisingly, birthing parents who rely on information from friends or family rather than from healthcare professionals report receiving less information than they desired (i.e., gaps in knowledge; Guerra-Reyes et al., 2017). Gaps in sexual health knowledge may translate into fears and concerns about sexual activity during the perinatal period for both partners. Cross-sectional studies reveal that greater fears (e.g., believing that sex will harm the fetus) or negative attitudes about sex (e.g., feeling self-conscious about one's body during sex) in pregnancy, as well as greater postpartum sexual concerns, are each linked with lower sexual frequency for the couple (de Pierrepont et al., 2016a, 2016b; Jawed-Wessel & Sevick, 2017), lower sexual desire in gestational and non-gestational parents (Bogren, 1991), higher sexual distress in gestational parents (Beveridge et al., 2018), and lower sexual function including poorer sexual satisfaction and greater pain during sex in gestational and birthing parents and their partners (de Pierrepont et al., 2016b; Jawed-Wessel et al., 2017; Pauls et al., 2008; Radoš et al., 2014). In sum, poor sexual knowledge and negative attitudes toward perinatal sexuality are associated with lower sexual well-being. To date no studies have examined links between access to information and couples' sexual well-being, including sexual distress.

Information-Motivation-Behavior Theory

There is theoretical support for why we might expect links between access to sexual health information and sexual well-being. Indeed, the Information-Motivation-Behavior Theory (Fisher & Fisher, 1992) posits that accurate information and motivation (i.e., positive attitudes and social support) can activate behavioral skills relevant to creating and maintaining behavior change. In line with this theory, expectant and new parent couples receiving evidence-based

information about potential changes to perinatal sexuality may allow both partners to feel more motivated, supported, and better equipped with skills to cope with such changes, which may in turn contribute to greater sexual well-being. Indeed, findings from an online knowledge campaign hosted between 2018 and 2019, #PostBabyHankyPanky, revealed that new parents reported feeling less concerned about changes to their sexual well-being, more confident in their ability to cope with such changes, and more confident discussing these changes with their partners after viewing informational videos related to perinatal sexual health compared to how they felt before watching the videos (Rosen et al., 2021). Healthcare professionals also benefited from this information and reported more confidence in their ability to discuss changes to sexual well-being with expectant and new parent couples compared to how they felt before watching the videos. In a different study expectant and new parents reported increased knowledge and positive attitudes about perinatal sexuality following a 2-hour online psychoeducational workshop about changes to sexuality in the perinatal period (de Pierrepont et al., 2022). Lastly, sexual education classes that included information about changes to sexual function during pregnancy were effective in improving sexual function for both birthing parents and their partners from pre- to post-test (Heidari et al., 2018; Bahadoran et al., 2015). Taken together, these studies demonstrate the value and potential benefits of receiving accurate information about sexuality from knowledgeable healthcare professionals during the perinatal period.

The Current Study

There are key gaps in current perinatal care with respect to couples accessing sexual health information, despite problems with sexual well-being being commonly experienced throughout the perinatal period. The overarching goal of the current study was to comprehensively examine access to perinatal sexual health information while accounting for the

interpersonal context by sampling both members of the couple. To our knowledge, no studies have assessed how sexual health information is associated with both parents' perinatal sexual well-being or examined the quantity or content of sexual health information that non-gestational/birthing parents receive. The purpose of the present study was fourfold: 1) To examine the quantity, content, and sources of perinatal sexual health information received/accessed by birthing parents and their partners in pregnancy and the postpartum; 2) To examine gaps between received/accessed and desired information; 3) To examine barriers to accessing information, including comfort and ease discussing sexuality with healthcare professionals; and 4) To establish links between the quantity of sexual health information an individual receives/accesses and their own and their partners' sexual well-being. We recruited two separate samples of pregnant and postpartum couples and hypothesized: H1) The majority of individuals would report receiving little information related to their sexual well-being in pregnancy and the postpartum; H2) Both members of the couple would report gaps between information received/accessed and desired information; H3) On average, individuals would report difficulty and discomfort discussing sexual problems with their healthcare professionals; and H4) When individuals received/accessed more information about their sexuality (regarding pregnancy for expectant parents or regarding the postpartum for new parents) both they and their partners would report greater sexual well-being (i.e., higher sexual frequency, higher sexual satisfaction, higher sexual desire, and lower sexual distress).

Materials and Methods

Participants and Procedure

First time pregnant (N = 116) couples at any stage of pregnancy and new parent couples (N = 131) up to 12-months postpartum were recruited simultaneously from Canada (70.6%) and

the United States (29.4%). Participants from both samples were required to be 18 years or older, fluent in English, have access to a personal e-mail account, and be in a committed romantic relationship with their partner for at least six-months. This relationship length was chosen to ensure couples were not in the initial stage of their relationship given evidence that sexual well-being is often highest at the onset of romantic relationships and then stabilizes or declines thereafter (reviewed in Impett et al., 2014). All recruitment materials clearly stated that the study was inclusive to couples of all bodies, sexual orientations, and genders, although one member of the couple had to be pregnant or have given birth. Additional inclusion criteria for couples in both samples included having a singleton pregnancy, as those who have given birth to multiples are at a greater risk of moderate to severe postpartum depression (Choi et al., 2009) which is associated with poorer sexual well-being and a greater number of sexual concerns (Dawson et al., 2021, 2022). Participants were not eligible if they or their partner reported an unmanaged medical or psychiatric illness. While couples were required to be having/have had their first biological child together, the non-gestational/birthing parent could have other children from a previous relationship if those children were not primarily living in the home with the couple completing the study. For the postpartum sample only, participants were not eligible for the study if they were currently pregnant. Eligibility was determined via an online screening survey completed by interested individuals. Once deemed eligible, participants were emailed an individualized anonymized link to a single online survey where they first read and provided informed consent prior to beginning the survey. Participants were instructed to complete their surveys independently from their partner. Participation was encouraged through e-mail reminders if the survey was not completed after one, two, and three weeks. The survey link expired after four weeks at which time participants were no longer eligible to participate. All

procedures were approved by the Research Ethics Board at the IWK Health Center in Halifax, Nova Scotia.

Recruitment of primiparous pregnant and new parent couples occurred online via social media advertisements, flyers in the community, former participant contacts who consented to being contacted about future studies, and word of mouth from December 2020 to August 2021. One member from each couple completed the screening survey and provided their partner's contact information. If eligible, both members of the couple were then approached via email to participate. Couples were withdrawn if one or both partners did not complete the survey ($N_{pregnant}$ = 14; $N_{postpartum}$ = 26), failed attention checks ($N_{postpartum}$ = 2), or if their survey responses following enrollment in the study indicated that they were actually ineligible for the study ($N_{postpartum}$ = 1). The final sample included 102 pregnant (*M* = 28.3 weeks pregnant; *range* 8-40 weeks, *SD* = 7.8 weeks) and 102 postpartum (*M* = 24.8 weeks postpartum; *range* 2-56 weeks, *SD* = 14.1 weeks) couples. Participants were individually compensated with the equivalent of $10 CAD in Amazon gift cards upon survey completion.

Measures

Sociodemographic Information. Participants reported their age, geographic location, ethnicity, gender, sexual orientation, household income, relationship status and duration, and employment status.

Sexual Health Information. Quantity and content of perinatal sexual health information received/accessed, as well as gaps in information and barriers to accessing information were assessed using a novel measure developed for the present study (see Online Supplemental Material). The measure assessed the quantity of information that individuals received/accessed in pregnancy about changes to their pregnancy sexuality (1 item) and postpartum sexuality (1 item)

rated on a 6-point Likert scale (i.e., 0 = no information, 5 = a lot of information). The postpartum sample received a third item assessing the amount of information that they received/accessed after their baby was born about their postpartum sexuality (i.e., 0 = no information, 5 = a lot of information). For the postpartum sample only, a mean score for information received/accessed about postpartum sexuality was calculated using two items: the amount of information received/accessed in pregnancy about postpartum sexuality and the amount of information received/accessed after the baby was born about postpartum sexuality. Actual scores (i.e., not mean, for the pregnancy sample) and mean scores (for the postpartum sample) ranged from 0 to 5, with higher scores indicating more information received/accessed.

Ease and comfort discussing perinatal sexual problems with healthcare professionals was assessed using two items rated on a bipolar 5-point Likert scale (e.g., very uncomfortable to very comfortable). One "select all that apply" question was used to assess the source(s) of perinatal sexuality information (e.g., obstetrician, family doctor). One "select all that apply" question was used to assess the content of information about pregnancy sexuality that expectant and new parents received and would like to have received during their pregnancy. For postpartum couples, an additional "select all that apply" question assessed information they received and would like to have received about their postpartum sexuality. If respondents reported receiving any information about their perinatal sexuality, one additional item assessed who initiated that discussion (i.e., them, their partner, or the person who provided the information).

Sexual Frequency. Participants reported how often they and their partner engaged in partnered sexual activity (e.g., oral sex, manual stimulation of genitals, vaginal intercourse) in the past 4 weeks rated on a 7-point Likert scale (e.g., 0 = not at all to 6 = more than once a day). Both partners individually reported on sexual frequency. Because our sexual frequency

item reflects a dyad-level variable, we calculated mean sexual frequency scores using both partners' responses. Mean scores could range from 0 to 6 with higher scores indicating couples' greater engagement in partnered sexual activity (Schwenck et al., 2020; Vannier & Rosen, 2017).

Sexual Satisfaction. Sexual satisfaction was assessed using the validated Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1995). Five bipolar items are rated on a 7-point Likert scale (e.g., very good/very bad, very worthless/very valuable). Total scores range from 5 to 35, with higher scores signifying greater sexual satisfaction. Scores on this scale have been validated in samples of cisgender adults (Lawrance & Byers, 1995) and adults in same-gender/sex relationships (Calvillo et al., 2020). The GMSEX demonstrated excellent internal consistency within the present study's pregnancy ($\alpha_{\text{gestational parent}} = .91$, $\alpha_{\text{non-gestational parent}} = .92$) and postpartum samples ($\alpha_{\text{birthing parent}} = .93$, $\alpha_{\text{non-birthing parent}} = .95$).

Sexual Desire. Sexual desire was assessed using the 14-item Sexual Desire Inventory (SDI; Spector et al., 1996) that captures solitary and dyadic (both other- and partner-focused separately) sexual desire in the past month. We used a three-factor structure, as proposed by Moyano and colleagues (2017). Responses were answered on an 8- or 9-point Likert scale and ranged from 0 (no desire) to 7 or 8 (strong desire) depending on the item. Total scores for the solitary desire subscale range from 0 to 31 and reflect desire to engage in solitary sexual activity. Total scores for the other-focused desire subscale range from 0 to 16 and reflect sexual desire for an attractive other. Finally, total scores for the partner-focused desire subscale range from 0 to 54 and reflect sexual desire for one's partner. Within each subscale, higher scores represent higher sexual desire in that domain. Scores on the SDI have demonstrated strong reliability and validity in both cisgender men and women (Spector et al., 1996), as well as sex and gender diverse individuals (Mark et al., 2018), and showed good to excellent internal consistency in both the

pregnancy ($\alpha_{\text{gestational parent}}$ = .88-.93, $\alpha_{\text{non-gestational parent}}$ = .87-.89) and postpartum ($\alpha_{\text{birthing parent}}$ = .89-.92, $\alpha_{\text{non-birthing parent}}$ = .78-.93) samples for the present study.

Sexual Distress. Sexual distress was assessed using the 13-item Sexual Distress Scale-Revised (SDS; DeRogatis et al., 2008). The SDS-R captures how often individuals feel bothered or distressed about sexual problems. Items are rated on a 5-point Likert scale and range from 0 (never) to 4 (always). Total scores on the SDS-R range from 0 to 52 with higher scores indicating higher levels of distress regarding one's sex life. This measure has been validated in both cisgender men (Santos-Iglesias et al., 2018) and cisgender women (DeRogatis et al., 2008) and has been used reliably in previous samples of first-time parent couples (Rossi et al., 2022; Schwenck et al., 2020). Scores on the SDS-R demonstrated excellent internal consistency in both the pregnancy ($\alpha_{\text{gestational parent}}$ = .96, $\alpha_{\text{non-gestational parent}}$ = .94) and postpartum ($\alpha_{\text{birthing parent}}$ = .94, $\alpha_{\text{non-birthing parent}}$ = .90) samples for the present study.

Data Analysis

SPSS 28.0 was used for all analyses. Multiple imputation was used to replace up to 10% of participants' missing data for each measure when relevant. All variables were normally distributed. To examine H1, H2, and H3, which are primarily descriptive analyses on the quantity, content, and sources of information received/accessed and desired, as well as comfort accessing information, we report percentages and averages. For H4, which examines links between quantity of information and sexual well-being, multi-level modeling using mixed two-level models in which partners were nested within couples were used (Kenny et al., 2006). To guide our analyses for H4, we used the Actor Partner Interdependence Model (APIM; Cook & Kenny, 2005), with information received/accessed about pregnancy or postpartum sexuality as the independent variable, sexual well-being outcomes as the dependent variables, and partner

role (e.g., birthing or non-birthing parent) as the distinguishing variable. This approach enabled us to evaluate associations between the quantity of information received/accessed by each individual and their own sexual well-being (i.e., actor effects) as well as their partner's sexual well-being (i.e., partner effects). Separate models were run for information received/accessed about pregnancy or postpartum sexuality with each facet of sexual well-being (i.e., sexual satisfaction, three sexual desire subscales, and sexual distress) for a total of ten models. For sexual frequency, we ran multiple regression analyses with information received/accessed by each parent as independent variables with simultaneous entry. Collinearity diagnostics were run alongside our regression models and all values were within acceptable ranges.

Results

Correlations and Descriptive Statistics

Table 1 displays sociodemographic information for both samples. Most birthing parents identified as women, with a minority identifying as genderqueer or non-binary. Descriptives for predictor and outcome variables are presented in Tables 2, 3, and 4. Correlations between quantity of information received/accessed by birthing parents and their partners and all sexual well-being variables are presented in Supplemental Tables 1a and 1b.

Aim 1: Quantity, Sources, Content, and Perceived Gaps in the Perinatal Sexual Health Information Couples Received/Accessed

Pregnant Couples

Two thirds of gestational parents (67%) and almost half of non-gestational parents (44%) reported receiving/accessing little-to-no information (≤2 on the 0 to 5 scale) about their pregnancy related-sexuality (see Table 2 for a full summary of information received/accessed by each partner). Gestational parents reported receiving/accessing significantly less information

about changes to their pregnancy sexuality than non-gestational parents ($t(202) = -3.81$, $p < .001$, 95% CI [-1.34, -.43], $d = -.53$). Regarding the source of information received/accessed, 37% of gestational parents and 43% of non-gestational parents reported receiving/accessing some perinatal sexuality information from healthcare professionals (e.g., family doctor, gynaecologist, midwife/doula, sex therapist). Other sources of information included the Internet, apps, partners, friends, and books. Discussions surrounding pregnancy sexuality were most often initiated by gestational parents rather than non-gestational parents or the person they received/accessed information from (e.g., healthcare professional; see Table 2). The most common type of information expectant couples received/accessed was regarding safety of sexual activity during pregnancy (see Table 3). The least common type of information expectant couples received/accessed was how to manage changes to their sex life during pregnancy, despite this being the most endorsed topic of sexual health information that expectant parents wanted to receive. Indeed, gestational and non-gestational parents both reported wanting to receive a wide range of information related to their pregnancy sexuality (see Table 3).

Postpartum Couples

Most birthing parents (78%) and non-birthing parents (63%) reported receiving/accessing little-to-no information about their postpartum sexuality in either pregnancy or the postpartum period (see Table 2). There were no significant differences between the quantity of postpartum sexuality information that birthing parents and non-birthing parents received/accessed. Regarding the source of information, 77% of birthing parents and 68% of non-birthing parents reported receiving/accessing some perinatal sexuality information from healthcare professionals. Discussions surrounding perinatal sexuality were most often initiated by birthing parents or the person they received information from, but rarely by non-birthing parents (see Table 2). The

most common types of information that birthing parents received was about when to resume sexual activity, followed by contraception and information about the vagina and perineum (see Table 3). The most common types of information that non-birthing parents received was about when to resume sexual activity, followed by changes to the birthing parent's sexuality, reassurance that changes to sexuality were normal and information about the vagina and perineum (see Table 3). Like the pregnancy sample, among the topics provided, receiving information about how to manage changes to one's sex life during the postpartum was of the least commonly endorsed, despite most new parents wanting to receive this information. Additionally, birthing and non-birthing parents reported wanting to receive a wide range of information related to their postpartum sexuality (see Table 3).

Aim 2: Barriers to Accessing Information About Perinatal Sexuality

Pregnant Couples

On average, gestational parents (M = 3.02, SD = 1.16) and non-gestational parents (M = 3.18, SD = 1.24) reported that discussing their sexual problems with healthcare professionals was neither easy nor difficult. Additionally, on average, gestational parents (M = 3.01, SD = 1.36) and non-gestational parents (M = 3.28, SD = 1.33) reported feeling neither comfortable nor uncomfortable discussing their sexual problems with healthcare professionals.

Postpartum Couples

On average, birthing parents (M = 3.14, SD = 1.21) and non-birthing parents (M = 3.39, SD = 1.07) reported that discussing their sexual problems with healthcare professionals was neither easy nor difficult. Additionally, on average, birthing parents (M = 3.18, SD = 1.21) and non-birthing parents (M = 3.23, SD = 1.19) reported feeling neither comfortable nor uncomfortable discussing their sexual problems with healthcare professionals.

Aim 3: Associations Between Quantity of Sexual Health Information Received/Accessed and Sexual Well-being

Pregnant Couples

When gestational parents reported receiving/accessing more information about their pregnancy related sexuality, the couple also reported engaging in sexual activity more frequently, and gestational parents reported higher sexual satisfaction, higher partner-focused sexual desire, lower sexual distress in pregnancy, and non-gestational parents reported lower solitary and other-focused sexual desire (see Table 5a). There were no significant associations between the amount of information non-gestational parents reported receiving/accessing and their own or gestational parents' sexual well-being outcomes.

Postpartum Couples

When birthing parents received/accessed more information (in pregnancy or after the baby was born) about their postpartum sexuality, the couple also reported engaging in sexual activity more frequently, and birthing parents reported higher sexual satisfaction, and higher sexual desire across all domains (solitary, other-focused, partner-focused) after the baby was born (see Table 5b). There were no significant associations between the quantity of information birthing parents received/accessed about their postpartum sexuality and their own sexual distress, or with the non-birthing parents' sexual outcomes. When non-birthing parents reported receiving/accessing more information about their postpartum sexuality, they also reported higher sexual satisfaction, and higher partner-focused sexual desire after the baby was born. There were no other significant associations for non-birthing parents' outcomes or partner effects for the birthing parents' sexual well-being.

Discussion

The present study examined couples' access to perinatal sexual health information and extended previous research by examining associations with both partners' sexual well-being. Our findings revealed that most expectant and new parents received/accessed little-to-no information about changes to their perinatal sexual well-being. Despite this lack of information, almost all expectant and new parents reported wanting a range of information related to their perinatal sexuality. Additionally, expectant and new parent couples, on average, reported feeling indifferent toward discussing their sex lives with healthcare professionals. Overall, we found that receiving/accessing more information about perinatal sexuality was linked with greater sexual well-being for gestational and birthing parents, and for non-birthing parents across two independent samples of pregnant and postpartum couples.

Quantity, Sources, Content, and Perceived Gaps in the Perinatal Sexual Health Information Couples Received/Accessed

Consistent with prior research, we found that most gestational and birthing parents received/accessed little-to-no information from any source about potential sexual challenges during pregnancy or the postpartum (Barrett et al., 2000; Bartellas et al., 2000; Woolhouse et al., 2014). We also found, for the first time, that many non-gestational and non-birthing parents receive/accessed little-to-no information. To our surprise, in our pregnant sample we found that non-gestational parents reported receiving/accessing more information about perinatal sexuality than gestational parents. Given that non-gestational parents have historically been excluded from discussions surrounding perinatal care with healthcare professionals (Forbes et al., 2021), they may seek out more pregnancy related sexual health information that is relevant to them specifically from outside sources (e.g., the Internet). Indeed, we observed a disparity between gestational parent- versus non-gestational parent-focused sexual health information in our study

such that 40-50% of expectant parents reported receiving/accessing information about changes to the gestational parents' pregnancy-related sexuality, while only 20-30% reported receiving/accessing information about the non-gestational parent's pregnancy-related sexuality. This disparity in access to information exists despite evidence that both partners experience changes to their sexuality during the perinatal period (Fitzpatrick et al., 2021).

Quantity and timing of information received/accessed from healthcare professionals differed depending on whether couples were pregnant or postpartum. Most birthing and non-birthing parents in the postpartum sample received/accessed at least some information directly from healthcare professionals regarding their postpartum sexuality, though this information was minimal. In contrast, less than half of gestational and non-gestational parents in our pregnancy sample received/accessed any information from healthcare professionals regarding their pregnancy sexuality. This lack of perinatal sexuality information from a healthcare professional is concerning given cross-sectional evidence that 59% of gestational parents endorse fears that hindered them from engaging in sexual activity during pregnancy (Beveridge et al., 2018). Furthermore, 90% of new parent couples report experiencing moderately distressing concerns about their sexuality in the postpartum (Schlagintweit et al., 2016). The inclusion of more conversations about sexuality in perinatal care could allow both healthcare professionals and couples to become more informed about couples' experiences regarding their perinatal sexual well-being (Ford et al., 2013). Indeed, both parties becoming more informed on such topics could reduce some anxiety for expectant and new parent couples which may be conducive to desiring, engaging in, and enjoying more satisfying and frequent sex. Additionally, healthcare professionals may begin to feel more prepared to have conversations regarding perinatal sexuality in the future.

Our data also revealed significant gaps in the breadth of information individuals and couples receive/access with respect to their perinatal sexuality. Previous research evaluating health information received/accessed in the postpartum has found that information related to perinatal sexuality contains the largest gaps among all health information (e.g., baby care, breastfeeding, mental health) received by birthing parents (Guerra-Reyes et al., 2017). Findings from the present study further support these conclusions. The most common information provided to both parents was related to problems with the birthing or gestational parent's sexuality, safety of sexual activity during pregnancy, contraception, and when to resume sexual activity in the postpartum. However, our study revealed that expectant and new parents want information about a variety of psychosexual outcomes (e.g., normalization of changes to both parents' sexualities and strategies to cope with these changes), which could easily be incorporated into perinatal health care (de Pierrepont et al., 2021).

Barriers to accessing information about perinatal sexuality

Despite, the importance of discussing perinatal sexuality with expectant and new parent couples, our findings revealed that it is often the gestational or birthing parent who initiates such conversations. Previous research sampling healthcare professionals has found that in addition to barriers such as lack of time and both actual and perceived discomfort, many healthcare professionals do not feel knowledgeable or adequately trained enough to deliver accurate information about perinatal sexuality (de Pierrepont et al., 2021). As such, we echo recent calls to action that have highlighted the immediate need and benefit of more perinatal sexuality education training for healthcare professionals (de Pierrepont et al., 2021; Rosen et al., 2021). In our study most expectant and new parents reported being neither comfortable nor uncomfortable discussing their sexuality with healthcare professionals, and that these discussions were neither

easy nor difficult. While previous research has reported that birthing parents experience anxiety initiating sexual health discussions with healthcare professionals during pregnancy (Woolhouse et al., 2014), our findings suggest a level of indifference toward discussing such information among both gestational and birthing parents and their partners. Moreover, though healthcare professionals have reported that the discomfort of expectant and new parents is a barrier to discussing perinatal sexual health information (de Pierrepont et al., 2021), our findings suggest that this is not necessarily the case and that couples might welcome these conversations.

Associations between quantity of sexual health information received/accessed and sexual well-being

Findings from the present study add to the growing literature on the benefits of sexual education for expectant couples. Consistent with Information-Motivation-Behaviour Theory (Fisher & Fisher, 1992), our study revealed links between more information about pregnancy sexuality and gestational parents' higher sexual well-being (i.e., greater sexual frequency, higher sexual satisfaction, higher sexual desire, and lower sexual distress) during pregnancy. These findings are the first to show links between receiving/accessing information about pregnancy sexuality and lower sexual distress, suggesting that perhaps normalizing sexual challenges in pregnancy may lead gestational parents to feel more equipped to manage and less bothered about such changes when they occur. In contrast, receiving/accessing information was not linked with non-gestational parents' pregnancy sexual well-being. Thus, these findings are only partially in line with quasi-experimental studies that have demonstrated benefits of sexual education interventions for expectant couples for improving sexual function during pregnancy for both members of the couple (Heidari et al., 2018; Bahadoran et al., 2015). Given that gestational parents' sexual well-being tends to follow steeper declines than non-gestational parents' during

pregnancy specifically (Dawson et al., 2021; Rosen et al., 2021), receiving/accessing information about changes to pregnancy sexuality may not be as relevant for non-gestational parents because they are not experiencing such marked changes (Fitzpatrick et al., 2021; Rosen et al., 2021). Conversely, and consistent with our results, perhaps we see stronger links between receiving/accessing information about postpartum sexuality and non-birthing parents' sexual well-being in the postpartum, because this may be when they experience more marked changes to their own and their partner's sexual well-being (e.g., not resuming sexual activity, desire discrepancies; reviewed in Fitzpatrick et al., 2021).

In line with previous research examining the benefits of psychosexual intervention for birthing parents' postpartum sexual outcomes (Sheikhi et al., 2020; Yörük & Karaçam, 2016; Zamani et al., 2019), we also found that greater access to postpartum-related sexual health information was linked with higher sexual satisfaction and desire for both partners. Though previous work (Sheikhi et al., 2020) has not found effects for sexual frequency, we found that when birthing parents received/accessed more information about postpartum sexuality, the couple also engaged in sexual activity more frequently. Differences between these studies may be related to how sexual activity was defined. Indeed, Sheiki and colleagues (2020) defined sexual activity as "vaginal intercourse", while our definition was inclusive of a variety of behaviors (e.g., oral sex, manual stimulation, vaginal intercourse). Receiving/accessing more information about postpartum sexuality may better equip couples to navigate their sexualities, including adopting more flexible approaches to sex and increasing their sexual repertoire, which in turn, may contribute to higher sexual desire and satisfaction.

Though most of our effects were in line with our hypotheses, there was one surprising finding related to associations between gestational parents receiving/accessing more information

about their pregnancy related sexuality and non-gestational parents' lower solitary and other-focused sexual desire. Given that these data are correlational, one third factor variable that may explain this finding is sexual frequency. When gestational parents receive/access more information about their pregnancy related sexuality (e.g., intercourse during pregnancy is safe), the gestational parent may be more willing and interested in maintaining sexual activity—indeed we saw associations with higher sexual desire for the gestational parent and sexual frequency for the couple. If sexual frequency changes minimally throughout the perinatal period, partners may maintain their dyadic desire for their partner and in turn feel less solitary sexual desire (i.e., to masturbate) and less desire for attractive others outside of their relationship.

Lastly, previous work (Heidari et al., 2018) has suggested that involving non-gestational parents in pregnancy focused sex education training may not be necessary to improve sexual function for both members of the couple, so long as gestational parents can effectively share materials and learned information with their partner. Our research does not support this conclusion. In both samples, gestational and birthing parents receiving/accessing more information about their pregnancy or postpartum sexuality was linked with their own but not their partners' higher sexual well-being. However, our study was also the first to show that when non-birthing parents received/accessed more information about postpartum sexuality, they reported higher sexual satisfaction and desire for their partner after the baby was born. Perhaps more structured, frequent, or in-depth delivery of sexual education from a trained professional—as in the study by Heidari and colleagues (2018)—is required for benefits to translate effectively to the partner. Regardless, we believe that involving both members of the couple in discussions about perinatal sexuality is important to reduce burden on gestational and birthing parents who

already shoulder a disproportionate amount of postpartum labor (e.g., childrearing, housework) relative to their partners (Yavorsky et al., 2015).

Limitations and Future Directions

Although our study had notable strengths, including two independent dyadic samples of expectant and new parent couples, these data were cross-sectional. Thus, we cannot conclude that receiving/accessing more information about perinatal sexuality *improves* couples' sexual well-being and longitudinal experimental work needs to be done to confirm this hypothesis. Further research may also seek to examine which sources of information are the most reliable and the most beneficial for couples' sexual well-being. As we shed further light on understanding perinatal sexual well-being through a dyadic interpersonal lens (Fitzpatrick et al., 2021), we recommend that both members of the couple be included in future studies to better understand how each partners' sexuality impacts and is impacted by receiving psychoeducation. Consistent with Family Systems Theory (Cox & Paley, 2003), which posits that all individuals and relationships within the family unit are interrelated, future work should aim to extend these findings outside of the couple and into the family dynamic given associations between relationship quality and non-sexual couple and family outcomes (e.g., co-parenting quality and child socioemotional development; Christopher et al., 2015; Ratcliffe et al., 2016).

Despite our best efforts to recruit a diverse sample in terms of ethnicity, sexual orientation, and class, our samples were predominantly White, heterosexual, and of high socio-economic status. We also did not assess whether couples were in monogamous relationships. Thus, these findings may not generalize to ethnic-, racial-, sexual-, and/or class- diverse couples or couples in other relationship constellations. Indeed, there are blatant disparities in access to appropriate health care, including perinatal care, received by marginalized groups (e.g., Black

parents, parents with low socioeconomic status, etc.; Trye et al., 2022). As such, these disparities may further impact certain groups' ability to access evidence-based information about their perinatal sexuality from healthcare professionals, with potentially greater negative consequences for their sexual well-being. We encourage healthcare professionals to consider intersections of race, class, sex, and gender and use culturally responsive methods (e.g., addressing racism, heterosexism, and classism) to fight back against these inequities in perinatal health care (Fitzpatrick et al., 2021; Trye et al., 2022).

Conclusion

To our knowledge, this was the first study to comprehensively examine the quantity and content of perinatal sexual education that expectant and new parent couples receive/access and links with sexual well-being outcomes for both partners. These findings add to our understanding of gaps in perinatal sexual education and highlight desired information that first-time expectant and new parent couples would like to receive. Not only did we demonstrate the scarcity of such education despite couples' educational needs and concerns, but our data revealed positive associations between quantity of information received/accessed and sexual well-being outcomes for both partners. The current sexual education gap in perinatal care could be addressed by healthcare professionals initiating comprehensive discussions surrounding sexuality with couples to better prepare both partners to expect and adjust to changes to their sexual well-being.

Interests & Word Count

(1) The authors report that there are no competing interests to declare.

(2) Word count (title, abstract, references, appendices, and tables not included) = 6428 words.

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Table 1.
Sociodemographic descriptives for the pregnancy (N = 102 couples) and postpartum (N = 102 couples) samples.

	Pregnancy sample		Postpartum sample	
	Gestational parents *M* ± *SD* or *N (%)*	Non-gestational parents *M* ± *SD* or *N (%)*	Birthing parents *M* ± *SD* or *N (%)*	Non-birthing parents *M* ± *SD* or *N (%)*
Age (years)	30.39 ± 4.09	31.82 ± 4.06	30.26 ± 4.06	31.44 ± 4.18
Gender				
Woman	100 (97.1%)	2 (2.0%)	101 (99.0%)	-
Man	-	99 (96.0%)	-	102 (100.0%)
Genderqueer	3 (2.9%)	2 (2.0%)	1 (1.0%)	-
Non-binary	-	1 (1.0%)		
Sexual Orientation				
Heterosexual	83 (81.4%)	93 (91.2%)	90 (88.2%)	96 (94.1%)
Lesbian	-	1 (1.0%)		
Bisexual	13 (12.7%)	3 (2.9%)	8 (7.8%)	3 (2.9%)
Pansexual	2 (2.0%)	2 (2.0%)	3 (2.9%)	1 (1.0%)
Asexual	1 (1.0%)	1 (1.0%)	1 (1.0%)	2 (2.0%)
Queer	2 (2.0%)	-	-	-
Questioning	1 (1.0%)	2 (2.0%)	-	-
Ethnicity/Culture				
Indigenous	-	1 (1.0%)	-	2 (2.0%)
White	76 (74.5%)	79 (77.5%)	80 (78.4%)	78 (76.5%)
East Asian	3 (2.9%)	1 (1.0%)	5 (4.9%)	3 (2.9%)
Hispanic	1 (1.0%)	1 (1.0%)	6 (5.9%)	4 (3.9%)
Latina/Latino/Latinx	2 (2.0%)	2 (2.0%)	3 (2.9%)	2 (2.0%)
African American/Black	3 (2.9%)	6 (5.9%)	3 (2.9%)	5 (4.9%)
South Asian	6 (5.9%)	4 (3.9%)	1 (1.0%)	2 (2.0%)
Southeast Asian	2 (2.0%)	3 (2.9%)	3 (2.9%)	1 (1.0%)
Biracial/Multiracial	8 (7.8%)	2 (2.0%)	3 (2.9%)	4 (3.9%)
Middle Eastern/Central Asian	1 (1.0%)	1 (1.0%)	1 (1.0%)	1 (1.0%)
Something else†	-	2 (2.0%)	-	-
Relationship Status				
Married	82 (80.4%)		86 (84.3%)	
Common-law	10 (9.8%)		11 (10.8%)	
Engaged	6 (5.9%)		2 (2.0%)	
Living together	4 (3.9%)		3 (2.9%)	
Relationship Length (years)	6.83 ± 4.68		7.17 ± 3.35	
Shared Annual Income				
$0-$39,999	7 (6.1%)		8 (7.8%)	
$40,000-$79,999	18 (17.6%)		25 (24.5%)	
>$80,000	77 (75.9%)		69 (67.6%)	

Note. The total N for our gender variable exceeds the total study N (204 couples) as participants were allowed to select as many options as they felt applied to them. Thus, participants who selected more than one gender are captured in more than one cell.
†Participant generated response(s) for ethnicity: Southern European

Table 2.
Descriptive statistics for the pregnancy (N = 102 couples) and postpartum (N = 102 couples) samples regarding quantity and source of perinatal sexual health information.

	Pregnancy sample		Postpartum sample	
	Gestational parents *N (%)*	Non-gestational parents *N (%)*	Birthing parents *N (%)*	Non-birthing parents *N (%)*
Quantity of information received/accessed in pregnancy about pregnancy sexuality				
0 (no information)	27 (26.5%)	14 (13.7%)	20 (19.6%)	11 (10.8%)
1	26 (25.5%)	15 (14.7%)	28 (27.5%)	14 (13.7%)
2	15 (14.7%)	16 (15.7%)	17 (16.7%)	9 (8.8%)
3	14 (13.7%)	18 (17.6%)	13 (12.7%)	25 (24.5%)
4	12 (11.8%)	20 (19.6%)	10 (9.8%)	20 (19.6%)
5 (a lot of information)	8 (7.8%)	19 (18.6%)	14 (13.7%)	20 (19.6%)
Quantity of information received/accessed in pregnancy about postpartum sexuality				
0 (no information)	53 (52.0%)	31 (30.4%)	33 (32.4%)	14 (13.7%)
1	19 (18.6%)	26 (25.5%)	28 (27.5%)	24 (23.5%)
2	16 (15.7%)	19 (18.6%)	21 (20.6%)	25 (24.5%)
3	10 (9.8%)	11 (10.8%)	10 (9.8%)	19 (18.6%)
4	3 (2.9%)	9 (8.8%)	5 (4.9%)	11 (10.8%)
5 (a lot of information)	1 (1.0%)	6 (5.9%)	5 (4.9%)	6 (5.9%)
Quantity of information received/accessed in the postpartum about postpartum sexuality				
0 (no information)			19 (18.6%)	21 (20.6%)
1			38 (37.3%)	31 (30.4%)
2			22 (21.6%)	18 (17.6%)
3			10 (9.8%)	20 (19.6%)
4			9 (8.8%)	5 (4.9%)
5 (a lot of information)			4 (3.9%)	4 (3.9%)
Source of information about perinatal sexuality				
Prenatal teacher/classes	14 (13.7%)	24 (23.5%)	14 (13.7%)	23 (22.5%)
Family doctor/general practitioner	8 (7.8%)	14 (13.7%)	26 (25.5%)	29 (28.4%)
Gynaecologist/obstetrician	17 (16.7%)	15 (14.7%)	49 (48%)	32 (31.4%)
Maternal health nurse	2 (2.0%)	6 (5.9%)	9 (8.8%)	14 (13.7%)
Midwife/doula	8 (7.8%)	14 (13.7%)	17 (16.7%)	16 (15.7%)
Sex/couples therapist	1 (1.0%)	3 (2.9%)	2 (2.0%)	1 (1.0%)
Other	46 (45.1%)	43 (42.2%)	15 (14.7%)	12 (11.8%)
Apps	4 (3.9%)	0	0	0
Books	4 (3.9%)	5 (4.9%)	1 (1.0%)	0
Internet	13 (12.7%)	11 (10.8%)	4 (3.9%)	1 (1.0%)
Friends/family	6 (5.9%)	3 (2.9%)	2 (2.0%)	1 (1.0%)
Emergency room doctor	1 (1.0%)	0	0	0
Pelvic floor physiotherapist	0	0	2 (2.0%)	0
Their partner	0	6 (5.9%)	0	1 (1.0%)
Did not specify source	23 (22.5%)	23 (22.5%)	7 (6.9%)	9 (8.8%)
Did not receive information	10 (9.8%)	17 (16.7%)	0	3 (2.9%)
Who initiated the conversation about perinatal sexuality?				

Gestational/Birthing parent	31 (30.4%)	47 (46.1%)	29 (28.4%)	33 (32.4%)
Non-gestational/birthing parent	5 (4.9%)	14 (13.7%)	1 (1.0%)	8 (7.8%)
Person who provided information	23 (22.5%)	14 (13.7%)	52 (51%)	33 (32.4%)
Did not receive information	15 (14.7%)	12 (11.8%)	1 (1.0%)	2 (2.0%)

Table 3.

Descriptive statistics for the pregnancy (N = 102 couples) and postpartum (N = 102 couples) samples regarding content of received/accessed and desired perinatal sexual health information.

	Pregnancy sample		Postpartum sample	
	Gestational parents *N (%)*	Non-gestational parents *N (%)*	Birthing parents *N (%)*	Non-birthing parents *N (%)*
Content of information about pregnancy sexuality received/ accessed				
Safety of sexual activity during pregnancy	54 (52.9%)	53 (52.0%)	58 (56.9%)	53 (52.0%)
Reassurance that changes to sexuality are normal	47 (46.1%)	52 (51.0%)	36 (35.3%)	56 (54.9%)
Potential changes/problems with one's own sexuality	60 (58.8%)	31 (30.4%)	45 (44.1%)	30 (29.4%)
Potential changes/problems with one's partner's sexuality	23 (22.5%)	68 (66.7%)	10 (9.8%)	67 (65.7%)
Problems with the vagina or perineum	30 (29.4%)	38 (37.3%)	37 (36.3%)	41 (40.2%)
Risks associated with sex during pregnancy	34 (33.3%)	31 (30.4%)	27 (26.5%)	41 (40.2%)
Potential changes to relationship satisfaction	25 (24.5%)	36 (35.3%)	22 (21.6%)	32 (31.4%)
How to manage changes to one's sex life during pregnancy	13 (12.7%)	22 (21.6%)	11 (10.8%)	15 (14.7%)
Other information#	9 (8.8%)	8 (7.8%)	9 (8.8%)	3 (2.9%)
Content of information about pregnancy sexuality desired				
Safety of sexual activity during pregnancy	46 (45.1%)	41 (40.2%)	35 (34.3%)	28 (27.5%)
Reassurance that changes to sexuality are normal	43 (42.2%)	35 (34.3%)	54 (52.9%)	39 (38.2%)
Potential changes to or problems with one's own sexuality	54 (52.9%)	42 (41.2%)	58 (56.9%)	29 (28.4%)
Potential changes/problems with one's partner's sexuality	44 (43.1%)	43 (42.2%)	31 (30.4%)	36 (35.3%)
Problems with the vagina or perineum	58 (56.9%)	32 (31.4%)	55 (53.9%)	25 (24.5%)
Risks associated with sex during pregnancy	47 (46.1%)	47 (46.1%)	34 (33.3%)	37 (36.3%)
Potential changes to relationship satisfaction	43 (42.2%)	37 (36.3%)	46 (45.1%)	36 (35.3%)
Managing changes to one's sex life	71 (69.6%)	62 (60.8%)	69 (67.6%)	52 (51.0%)
Other information†	11 (10.8%)	2 (2.0%)	5 (4.9%)	0
Content of information about postpartum sexuality received/accessed in pregnancy				
When to resume sexual activity	50 (49.0%)	44 (43.1%)	77 (75.5%)	68 (66.7%)
Reassurance that changes to sexuality are normal	25 (24.5%)	40 (39.2%)	36 (35.3%)	47 (46.1%)
Variability in returning to a "normal" sex life	14 (13.7%)	25 (24.5%)	17 (16.7%)	25 (24.5%)
Potential changes/problems with one's own sexuality	41 (40.2%)	27 (26.5%)	42 (41.2%)	23 (22.5%)
Potential changes/problems with one's partner's sexuality	17 (16.7%)	51 (50.0%)	13 (12.7%)	57 (55.9%)
Potential changes to relationship satisfaction	25 (24.5%)	39 (38.2%)	25 (24.5%)	41 (40.2%)

Managing changes to one's sex life in the postpartum	2 (2.0%)	15 (14.7%)	8 (7.8%)	17 (16.7%)
Problems with the vagina or perineum	34 (33.3%)	37 (36.3%)	49 (48.0%)	47 (46.1%)
Urinary/fecal incontinence	28 (27.5%)	19 (18.6%)	18 (17.6%)	15 (14.7%)
Contraception	19 (18.6%)	18 (17.6%)	60 (58.8%)	32 (31.4%)
Other information‡	13 (12.7%)	8 (7.8%)	4 (3.9%)	3 (2.9%)
Content of information about postpartum sexuality received/accessed in postpartum				
When to resume sexual activity			69 (67.6%)	55 (53.9%)
Reassurance that changes to sexuality are normal			26 (25.5%)	40 (39.2%)
Variability in returning to a "normal" sex life			18 (17.6)	18 (17.6%)
Potential changes/problems with one's own sexuality			32 (31.4%)	15 (14.7%)
Potential changes/problems with one's partner's sexuality			8 (7.8%)	33 (32.4%)
Potential changes to relationship satisfaction			16 (15.7%)	26 (25.5%)
Managing changes to one's sex life in the postpartum			10 (9.8%)	14 (13.7%)
Problems with the vagina or perineum			42 (41.2%)	39 (38.2%)
Urinary/fecal incontinence			14 (13.7%)	12 (11.8%)
Contraception			64 (62.7%)	31 (30.4%)
Other information^			1 (1.0%)	0
Content of information about postpartum sexuality desired				
When to resume sexual activity	68 (66.7%)	49 (48.0%)	37 (36.3%)	25 (24.5%)
Reassurance that changes to sexuality are normal	55 (53.9%)	37 (36.3%)	57 (55.9%)	38 (37.3%)
Variability in returning to a "normal" sex life	68 (66.7%)	50 (49.0%)	62 (60.8%)	44 (43.1%)
Potential changes/problems with one's own sexuality	67 (65.7%)	41 (40.2%)	62 (60.8%)	30 (29.4%)
Potential changes/problems with one's partner's sexuality	56 (54.9%)	49 (48.0%)	39 (38.2%)	37 (36.3%)
Problems with the vagina or perineum	69 (67.6%)	35 (34.3%)	55 (53.9%)	24 (23.5%)
Potential changes to relationship satisfaction	58 (56.9%)	40 (39.2%)	55 (53.9%)	35 (34.3%)
Managing changes to one's sex life	84 (82.4%)	59 (57.8%)	74 (72.5%)	53 (52.0%)
Urinary/fecal incontinence	60 (58.8%)	37 (36.3%)	30 (29.4%)	15 (14.7%)
Contraception	57 (55.9%)	43 (42.2%)	33 (32.4%)	22 (21.6%)
Other information*	3 (2.9%)	3 (2.9%)	3 (2.9%)	2 (2.0%)

Note. # Other responses reported included information about increases in sexual desire, sex and pregnancy complications, sex after a vaginal delivery

† Other responses reported included information specific to sexual desire, information on pregnancy safe sex products (i.e., lubricant), impacts of cesarian sections on sexuality, safety of different types of sexual activities, dryness during sexual activity, and links between postpartum depression and sexual well-being

‡ Other responses reported included information related to pelvic floor healing

^ Other responses reported included information related to healing the vagina and perineum
* Other responses reported included a timeline for pain, guide for when to ask questions, and information on the impacts of breastfeeding on sexual well-being.

Table 4

Descriptive statistics for the pregnancy (N = 102 couples) and postpartum (N = 102 couples) samples regarding sexual well-being outcome variables.

	Pregnancy sample		Postpartum sample	
	Gestational parents *M* ± *SD*	Non-gestational parents *M* ± *SD*	Birthing parents *M* ± *SD*	Non-birthing parents *M* ± *SD*
Sexual frequency	1.94 ± 1.24	1.94 ± 1.24	1.56 ± 1.05	1.56 ± 1.05
Sexual satisfaction	25.62 ± 6.52	27.15 ± 6.09	24.02 ± 7.18	23.08 ± 8.39
Solitary sexual desire	11.79 ± 9.15	16.65 ± 7.67	8.88 ± 7.91	16.86 ± 8.18
Other-focused sexual desire	2.76 ± 3.45	7.14 ± 4.95	3.59 ± 3.95	7.78 ± 4.14
Partner-focused sexual desire	27.12 ± 10.97	33.23 ± 9.80	24.09 ± 11.33	36.15 ± 8.76
Sexual distress	15.05 ± 12.09	8.88 ± 8.94	16.49 ± 11.25	11.27 ± 8.41

Table 5a.

Associations between quantity of information about pregnancy sexuality received/accessed and pregnancy sexual well-being (i.e., sexual frequency, sexual satisfaction, sexual desire, and sexual distress).

	Information about pregnancy sexuality					
	b	*SE*	df	*t*	*p*	95% CI
Sexual frequency						
Actor effects						
Gestational parents	**.16**	**.08**	**98**	**2.07**	**.041**	**.01, .31**
Non-gestational parents	.09	.07	98	1.16	.249	-.06, .23
Sexual satisfaction						
Actor effects						
Gestational parents	**1.01**	**.39**	**99**	**2.59**	**.011**	**.24, 1.79**
Non-gestational parents	.66	.36	99	1.86	.066	-.04, 1.37
Partner effects						
Gestational parents	.44	.37	99	1.17	.244	-.30, 1.18
Non-gestational parents	.22	.37	99	.60	.552	-.52, .96
Solitary sexual desire						
Actor effects						
Gestational parents	.31	.57	99	.54	.587	-.82, 1.44
Non-gestational parents	.45	.44	99	1.03	.304	-.41, 1.31
Partner effects						
Gestational parents	.52	.54	99	.96	.342	-.56, 1.60
Non-gestational parents	**-1.49**	**.46**	**99**	**-3.27**	**.001**	**-2.39, -.59**
Other-focused sexual desire						
Actor effects						
Gestational parents	.16	.22	99	.73	.466	-.28, .60
Non-gestational parents	-.17	.29	99	-.57	.569	-.74, .41
Partner effects						
Gestational parents	.18	.21	99	.88	.382	-.23, .60
Non-gestational parents	**-.68**	**.30**	**99**	**-2.26**	**.026**	**-1.28, -.08**
Partner-focused sexual desire						
Actor effects						
Gestational parents	**1.51**	**.68**	**98**	**2.21**	**.029**	**.16, 2.86**
Non-gestational parents	-.21	.59	99	-.35	.725	-1.37, .96
Partner effects						
Gestational parents	.48	.65	98	.74	.459	-.80, 1.77
Non-gestational parents	-.17	.61	99	-.28	.781	-1.39, 1.04
Sexual distress						
Actor effects						
Gestational parents	**-1.79**	**.73**	**99**	**-2.45**	**.016**	**-3.23, -.34**
Non-gestational parents	-.17	.54	99	-.33	.745	-1.24, .89
Partner effects						
Gestational parents	-.58	.70	99	-.83	.410	-1.96, .81
Non-gestational parents	.06	.56	99	.11	.916	-1.05, 1.17

Note. Results include individuals in the pregnancy sample (N = 204). Bolded associations are significant at $p \leq .05$. Actor effects indicate the effects of one's own predictor variable (i.e., quantity of information) on their own outcome variables (i.e., sexual well-being). Partner effects indicate the effects of one's partner's predictor variable on their own outcome variables.

Table 5b.

Associations between quantity of information about postpartum sexuality received/accessed and postpartum sexual well-being (i.e., sexual frequency, sexual satisfaction, sexual desire, and sexual distress).

	Information about postpartum sexuality					
	b	*SE*	df	*t*	*p*	95% CI
Sexual frequency						
Actor effects						
Birthing parents	**.17**	**.08**	**98**	**2.01**	**.047**	**.00, .33**
Non-birthing parents	.14	.09	98	1.63	.107	-.03, .31
Sexual satisfaction						
Actor effects						
Birthing parents	**1.23**	**.57**	**96**	**2.17**	**.033**	**.10, 2.37**
Non-birthing parents	**1.73**	**.68**	**96**	**2.55**	**.012**	**.39, 3.08**
Partner effects						
Birthing parents	.22	.60	97	.37	.710	-.97, 1.42
Non-birthing parents	.63	.65	96	.97	.334	-.66, 1.93
Solitary sexual desire						
Actor effects						
Birthing parents	**1.52**	**.62**	**96**	**2.44**	**.017**	**.28, 2.75**
Non-birthing parents	-.13	.69	96	-.19	.854	-1.49, 1.24
Partner effects						
Birthing parents	.00	.65	96	.00	.999	-1.29, 1.28
Non-birthing parents	.03	.66	96	.05	.960	-1.28, 1.34
Other-focused sexual desire						
Actor effects						
Birthing parents	**.83**	**.30**	**96**	**2.74**	**.007**	**.23, 1.44**
Non-birthing parents	-.59	.33	96	-1.76	.081	-1.24, .073
Partner effects						
Birthing parents	-.16	.32	96	-.49	.626	-.78, .47
Non-birthing parents	-.04	.32	96	-.14	.890	-.68, .59
Partner-focused sexual desire						
Actor effects						
Birthing parents	**2.91**	**.86**	**96**	3.37	**.001**	**1.20, 4.62**
Non-birthing parents	**1.91**	**.72**	**96**	2.67	**.009**	**.49, 3.34**
Partner effects						
Birthing parents	.61	.90	96	.68	.495	-1.17, 2.39
Non-birthing parents	.33	.69	96	.47	.639	-1.04, 1.69
Sexual distress						
Actor effects						
Birthing parents	-.86	.87	96	-.99	.325	-2.58, .86
Non-birthing parents	-.61	.70	96	-.86	.390	-2.00, .79
Partner effects						
Birthing parents	-1.09	.90	96	-1.21	.230	-2.88, .70
Non-birthing parents	-.68	.68	96	-1.00	.320	-2.02, .67

Note. Results include individuals in the postpartum sample (N = 204). Bolded associations are significant at $p < .05$. Actor effects indicate the effects of one's own predictor variable (i.e., quantity of information) on their own outcome variables (i.e., sexual well-being). Partner effects indicate the effects of one's partner's predictor variable on their own outcome variables.

Online Supplemental Material

Sex Information During Pregnancy and Postpartum

Pregnancy time-point

For gestational parent:

1. During your pregnancy, how much information have you received about sex *and pregnancy*?
    - 0 – No information to 5 – A lot of information

2. During your pregnancy, how much information have you received about sex *after the baby is born*?
    - 0 – No information to 5 – A lot of information

For non-gestational parent:

1. During your partner's pregnancy, how much information have you received about sex *and pregnancy?*
    - 0 – No information to 5 – A lot of information

2. During your partner's pregnancy, how much information have you received about sex *after the baby is born*?
    - 0 – No information to 5 – A lot of information

For both partners:

3. *Only display if "> 0" was selected for receiving information about sex *and pregnancy**

    During pregnancy, what information have you received about sex *and pregnancy* [select all that apply]?
    - Potential changes to, or problems with, your own sexuality (e.g., sex drive, frequency, satisfaction) during pregnancy
    - Potential changes to, or problems with, your partner's sexuality (e.g., sex drive, frequency, satisfaction) during pregnancy
    - Potential changes to relationship satisfaction (i.e., how close you feel to your partner) during pregnancy
    - Reassurance that changes to sexuality are normal
    - How to manage changes to your sexuality and sex life during pregnancy
    - Problems with the vagina or perineum (e.g., pain, vaginal dryness, bleeding)
    - Safety of sexual activity during pregnancy
    - Risks related to sexual activity during pregnancy
    - Not listed [please specify]

4. *Only display if ">0" was selected for receiving information about sex *after the baby is born**

   During pregnancy, what information have you received about sex *after the baby is born* [select all that apply]?
   - Potential changes to, or problems with, your own sexuality (e.g., sex drive, frequency, satisfaction) postpartum
   - Potential changes, to or problems with, your partner's sexuality (e.g., sex drive, frequency, satisfaction) postpartum
   - Potential changes to relationship satisfaction (i.e., how close you feel to your partner) postpartum
   - Reassurance that changes to sexuality are normal
   - How to manage changes to your sexuality and sex life postpartum
   - Problems with the vagina or perineum (e.g., pain, vaginal dryness, bleeding)
   - Urinary/fecal continence
   - Contraception postpartum
   - When to resume sexual activity
   - Variability in what returning to "normal" sex life looks like
   - Not listed [please specify]

5. Who provided you with information about sexuality and/or where did you access this information [select all that apply]?
   - Prenatal teacher/classes
   - Family doctor/general practitioner
   - Gynaecologist/obstetrician
   - Maternal health nurse
   - Midwife/doula
   - Sex/couples therapist
   - Not listed [please specify]
   - I did not receive any information about my sexuality and sex life from anyone during pregnancy or postpartum

6. Who <u>initiated</u> the conversation about your sexuality and sex life in pregnancy or postpartum?
   - You
   - Your partner
   - The person you received information from
   - I did not receive any information about my sexuality and sex life from anyone during pregnancy or postpartum

7. How easy is it to talk to your health care provider about sex and sexual problems during pregnancy or postpartum?
   - 1 (very difficult); 2 (somewhat difficult), 3 (neither difficult nor easy); 4 (somewhat easy); 5 (very easy)

8. How comfortable are you talking to your health care provider about sex and sexual problems during pregnancy or postpartum?
    - 1 (very uncomfortable); 2 (somewhat uncomfortable), 3 (neither uncomfortable nor comfortable); 4 (somewhat comfortable); 5 (very comfortable)

9. What information would you have liked to receive about sex *and pregnancy* but didn't [select all that apply]?
    - Potential changes to, or problems with, your own sexuality (e.g., sex drive, frequency, satisfaction) during pregnancy
    - Potential changes to, or problems with your partner's sexuality (e.g., sex drive, frequency, satisfaction) during pregnancy
    - Potential changes to relationship satisfaction (i.e., how close you feel to your partner) during pregnancy
    - Reassurance that changes to sexuality are normal
    - How to manage changes to your sexuality and sex life during pregnancy
    - Problems with the vagina or perineum (e.g., pain, vaginal dryness, bleeding)
    - Safety of sexual activity during pregnancy
    - Risks related to sexual activity during pregnancy
    - Not listed [please specify]

10. What information would you have liked to receive about sex *after your baby is born* but didn't [select all that apply]?
    - Potential changes to, or problems with, your own sexuality (e.g., sex drive, frequency, satisfaction) postpartum
    - Potential changes, to or problems with your partner's sexuality (e.g., sex drive, frequency, satisfaction) postpartum
    - Potential changes to relationship satisfaction (i.e., how close you feel to your partner) postpartum
    - Reassurance that changes to sexuality are normal
    - How to manage changes to your sexuality and sex life postpartum
    - Problems with the vagina or perineum (e.g., pain, vaginal dryness, bleeding)
    - Urinary/fecal continence
    - Contraception postpartum
    - When to resume sexual activity
    - Variability in what returning to "normal" sex life looks like
    - Not listed [please specify]

Postpartum time-point

<u>For birthing parent:</u>

1. During your pregnancy, how much information did you receive about sex *and pregnancy*?
    - 0 – No information to 5 – A lot of information

2. During your pregnancy, how much information did you receive about sex *after the baby was born*?
    - 0 – No information to 5 – A lot of information

<u>For non-birthing parent:</u>

1. During your partner's pregnancy, how much information did you receive about sex *and pregnancy?*
    - 0 – No information to 5 – A lot of information

2. During your partner's pregnancy, how much information did you receive about sex *after the baby was born*?
    - 0 – No information to 5 – A lot of information

<u>For both partners:</u>

3. *Only display if ">0" was selected for receiving information about sex *and pregnancy**

    During the pregnancy, what information did you receive about sex *and pregnancy* [select all that apply]?
    - Potential changes to, or problems with, your own sexuality (e.g., sex drive, frequency, satisfaction) during pregnancy
    - Potential changes to, or problems with, your partner's sexuality (e.g., sex drive, frequency, satisfaction) during pregnancy
    - Potential changes to relationship satisfaction (i.e., how close you feel to your partner) during pregnancy
    - Reassurance that changes to sexuality are normal
    - How to manage changes to your sexuality and sex life during pregnancy
    - Problems with the vagina or perineum (e.g., pain, vaginal dryness, bleeding)
    - Safety of sexual activity during pregnancy
    - Risks related to sexual activity during pregnancy
    - Not listed [please specify]

4. *Only display if ">0" was selected for receiving information about sex *after the baby was born**

    During the pregnancy, what information did you receive about sex *after the baby was born* [select all that apply]?
    - Potential changes to, or problems with, your own sexuality (e.g., sex drive, frequency, satisfaction) postpartum
    - Potential changes, to or problems with, your partner's sexuality (e.g., sex drive, frequency, satisfaction) postpartum
    - Potential changes to relationship satisfaction (i.e., how close you feel to your partner) postpartum
    - Reassurance that changes to sexuality are normal
    - How to manage changes to your sexuality and sex life postpartum

- Problems with the vagina or perineum (e.g., pain, vaginal dryness, bleeding)
- Urinary/fecal continence
- Contraception postpartum
- When to resume sexual activity
- Variability in what returning to "normal" sex life looks like
- Not listed [please specify]

5. After your baby was born, how much information have you received about sex *postpartum*?
    - 0 – No information to 5 – A lot of information

6. *Only display if ">0" was selected for receiving information about sex *after the baby was born**

    After your baby was born, what information did you receive [select all that apply]?
    - Potential changes to, or problems with, your own sexuality (e.g., sex drive, frequency, satisfaction) postpartum
    - Potential changes, to or problems with, your partner's sexuality (e.g., sex drive, frequency, satisfaction) postpartum
    - Potential changes to relationship satisfaction (i.e., how close you feel to your partner) postpartum
    - Reassurance that changes to sexuality are normal
    - How to manage changes to your sexuality and sex life postpartum
    - Problems with the vagina or perineum (e.g., pain, vaginal dryness, bleeding)
    - Urinary/fecal continence
    - Contraception postpartum
    - When to resume sexual activity
    - Variability in what returning to "normal" sex life looks like
    - Not listed [please specify]

7. Who provided you with information about sexuality and/or where did you access this information [select all that apply]?
    - Prenatal teacher/classes
    - Family doctor/general practitioner
    - Gynaecologist/obstetrician
    - Maternal health nurse
    - Midwife/doula
    - Sex/couples therapist
    - Not listed [please specify]
    - I did not receive any information about my sexuality and sex life from anyone during pregnancy or postpartum

8. Who <u>initiated</u> the conversation about your sexuality and sex life in pregnancy or postpartum?

- You
- Your partner
- The person you received information from
- I did not receive any information about my sexuality and sex life from anyone during pregnancy or postpartum

9. How easy is it to talk to your health care provider about sex and sexual problems during pregnancy or postpartum?
    - 1 (very difficult); 2 (somewhat difficult), 3 (neither difficult nor easy); 4 (somewhat easy); 5 (very easy)

10. How comfortable are you talking to your health care provider about sex and sexual problems during pregnancy or postpartum?
    - 1 (very uncomfortable); 2 (somewhat uncomfortable), 3 (neither uncomfortable nor comfortable); 4 (somewhat comfortable); 5 (very comfortable)

11. What information would you have liked to receive about sex *and pregnancy* but didn't [select all that apply]?
    - Potential changes to, or problems with, your own sexuality (e.g., sex drive, frequency, satisfaction) during pregnancy
    - Potential changes to, or problems with, your partner's sexuality (e.g., sex drive, frequency, satisfaction) during pregnancy
    - Potential changes to relationship satisfaction (i.e., how close you feel to your partner) during pregnancy
    - Reassurance that changes to sexuality are normal
    - How to manage changes to your sexuality and sex life during pregnancy
    - Problems with the vagina or perineum (e.g., pain, vaginal dryness, bleeding)
    - Safety of sexual activity during pregnancy
    - Risks related to sexual activity during pregnancy
    - Not listed [please specify]

12. What information would you have liked to receive about sex *post-baby* but didn't [select all that apply]?
    - Potential changes to, or problems with, your own sexuality (e.g., sex drive, frequency, satisfaction) postpartum
    - Potential changes, to or problems with, your partner's sexuality (e.g., sex drive, frequency, satisfaction) postpartum
    - Potential changes to relationship satisfaction (i.e., how close you feel to your partner) postpartum
    - Reassurance that changes to sexuality are normal
    - How to manage changes to your sexuality and sex life postpartum
    - Problems with the vagina or perineum (e.g., pain, vaginal dryness, bleeding)
    - Urinary/fecal continence
    - Contraception postpartum
    - When to resume sexual activity

- Variability in what returning to “normal” sex life looks like
- Not listed [please specify]

Table 1a.
Correlations within- and between-both members of the pregnant couples (N = 102) for predictor and outcome variables.

		1	2	3	4	5	6	7
1.	Total information received/accessed about pregnancy sexuality	**.12**	.14	.19	.06	-.08	-.04	-.03
2.	Couple's sexual frequency	.22*	**1**	.38**	.11	.13	.49**	-.24*
3.	Sexual satisfaction	.27**	.43**	**.54****	-.12	-.14	.30**	-.58**
4.	Solitary sexual desire	.07	.12	-.02	**.34****	.50*	.27**	.12
5.	Other-focused sexual desire	.09	.23*	.09	.48**	**.17**	.31**	.12
6.	Partner-focused sexual desire	.24*	.54**	.41**	.20*	.31**	**.22***	-.23*
7.	Sexual distress	-.25*	-.31*	-.66**	.08	.03	-.26**	**.40****

Note: * indicates significance at $p < .05$, ** indicates significance at $p < .001$. Correlations within birthing parents' predictors and outcomes are below the diagonal; correlations within partners' predictors and outcomes are above the diagonal. Correlations between gestational parents and non-gestational parents' predictors and outcomes are on the diagonal, in bold.

Table 1b.

Correlations within- and between-both members of the postpartum couples (N = 102) for predictor and outcome variables.

		1	2	3	4	5	6	7
1.	Mean information received/accessed about postpartum sexuality	**.09**	.18	.26**	-.02	-.18	.27**	-.10
2.	Couple's sexual frequency	.21*	**1**	.52**	-.21*	-.12	.22*	-.25*
3.	Sexual satisfaction	.22*	.44**	**.44****	-.15	-.22*	.13	-.55**
4.	Solitary sexual desire	.24*	.13	.22*	**.25***	.34**	.21*	.11
5.	Other-focused sexual desire	.27**	.34**	.29**	.35**	**.18**	.24*	.11
6.	Partner-focused sexual desire	.34**	.54**	.51**	.29**	.53**	**.06**	-.08
7.	Sexual distress	-.11	-.22*	-.51**	-.03	-.06	-.37**	**.48****

Note: * indicates significance at $p < .05$, ** indicates significance at $p < .001$. Correlations within birthing parents' predictors and outcomes are below the diagonal; correlations within partners' predictors and outcomes are above the diagonal. Correlations between birthing parents and non-birthing parents' predictors and outcomes are on the diagonal, in bold.