What Does a Pregnancy Loss Mean for Sex? Comparing Sexual Well-Being Between Couples With and Without a Recent Loss

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Abstract

It is unclear whether sexual well-being, which is an important part of individual and relational health, may be at risk for declines after a pregnancy loss given the limits of prior work. Accordingly, in a cross-sectional study, we used structural equation modeling to (1) compare sexual well-being levels—satisfaction, desire, function, distress, and frequency—of both partners in couples who had experienced a pregnancy loss in the past four months (N = 103 couples) to their counterparts in a control sample of couples with no history of pregnancy loss (N = 120couples), and (2) compare sexual well-being levels of each member of a couple to one another. We found that gestational individuals and their partners in the pregnancy loss sample were less sexually satisfied than their control counterparts but did not differ in sexual desire nor problems with sexual function. Surprisingly, we found that partners of gestational individuals had less sexual distress than their control counterparts. In the pregnancy loss sample, gestational individuals had lower levels of sexual desire post-loss than their partners but did not differ in sexual satisfaction, problems with sexual function, nor sexual distress. Our results provide evidence that a recent pregnancy loss is associated with lower sexual satisfaction and greater differences between partners in sexual desire, which may be useful information for clinicians working with couples post-loss. Practitioners can share these findings with couples who may find it reassuring that we did not find many aspects of sexual well-being to be related to pregnancy loss at about three months post-loss.

Keywords: pregnancy loss, sexual relationships, sexual well-being, couples, miscarriage

What Does a Pregnancy Loss Mean for Sex? Comparing Sexual Well-Being Between Couples With and Without a Recent Loss

Pregnancy loss, also known as miscarriage or spontaneous abortion, is traumatic for many, and can be detrimental to the psychological and relational well-being of individuals who experience the loss (Diamond & Diamond, 2016). The negative effects of pregnancy loss are far reaching as approximately 15% to 20% of pregnancies are lost (Puscheck, 2018) and as many as 25% of women experience one or more pregnancy losses during their lives (Diamond & Diamond, 2016). A limited number of studies provide evidence that pregnancy loss may also negatively relate to aspects of couples' sexual relationships such as intimacy, sexual functioning, and sexual satisfaction (Francisco et al., 2014; Hasanpour et al., 2019; Serrano & Lima, 2006; Swanson et al., 2003; Zhang et al., 2016). Disruptions to the sexual relationship has important implications for those facing loss of pregnancy, as maintaining a strong sexual relationship promotes positive relationship quality and longevity (Impett et al., 2014), and better emotional regulation and coping in times of stress (Diamond & Huebner, 2012). However, the conclusion that couples' sexual relationships are negatively associated with pregnancy loss is premature as existing studies have (a) focused on couples facing the rare experience of having multiple losses, (b) lacked tests of how pregnancy loss relates to all facets of sexual well-being—sexual satisfaction, desire, function, distress, and frequency—which together provide a holistic picture of couple sexual relationships (Rosen et al., 2020), and (c) focused only on the person who physically experienced the loss rather than both members of the couple, thus ignoring the relational context of the loss and of sexuality (Diamond & Diamond, 2016). Accordingly, we aimed to compare various facets of sexual well-being among couples who experienced a pregnancy loss in the last four months to the sexual well-being of couples who had never

experienced a pregnancy loss. In so doing, we hoped to gain a more comprehensive picture of how pregnancy loss may be linked to couples' sexual relationships.

Pregnancy Loss and Sexual Well-Being

The potential associations between pregnancy loss and a couple's sexual relationship may be understood through Patterson's Family Adjustment and Adaptation Response Model (2002). Patterson suggests that when a family interprets their demands (i.e., stressors and strains that call for familial change) as outweighing their capabilities (i.e., resources and coping ability to handle those demands), they undergo a period in which they adapt by re-balancing demands and capabilities, referred to as a crisis. This crisis period can lead to changes in family structure, roles, and patterns of interactions (Patterson, 1988), which may ultimately affect sexual relationships. For example, the physical and psychological stress of pregnancy loss may pile-up on top of prior challenges—like tension around expectations of having a child or the demands of work, school, and family—to the degree that couples feel overwhelmed. Indeed, results from a meta-analysis of 29 studies found that women who have experienced a pregnancy loss are at increased risk for anxiety and depressive disorders compared to women who have not (Herbert et al., 2022), which exemplifies the disruptive negative emotions that can follow pregnancy loss. An accumulation of stressors and negative emotion in response to pregnancy loss may spill over to a couple's sexual relationship. Grief after a pregnancy loss is most severe in the first six months post-loss (see Brier, 2008, for review), which may make "crises" more likely to occur for couples during this time. This model has been used to understand declines in sexual well-being during other challenging life events such as financial stress and sexual satisfaction in new marriages (Wikle et al., 2020), and physical and emotional intimacy among cohabiting couples during the COVID-19 pandemic (Cornelius et al., 2022).

4

Preliminary empirical work provides evidence that couples' sexual relationships are indeed associated with pregnancy loss during what may be a "crisis" period for couples. To our knowledge, there are only five empirical, correlational studies on the associations between pregnancy loss and sexual well-being. These studies have provided evidence that women who experience a pregnancy loss tend to have lower sexual intimacy based on self-reported changes after the loss (Swanson et al., 2003) or when compared to other women who have not experienced a loss (Hasanpour et al., 2019), and that women report lower sexual satisfaction when comparing their own experiences before and after a loss (Serrano & Lima, 2006). Women who have experienced a pregnancy loss also report lower sexual function than control groups (Francisco et al., 2014; Hasanpour et al., 2019) and partners similarly report lower sexual function than partners in couples who have not experienced a pregnancy loss (Zhang et al., 2016). There is mixed evidence that pregnancy loss relates to lower sexual desire for women based on comparisons to women who have not had repeated losses (Francisco et al., 2014) and women's and partners' self-reports (Serrano & Lima, 2006). For couples who have experienced a pregnancy loss, sexual interactions may evoke traumatic memories of the loss, which could lead to avoidance of sexual activity, create a sense of isolation and distance between partners (Jaffe & Diamond, 2011), and ultimately result in lower sexual well-being. Indeed, in their qualitative study of fathers and later pregnancy loss (23+ weeks gestation), Camacho-Ávila et al. (2023) found that arousal and sexual desire faded for fathers because of grief and that fathers reported their memories and fears about pregnancy loss negatively impacted their sexuality. Similar sentiments were expressed by couples in a broader study of parental loss and sexuality (Dyregrov & Gjestad, 2011).

5

Existing knowledge suggesting that sexual well-being is associated with pregnancy loss is limited in three key ways. First, the five existing correlational studies relied on samples who experienced multiple pregnancy losses (typically three or more) before the 20th week of gestation (Francisco et al., 2014; Hasanpour et al., 2019; Serrano & Lima, 2006; Swanson et al., 2003; Zhang et al., 2016). Focusing on multiple pregnancy losses limits the generalizability of findings about pregnancy loss and sexual well-being as only 1% of couples experience multiple pregnancy losses to this degree (Zhang et al., 2016), while 25% of all women experience a pregnancy loss during their lives (Diamond & Diamond, 2016). Second, research lacks information about how pregnancy loss is associated with unique dimensions of sexual wellbeing, which include sexual satisfaction (how rewarding sex is), sexual desire (interest in sex), sexual frequency (how often sex happens), sexual function (degree of sexual problems with climaxing, arousal, pain, enjoyment, erectile difficulties, vaginal dryness, etc.), and sexual distress (concern about sex; Dubé et al., 2020). These dimensions are conceptually and empirically distinct from one another (see Rosen et al., 2020). For instance, infertility-related emotional stressors have been found to be associated with one's own levels of sexual desire but not sexual satisfaction (El Amiri et al., 2021). As another example, sexual satisfaction is more strongly associated with commitment in relationships than is sexual frequency (Joel et al., 2020). Finally, there is ample evidence suggesting that individuals continue to engage in sexual activity even when sexual function (Elmerstig et al., 2008; Reed et al., 2012) or sexual desire (Lundin & Elmerstig, 2015) are low —possibly because they want to become pregnant (Lundin & Elmerstig, 2015), or to connect with their partner or avoid dissapointing them (Muise et al., 2013; Rosen et al., 2015). To our knowledge, sexual distress has not been examined postpregnancy loss and there is mixed evidence regarding the impacts to sexual desire. Sexual

frequency has been examined in a study of parents' sexuality across several loss types (including stillbirth, SIDS, and other illnesses and accidents), where one-third of parents reported decreased levels sexual activity after their loss (Dyregrov & Gjestad, 2011). Thus, there is some initial evidence that sexual frequency may decline after pregnancy loss, with potential consequences for life satisfaction (Muise et al., 2015) and health (Cao et al., 2020).

Third, prior studies on the associations between pregnancy loss and sexual well-being have often lacked perspectives from both members of the couple. A lack of dyadic data neglects the relational context of the loss despite both partners' being psychologically impacted (Diamond & Diamond, 2016; Serrano & Lima, 2006), and that the sexual experiences of both partners after a pregnancy loss are interrelated but may also differ in important ways (see Diamond & Diamond, 2016). Only one study to our knowledge has compared the sexual experiences of partners to each other post-loss. In this study, Serrano and Lima (2006) found that women reported lower sexual desire than their partners following recurrent miscarriage; this study did not examine the other facets of sexual well-being. Comparing the experiences of both members of a couple could shed light on similarities and differences in experiences post-loss that may inform interventions aimed at supporting couples.

Gestational individuals, or women and individuals assigned female at birth (AFAB) who were pregnant when a loss occurred, may face unique challenges compared to their partners that result in poorer relative sexual well-being. The physical tolls of a pregnancy loss for gestational individuals can include bleeding, surgery, and side effects from treatment post-loss (Jurkovic et al., 2013). Further, prenatal-fetal attachments tend to be stronger for gestational individuals than non-gestational individuals (Close et al., 2020), which may trigger more intense and chronic grief reactions for gestational individuals (Markin, 2016). In line with Patterson (1988),

gestational individuals' unique physical and psychological challenges may pile-up beyond those of their partner, ultimately putting them at greater risk for poorer sexual well-being post-loss (e.g., Serrano & Lima, 2006). Given these challenges would be present only for couples who have had a pregnancy loss, its plausible that any between-partner, sexual well-being differences in couples who have had a pregnancy loss would be larger than any between-partner, sexual well-being differences in couples with no history of pregnancy loss.

Current Study

In sum, the demands of pregnancy loss may lead to an adjustment period which can strain couples' sexual relationships (Patterson, 2002). Prior research provides preliminary support that pregnancy loss is associated with poorer sexual well-being, and that gestational individuals have poorer sexual well-being than their partners. Accordingly, in a pre-registered, cross-sectional study of couples experiencing a recent pregnancy loss and control couples with no history of pregnancy loss, we tested four hypotheses: (1) gestational individuals and partners of gestational individuals would each report poorer levels of sexual well-being (i.e., lower sexual satisfaction, function, and desire; higher sexual distress) compared to their control counterparts, that is, control AFAB individuals and partners of control AFAB individuals (2) gestational individuals would report poorer levels of sexual well-being compared to partners of gestational individuals (3) any significant within-couple differences in the pregnancy loss sample would be larger than within-couple differences in the control sample, and (4) couples in the pregnancy loss sample would report lower sexual frequency compared to couples in the control group.

Methods

Participants

A sample of couples who experienced a pregnancy loss in the last four months and a control sample of couples who had never experienced a pregnancy loss were recruited from Canada, U.S., U.K., and Australia for the current study. Eligibility criteria for the pregnancy loss sample included (1) having access to the Internet, a personal email address, a device to complete surveys, and being fluent in English (2) being at least 18 years of age, (3) being in a relationship for at least one year, (4) experiencing a pregnancy loss within four months of their first outreach (e.g., email) to the research team about the study, (5) having both partners know about the pregnancy prior to the loss, (6) not having the pregnancy be the result of an elective, nonmedically recommended abortion, (7) not having the pregnancy result in a live birth (i.e., no signs of life after delivery), (8) not having sexual functioning of either partner impaired by a selfreported major untreated mental or physical illness and/or the treatment of such illness throughout the time of participation, and (9) not undergoing fertility treatment at the time of the loss or while participating. Regarding this last criterion, there is evidence, albeit mixed (Furukawa et al., 2012), that those undergoing fertility treatment are at risk for adverse changes to sexual well-being (Dong et al., 2022; Lundin & Elmerstig, 2015). Thus, to avoid conflated results, we excluded those undergoing fertility treatment from the study. Participants were included regardless of how many pregnancy losses they have had in the past.

Eligibility criteria for the control sample included criteria 1–3 of the pregnancy loss sample and (4) cohabitating for at least six months¹, (5) not currently being pregnant, breastfeeding, within one year postpartum, or undergoing fertility treatment, and (6) not self-reporting a major medical or psychiatric illness that is not well-managed (e.g., untreated and/or

¹ The control sample data came from a broader study. Thus, there are some differences in eligibility criteria between the samples, such as the required relationship duration.

unstable symptoms). Of the 299 and 190 couples screened for the pregnancy loss and control sample, respectively, 103 couples from the pregnancy loss sample and 151 couples from the control sample met eligibility criteria and were enrolled in the study. The 31 couples in the control sample who indicated that they had experienced a pregnancy loss during their lifetime were excluded to avoid confounding results (17.9% of full control sample). This brought the final size of the control sample to 120 couples. A figure detailing the recruitment flow for each sample (Supplemental Figures 1 and 2) can be found on the study's Open Science Framework (OSF) page at https://osf.io/z427u/?view_only=adcdfdf12293440fb4b6d4d9a04bf64b.

Sociodemographic characteristics of the samples are presented in Table 1 (see supplemental material details on measures). In summary, participants in both samples were on average in their early 30s, made between \$60,000 to \$100,000 per year in household income, identified primarily as cis-gender, and had the largest proportions of participants identify as White with smaller proportions identifying with other races/ethnicities. Couples in the pregnancy loss sample were predominantly in mixed-sex, female-male relationships, highly represented the U.S. and Canada with some Australia and U.K. representation and were predominantly in married relationships. Couples in the control sample were largely in mixed-sex, female-male relationships with some couples in same-sex, female-female relationships, primarily represented Canada with some representing the U.S., and were mostly in married relationships with substantive portions in engaged and dating relationships.

[Table 1 Here]

Procedure

The pregnancy loss and control samples were respectively drawn from two larger longitudinal studies on sexuality and sexual relationships. There are no current publications

using data from either of the two samples. For both samples, only data from the baseline (first) surveys were utilized in the current study. Both samples were recruited online via social media (e.g., Facebook, Instagram, Reddit) and in-person (e.g., posters at medical facilities and in the control, reviewing patient charts, word of mouth) from July 2021 to July 2022 (pregnancy loss) and from February 2021 to September 2021 (control). Study advertisements encouraged participation from people of all bodies, gender identities, and sexual orientations. The data collection is ongoing for the pregnancy loss sample, however, data for the current study were collected in full by July 30, 2022, as noted in our pre-registration on OSF. Participants were screened via a phone call with a research assistant or through a screening survey hosted on Qualtrics prior to participation to ensure they met eligibility criteria. After providing informed consent at the start of the survey, participants in both samples completed a survey independent of their partners which included validated, online questionnaires. The survey was sent via email and hosted on Qualtrics. Surveys expired after one month and participants received reminders to complete their surveys.

Those in the pregnancy loss sample completed their surveys on average at 9.71 weeks post-loss (SD = 5.36 weeks). Most couples in the pregnancy loss sample reported losses between 3–15 weeks gestation (N = 85, 82.6% of pregnancy loss sample), some reported losses between 16–25 weeks gestation (N = 8, 7.8% of pregnancy loss sample), and others reported losses between 26–41 weeks gestation (N = 9, 8.7% of pregnancy loss sample). Couples in the pregnancy loss sample received up to \$178 CDN (\$89 each) in online gift cards or electronic cash payments for participating in the full study. Couples in the control sample received up to

² Percentages do not add to 100% as one couple was missing information on the number of weeks pregnant when the loss occurred.

\$126 CDN (\$63 each) in online gift cards or electronic cash payments for participating in the full study. Procedures for the control sample were approved by the participating university's Research Ethics Board, and those for the pregnancy loss sample were approved by the Research Ethics Board at a research hospital (*masked for review*).

Measures

Sexual Satisfaction. Sexual satisfaction was assessed using the Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1995). Participants responded to the prompt "How would you describe your overall sexual relationship with your partner during the last 4 weeks?" on a 7-point Likert scale regarding five bipolar pairs of words (e.g., "very bad" and "very good"; "very unsatisfying" and "very satisfying"). The construct was modeled as a latent variable and higher scores reflect greater sexual satisfaction. The GMSEX has shown strong psychometric properties in clinical samples, such as among couples seeking medically assisted reproduction (Arpin et al., 2019), and in control samples (Mark et al., 2014), and has been validated for use among men and women (Mark et al., 2014). The scale displayed good reliability in the current study (gestational individuals ω = .92; non-gestational individuals ω = .94; control AFAB individuals ω = .95).

Sexual Desire. Sexual desire was assessed using the Dyadic Sexual Desire subscale of the Sexual Desire Inventory (SDI-2; Spector et al., 1996). As indicated by Moyano et al. (2017), this subscale includes seven questions about an individual's desire for partnered sexual activity (e.g., "During the last month, how often would you have liked to engage in sexual activity with a partner"). Items were rated on several 8-point or 9-point scales with the low anchor indicating lower sexual desire (e.g., "not at all," "no desire," "not at all important") and the high anchor indicating high sexual desire (e.g., "more than once a day," "strong desire," "extremely

important"). The construct was modeled as a latent variable and higher scores reflect greater desire for sexual activity with one's partner. The SDI-2 has shown strong psychometric properties among clinical (Rosen et al., 2018) and control samples (Moyano et al., 2017), and the Dyadic Sexual Desire subscale of this measure displayed good reliability in the current study (gestational individuals $\omega = .90$; non-gestational individuals $\omega = .81$; control AFAB individuals $\omega = .93$; partners of control AFAB individuals $\omega = .89$).

Sexual Function. Sexual function was assessed using one item from the Problem

Distress subscale of the Sexual Function Evaluation Questionnaire (SFEQ; Mitchell et al., 2022).

This subscale was chosen given the focus of the study on understanding distressing sexual difficulties following pregnancy loss. As indicated by Mitchell and colleagues (2022), the Problem Distress item is calculated by taking the maximum score of five subitems related to pain, difficulty reaching climax, climaxing too quickly, vaginal dryness, or erectile difficulties.

These subitems first ask participants about their experience in the past month (e.g., "In the last month, did you experience physical pain as a result of sex?") with possible responses being "yes," "no," or options to report they did not have sex in the last month. If participants answer "yes," they are asked "How did you feel about this?" where response options are on a 4-point Likert scale (1 = Not at all distressed to 4 = Very distressed). If they answer "no," participants receive a score of zero for a particular item and if they indicated they did not have sex in the last month the subitem is marked as missing. The maximum of the subitems is then calculated after

the subitems are scored.³ Higher scores reflect greater levels of distressing sexual function problems.

Sexual Distress. Sexual distress was assessed using the Sexual Distress Scale – Short Form (SDS-SF; Santos-Iglesias et al., 2020). Participants indicated how often a sexual problem bothered or caused them distress over the last four weeks regarding five items (e.g., "worried about sex"). Items were rated on a 5-point scale (0 = never to 4 = always). The construct was modeled as a latent variable and higher scores reflect greater sexual distress about one's overall sexual relationship. The SDS-SF has shown strong psychometric properties among clinical (Santos-Iglesias et al., 2020) and control samples (Gauvin et al., 2022). The scale displayed good reliability in the current study (gestational individuals $\omega = .89$; non-gestational individuals $\omega = .90$; control AFAB individuals $\omega = .90$).

Sexual Frequency. As in prior research (e.g., Rosen et al., 2020), sexual frequency was assessed using a single item, "During the past 4 weeks, how often did you and your partner engage in any sexual activity defined as oral sex, manual stimulation (touching genitals), intercourse with vaginal penetration, intercourse with anal penetration." The item was rated on a

³ Initially, in line with Mitchell et al. (2022) and our pre-registration, we utilized the full Problem Distress subscale of the Sexual Function Evaluation Questionnaire. In addition to the max score item we describe, the full subscale includes three other items relating to lacking interest, enjoyment, and excitement/arousal during sex. Per the pattern provided by Mitchell et al. (2022), we attempted to model this construct as a latent variable. Reliability was good for gestational individuals ($\omega = .79$), non-gestational individuals ($\omega = .77$), and control women and AFAB ($\omega = .77$). However, reliability was poor for control sample ($\omega = .42$) (and poorer yet for control partners who indicated their sex was male: $\omega = .36$). Upon further inspection, we observed that the three items relating to lacking interest, enjoyment, and enjoyment/arousal were heavily kurtote and skewed toward no concern at all (a score of zero) and were poorly correlated with one another and the max item (r = .11 - .48). Rather than exclude control partners because their subscale had poor reliability, we decided to directly compare the four groups on the maximum score item, which was neither skewed nor kurtote and adequately represented our aim to examine problems in sexual function and we had separately measured sexual desire. It is plausible the Problem Distress subscale of the SFEQ works best when men and individuals assigned male at birth have a specific sexual stressor or problem (like pregnancy loss) but not as well when they do not have a specific problem (i.e., are part of a control sample); this subscale may work well for women and AFAB regardless of if they have a specific stressor/problem or not. The subscale was originally validated among a clinical sample, and more work with this scale among control samples may be insightful.

7-point rating scale ($0 = not \ at \ all$ to $6 = more \ than \ once \ a \ day$). Higher scores reflect more frequent sexual activity. Given the high correlation between partner's scores (pregnancy loss sample r = .66, control sample r = .77), both partners' scores were modelled as indicators of a latent construct to create a couple sexual frequency variable (Galovan et al., 2016).

Data Analysis

Our hypotheses and data analysis plan were pre-registered on the study's OSF page (https://osf.io/z427u/?view only=adcdfdf12293440fb4b6d4d9a04bf64b). Deidentified data, syntax, and output files of analyses have been posted at this link to promote transparency and replicability of findings. We conducted a series of multiple-group analyses in Mplus (Version 8.6; Muthén & Muthen, 1998-2017) to test our hypotheses, with separate models for sexual satisfaction, desire, distress, and frequency. We analyzed the data via separate models because it was not feasible given our sample sizes to combine the many model parameters across outcomes (e.g., factor loadings, intercepts, (residual) variances, and other parameters for five outcomes across 4 subgroups) into a single model and still have our model converge. First, we conducted measurement invariance testing for all multi-item constructs (i.e., not sexual function or sexual frequency) before comparing means on sexual well-being constructs between and among the pregnancy loss and control samples. It is only possible to test measurement invariance when multiple items are used to assess a construct. In line with Putnick and Bornstein (2016), we tested for measurement invariance testing to establish that group differences could be attributed to structural differences (i.e., where one group has higher or lower levels than another) rather than measurement differences (i.e., where one group views a construct in a different way than another group). This process first entailed testing for metric invariance—where each indicator (e.g., one of the five sexual satisfaction items) relates to the overall construct (e.g., sexual

satisfaction) in a similar way (i.e., its factor loading) for the groups being compared (i.e., gestational individuals, partners of gestational individuals, control AFAB individuals, and partners of control AFAB individuals). Metric invariance is indicated by change in comparative fit index (Δ CFI) between the configural (unconstrained) model and metric (factor loadings constrained to be the same across groups) model not worsening more than 0.01 (Cheung & Rensvold, 2002). The next step in this process was testing for scalar invariance, where intercepts are constrained to be the same across groups. Scalar invariance is indicated by Δ CFI between a metric model and scalar model not worsening more than 0.01 (Cheung & Rensvold, 2002). In these models, the interdependence of the scores from both members of the couple were accounted for by allowing residuals from items that were answered by both partners to correlate with one another (Kenny et al., 2006). Further details on our approach to model specification and measurement invariance testing can be found in the study pre-registration on OSF page. Missing data were handled via full-information maximum-likelihood estimation. Principal components, which were generated through the PcAux package (Lang et al., 2020) in R, were included as auxiliary variables in the models to help estimate missing data (Howard et al., 2015). There were little missing data overall (average data percent present across all variables = 99%, minimum present = 92%). We considered a model to adequately fit the data when the model comparative fit index (CFI) was greater than .90, model root mean square error of approximation (RMSEA) was less than .08, model standardized root mean square residual (SRMR) was less than .10, and when normed χ^2 (χ^2 divided by degrees of freedom) was 3 or less (Hair et al., 2010). Given that χ^2 tests are prone to type II error in models that are complex or have large samples (Hair et al., 2010), we rely on the other fit indices we described to evaluate model fit (but report the results of χ^2 tests for reference). A table with means, standard deviations, and correlations among all study variables is provided as Supplemental Table 2 on the study's OSF page.

Next, as the test of our main hypotheses, we compared sexual well-being means between groups, as illustrated in Supplemental Figure 3 (see OSF), performing five comparison tests per outcome (except couple sexual frequency). In reference to Hypothesis 1, tests 1–2 assessed differences in sexual well-being means between (1) gestational individuals and control AFAB individuals and (2) partners of gestational individuals and partners of control AFAB individuals. In reference to Hypothesis 2, tests 3–4 assessed the difference in sexual well-being means between (3) gestational individuals and partners of gestational individuals and (4) control AFAB individuals and partners of control AFAB individuals. In reference to Hypothesis 3, the last test (5) assessed if the difference between gestational individuals and partners of gestational individuals was different from the difference between control AFAB individuals and partners of control AFAB individuals. Test five provided a benchmark to see whether any significant withincouple differences in the pregnancy loss sample were larger than the within-couple differences in the control sample. The five tests were conducted for all outcomes except for sexual frequency because sexual frequency was modeled as a couple-level variable. In reference to Hypothesis 3, means were compared between the couple sexual frequency levels of those in the pregnancy loss sample and those in the control sample.

All mean comparison tests were done by defining new parameters using the "model constraint" command in Mplus (e.g., Allsop et al., 2020; Schwenck et al., 2022) that formally compared the means of the groups in line with our hypotheses. We applied the Holm-Bonferroni Method (Holm, 1979) to adjust the *p* values of tests 1–4 for multiple comparisons within each outcome using an open source calculator developed by Gaetano (2013).

As detailed in the study pre-registration, power was estimated via an a-priori Montecarlo power simulation conducted in Mplus (see Wang & Wang, 2019). Results of this power analysis indicated that, given our sample sizes, there was 89.5% power to detect a mean difference of Cohen's d = .283 between (a) gestational individuals and partners of gestational individuals and (b) between control AFAB individuals and partners of control AFAB individuals and 88.2% power to detect a mean difference of Cohen's d = .407 between (c) gestational individuals and control AFAB individuals and (d) non-gestational individuals and control sample. In sum, the current project had high power to detect small to medium size mean differences between groups (Cohen, 1988).⁴

Results

Measurement Invariance Testing

All multi-item measures were scalar invariant. Specifically, Δ CFI between the configural and metric models was not more than .01 for all outcomes (sexual satisfaction: Δ CFI = .008; sexual desire: Δ CFI = .010; sexual distress: Δ CFI = .004), and similarly, Δ CFI between the metric and scalar models was not more than .01 for all outcomes (sexual satisfaction: Δ CFI = .008; sexual desire: Δ CFI = .008; sexual distress: Δ CFI = .007). Therefore, it was appropriate to make group comparisons for all models with multi-item measures.

The final models acceptably fit the data (Hair et al., 2010) for sexual satisfaction $(\chi^2(73)=103.471, p=.011; \chi^2/df=1.42; CFI=.983; RMSEA=.061, 95\% CI [.030, .087];$

analysis ran on October 21, 2022, which used the exact same model parameters as before, but updated the sample sizes for the pregnancy loss and control samples respectively to 103 and 120, which are the actual sample sizes used in the current study. This updated power analysis is also posted on the OSF page. Differences in expected and actual sample sizes are a result of data cleaning.

⁴ The original power analysis as posted on the study's OSF page assumed a sample size of 105 for the pregnancy loss sample and 128 for the control sample. The numbers reported in this paragraph came from an updated power

SRMR = .210), sexual desire (χ^2 (165)=209.159; χ^2 /df = 1.27; p = .011; CFI = .973; RMSEA = .049, 95% CI [.025, .068]; SRMR = .144), sexual function (χ^2 (0)=.000; χ^2 /df = undefined; 1.27 p = .000; CFI = 1.000; RMSEA = .000, 95% CI [.000, .000]; SRMR = .003), sexual distress (χ^2 (73)=103.284, p = .011; χ^2 /df = 1.42; 1.41; CFI = .975; RMSEA = .061, 95% CI [.000, .000]; SRMR = .120) and sexual frequency (χ^2 (0)=.000, p = .000; χ^2 /df = undefined; CFI = 1.000; RMSEA = .000, 95% CI [.000, .000]; SRMR = .004).

Mean Differences Between Pregnancy Loss and Control Samples

Sexual well-being means for both samples are provided in Table 2 and plotted in Figure 1. In line with our hypothesis, gestational individuals reported significantly lower levels of sexual satisfaction than control AFAB individuals as Holm-Bonferroni-adjusted p < .001. With a Cohen's effect size of d = .59, this difference is considered medium-sized (Cohen, 1988). Additionally, partners of gestational individuals reported significantly lower levels of sexual satisfaction than partners of control AFAB individuals as Holm-Bonferroni-adjusted p = .009, and Cohen's d indicated a small-sized difference of d = .42. In contrast to our hypothesis, there were no statistically significant differences within or between groups in terms of sexual desire, nor problems in sexual function (exact p-values of all group comparisons are provided in Supplemental Table 1). Similarly, there was no evidence to support our hypothesis that couples in the pregnancy loss sample would report lower sexual frequency compared to couples in the

 $^{^5}$ For sexual satisfaction, sexual desire, and sexual distress, CFI, RMSEA, and normed χ^2 were in typically accepted ranges, but SRMR was too high (less than .10 is recommended; Hair, et al, 2010). This result may be an artifact of the "reliability paradox" (Hancock & Mueller, 2011), where a latent factor with low factor loadings (poor reliability) may have better model fit than a latent factor with high factor loadings (good reliability). For example, Ximénez and colleagues (2022) found that SRMR tends to be higher when standardized factor loadings are high (close to 1); the factor loadings for indicators of sexual satisfaction (GMSEX), sexual desire (SDI-2), and sexual distress (SDS-SF) were predominantly high (~.7–.9). Considering this reliability paradox, and the fact that CFI, RMSEA and normed χ^2 were acceptable for all models, we proceeded with caution to test mean differences between groups on these outcomes.

control group. Further in contrast to our hypothesis, partners of gestational individuals reported significantly *lower* levels of sexual distress than partners of control AFAB individuals as Holm-Bonferroni-adjusted p = .036, which would be considered a small-sized difference with Cohen's d = .37 (Cohen, 1988). Gestational individuals did not report significantly different levels of sexual distress than control AFAB individuals.

Mean Differences Between Partners

There was some evidence to support our hypothesis regarding within-couple differences in sexual well-being. In line with our expectations regarding the pregnancy loss sample, gestational individuals reported significantly lower levels of sexual desire than partners of gestational individuals as Holm-Bonferroni-adjusted p < .001. This difference between gestational individuals and partners of gestational individuals on sexual desire was itself significantly different than the difference between control AFAB individuals and partners of control AFAB individuals on sexual desire as p = .004. Control AFAB individuals also did not report significantly lower levels of sexual desire than partners of control AFAB individuals as Holm-Bonferroni-adjusted p = .450. The difference in sexual desire between gestational individuals and partners of gestational individuals would be considered a large-sized difference as its effect size is Cohen's d = .84 (Cohen, 1988). Contrary to our hypothesis, gestational individuals did not report significantly lower levels of sexual satisfaction, function, nor distress than partners of gestational individuals. In line with our expectations regarding the control sample, control AFAB individuals did not report significantly different levels of sexual satisfaction, function, or distress compared partners of control AFAB individuals.

[Table 2 Here]

[Figure 1 Here]

Discussion

This is the first study we are aware of to compare levels of five distinct dimensions of sexual well-being between both members of a couple who have experienced a recent pregnant loss to both members of a control sample who have not experienced such a loss. In line with our hypothesis, we found that gestational individuals—women and those assigned female at birth (AFAB) who were pregnant at the time of the loss—and their partners reported lower levels of sexual satisfaction than their control counterparts. We found that partners of gestational individuals reported lower levels of sexual distress than partners of control AFAB individuals, and that individuals in the pregnancy loss sample did not differ from those in the control with respect to sexual function, sexual desire, or sexual frequency. We also found that gestational individuals reported lower levels of sexual desire than their own partners, and that this sexual desire gap was larger than the gap in sexual desire between the two partners in the control sample, who we found did not differ in their levels of sexual desire. We did not observe any other differences in sexual well-being within couples in either sample. Couples may find it reassuring that we did not find many aspects of sexual well-being to be related to pregnancy loss, suggesting that may be able to come together and continue to invest in their intimacy during a time of shared grief and adjustment.

Pregnancy Loss is Associated with Poorer Sexual Satisfaction

We found that both members of couples who had experienced a recent pregnancy loss had lower levels of sexual satisfaction than those in couples who had not. This finding aligns with prior work, which has found that having repeated pregnancy losses is associated with lower levels of sexual satisfaction for women (Serrano & Lima, 2006). During sex, memories of a pregnancy loss may arise for either partner (Jaffe & Diamond, 2011), which may disrupt both

partners' satisfaction from sex. Also, grief could negatively bias evaluations such that one sees more costs than rewards from the sexual relationship (Lawrance & Byers, 1995). Grief may also pileup on other demands, creating stress which spills over to sexual encounters between partners (Patterson, 1988), and makes sex less fulfilling. Because pregnancy loss relates to poorer sexual satisfaction for both members of a couple, couples may be at risk for negative implications to their relationship longevity (Gold et al., 2010). (Per Gravensteen et al. (2018) and Mekosh-Rosenbaum and Lasker (1995), couples are likely not at risk for poorer relationship satisfaction following pregnancy loss.) Indeed, women who have had a pregnancy loss are at heightened risk of their relationship ending compared to women who have had a live birth (Gold et al., 2010), and dissatisfaction with sex has been linked with marital stability (Hill et al., 2017). Thus, couples and practitioners should attend not only to physical needs post-loss, like physical recovery, but also on nurturing sexual satisfaction.

Practitioners can share that pregnancy loss is associated with lower levels of sexual satisfaction for both members of a couple. Sharing this trend may underscore that changes to sexual satisfaction is a common experience. Clinicians should be prepared to offer intervention to promote sexual satisfaction. For instance, clinicians can promote intimacy by helping partners share their experiences post-loss with one another (Bois et al., 2016). Clinicians could also encourage couples to explore together how various aspects of pregnancy loss like grief, unmet expectations, and physical recovery may be interfering with their sexual satisfaction.

Pregnancy Loss Not Associated with Lower Sexual Desire, Function, Distress, or Frequency

In contrast to sexual satisfaction, we found no evidence that those who experienced pregnancy loss had lower levels of sexual desire, higher levels of sexual function problems or

sexual distress, or lower sexual frequency relative to couples who had not suffered a recent pregnancy loss. Sexual satisfaction is thought to be a more interpersonal construct as it centers on perceptions of the positive and negative aspects of one's sexual relationship (Lawrance & Byers, 1995). In contrast, sexual function (Rosen et al., 2000), sexual desire, (van Anders et al., 2021) and sexual distress (Stephenson & Meston, 2010) focus on perceptions of one's own personal sexual experiences and feelings, and sexual frequency is a concrete assessment of sexual activity or behavior. Thus, aspects of sex which are more intraindividual or objective may be less sensitive to some of the challenges faced on a relational level after pregnancy loss, like sexual satisfaction.

Our findings that pregnancy loss was not associated with more problems with sexual function or lower sexual desire contrast with prior work where pregnancy loss has been linked with both lower sexual function (Francisco et al., 2014; Hasanpour et al., 2019; Zhang et al., 2016) and lower sexual desire (Francisco et al., 2014; Serrano & Lima, 2006). Sampling differences may account for this contrast as our sample included many couples who had only experienced one loss in their lifetimes (56% of couples) and excluded those undergoing fertility treatment. In contrast, prior work only included those with repeated losses and did not exclude those undergoing fertility treatment. These sampling differences are important because couples experiencing repeated losses may cognitively distance themselves from their pregnancy to protect themselves from the potential pain of a future loss (Serrano & Lima, 2006). It is possible that those with multiple losses similarly distance themselves from their sexuality and sexual relationships, which could disrupt their arousal patterns and bodily function as well as their interest in sex. In line with Patterson (1988), if couples experiencing multiple losses are also undergoing fertility treatment, then their stressors—like disruptions to intimacy via emotional,

mental, and physical tolls of treatment (El Amiri et al., 2021) and disruptions to sexual well-being via financial burden of treatment (masked, in press)—may pile up and further diminish sexual desire and sexual function. Ultimately, a first pregnancy loss that does not occur in conjunction with fertility treatment may be less disruptive to a couple's sexual desire and function as compared to having multiple losses and undergoing fertility treatment.

Another possibility for why our findings contrast with prior work is that lower levels of sexual satisfaction, sexual desire, and sexual function were conflated in prior studies whereas these facets were measured separately in the current study. Both the Female Sexual Function Index (Rosen et al., 2000) and the International Index of Erectile Function (Rosen et al., 1997) used in prior studies include items about satisfaction with sex, sexual desire, as well as other aspects of sexual function (e.g., orgasm, pain) within the overall total scores. Thus, the findings of the current study may only contrast with prior work because sexual function and sexual desire were measured separately from sexual satisfaction. (Dubé et al., 2020). Future research is needed to clarify why sexual satisfaction, but not other facets of sexual well-being, are seemingly adversely associated with pregnancy loss.

Pregnancy Loss is Associated with Lower Sexual Distress for Partners

Contrary to our hypothesis, we found that partners of gestational individuals in couples who had experienced a pregnancy loss reported lower levels of sexual distress post-loss than partners of control AFAB individuals who had never experienced a pregnancy loss. It is possible that following the loss, partners of gestational individuals can positively reframe the stress of pregnancy loss, as others have done after traumatic events (e.g., stroke survivors; Ostwald et al., 2009), to limit their sexual distress. In line with the Family Adjustment and Adaptation Response Model (Patterson, 1988; Patterson, 2002), positive reframing may be helpful because it redirects

resources to meet other demands. In other words, partners of gestational individuals may focus less on sex than before the loss and more on other aspects of their lives, like managing grief and supporting their partner, which reduces their worries or concerns about the sexual relationship (and any potential changes to it) during this time. Future research could test these ideas in a qualitative study by interviewing partners of gestational individuals to explore how the coping mechanisms they use post-loss may affect their sexuality and sexual relationships.

Pregnancy Loss is Associated with Greater Sexual Desire Differences Within Couples

In line with our hypothesis, we found that gestational individuals reported lower levels of sexual desire than their partners after a pregnancy loss. This difference in sexual desire between gestational individuals and partners of gestational individuals was larger than in the control sample where we found no sexual desire differences between partners. Taken together, these findings point to pregnancy loss being linked with greater disparities in sexual desire between gestational individuals and their partners. Gestational individuals may tend to report lower sexual desire than their partners because they carry heavier physical burdens (Jurkovic et al., 2013) and psychological burdens (Markin, 2016) post-loss than their partners. Future research can examine to what extent and at what point post-loss this increased desire discrepancy between gestational individuals and non-their partners may resolve.

Practitioners can share that pregnancy loss is seemingly associated with greater differences in sexual desire between a gestational and non-gestational partner. This information could provide a springboard to discuss that while sexual desire differences between partners occur for all couples (Schnarch, 2009), they may become more pronounced after a pregnancy loss. Couples might benefit from reflecting on whether they can relate to this experience, and the emotional or relational impact for their relationship, if any.

Theoretical Implications

We suggest theoretical implications based on our study. The findings of our study align with Patterson's Family Adjustment and Adaptation Model (Patterson, 1988; Patterson, 2002), in that the shared couple-level demand of pregnancy loss seems to be linked with lower levels of sexual satisfaction and greater disparities in sexual desire between partners during a period of adjustment. When being used to study sexual well-being previously, to our knowledge this model has only been applied among samples in normative life situations or normative life transitions, such as adjusting to a relationship after marriage (Wikle et al., 2020). The current study extends this model by applying it to understanding how a significant life stressor—pregnancy loss—relates to sexual well-being.

Limitations and Future Directions

One core limitation of the current study is that, while the pregnancy loss and control samples shared various characteristics, they also differed in several traits. The samples' differences could potentially be attributed to these known factors, such as gender proportions (more same-sex couples in control sample), relationship statuses (more married couples in pregnancy loss sample), and nationalities (more Canadians and no Australians or Britons in control sample). In the dearth of research on pregnancy loss and sexual well-being, intersections between the (known) traits that differ between the samples with other sociodemographic and biopsychosocial characteristics are complex and not well understood. It is also possible that third-party variables that were not assessed in the current study contributed to the observed differences or by suppressing non-observed differences.

We acknowledge several other important limitations of the current study. First, generalizability is limited as all couples came from primarily English-speaking countries (and

most were from Canada and the United States). Next, while there was a relatively large proportion of same-sex couples in the control sample (16.7% of couples), the proportion of same-sex couples in the pregnancy loss sample was small (2.9%); generalizability of the study's findings to same-sex couples who experience a pregnancy loss is limited. Further, in both the pregnancy loss and control samples, there were small proportions of transgender individuals and Black, Indigenous and People of Color (BIPOC) individuals. Because these groups have less equitable access to quality healthcare as compared to cis-gender and White individuals, respectively (Bradford et al., 2013; Institute of Medicine (US) Committee on Understanding and Eliminating Racial Ethnic Disparities in Health Care, 2003), they may be at greater risk for poorer sexual well-being outcomes post-loss. Future works can explore these and other communities' (e.g., individuals with disabilities) experiences to understand whether health disparities differentially relate to health and relationship outcomes post-loss and to promote tailored care. Generalizability is also limited as most couples had losses that occurred before the 20th week of pregnancy, and surveys were taken on average at about 10 weeks post-loss. Accordingly, practitioners should emphasize that the implications of the current study are most applicable for couples whose losses came midway through the 2nd trimester of pregnancy and reflect trends from experiences at about 3 months post-loss. Next, the sample was a convenience sample, and thus self-selection bias may have influenced the results; it is possible that those in the pregnancy loss sample reported different sexual well-being than their peers who did not participate in the study. For instance, couples who were more distressed post-loss or whose relationships were more disrupted may have been less likely to participate. Also, being able to use a multi-item assessment of problems in sexual function would have increased confidence in findings surrounding sexual function. Finally, looking forward, it would be worthwhile to

explore longitudinally how patterns of sexual well-being change over time post-loss, and how these patterns are potentially associated with the time elapsed since a loss, the number of weeks pregnant when the loss occurred, and whether a couple has had one or multiple losses.

Conclusions

In conclusion, the results of this study provide evidence that couples who have experienced a recent pregnancy loss on average do not tend to report lower levels of sexual desire, greater problems in sexual function, nor greater sexual distress compared to couples who have not experienced a recent loss. In addition, the results of the study provide evidence that partners of gestational individuals tend to be less distressed about sex post-loss than partners of control AFAB individuals. Practitioners can share these findings with couples who may find it reassuring that we did not find many aspects of sexual well-being to be related to pregnancy loss. However, sexual satisfaction was lower for both members of couples who had experienced a recent loss and differences in sexual desire between partners tended to be more pronounced in couples after pregnancy loss, with gestational individuals having lower sexual desire than their partners. This study was the first we are aware of to simultaneously examine five distinct facets of sexual well-being utilizing data from both members of a couple, and to focus on pregnancy losses broadly instead of the relatively rare experience of having multiple losses. The findings of the study can be used to help clinicians and couples better understand sexual experiences postloss.

Compliance with Ethical Standards

Declarations

Conflicts of Interest/Competing Interests

The authors have no known conflicts of interest to disclose.

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Ethics Approval

Approval was obtained from the research ethics boards at *blinded*. The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

Consent to Participate

Informed consent was obtained from all individual participants included in the study.

Availability of Data and Material

The data and materials for this study can be found at

https://osf.io/z427u/?view_only=adcdfdf12293440fb4b6d4d9a04bf64b.

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 Table 1. Sociodemographic Characteristics of the Samples

Variable		N(%) or $M(SI)$	O; actual range)	
	Pregnancy Loss Sample (N = 103 couples)		Control Sample $(N = 120 \text{ couples})$	
	Gestational individuals	Partners	AFAB individuals	Partners
Age (years)	31.22 (4.32; 20–41)	32.30 (4.62; 22–44)	32.82 (9.16; 19–64)	33.74 (9.72; 18–67)
Sex				
Male	0 (0.0)	100 (97.1)	0 (0.0)	97 (80.8)
Female	103 (100)	3 (2.9)	120 (100)	20 (16.7)
Gender ^a				
Man	0 (0.0)	100 (97.1)	2 (1.7)	96 (80.0)
Woman	101 (98.1)	1 (1.0)	112 (93.3)	18 (15.0)
Non-binary	1 (1.0)	1 (1.0)	9 (7.5)	5 (4.2)
Additional ^b	0 (0.0)	2 (1.9)	0 (0.0)	2 (1.7)
Transgender identity				
Transgender	0(0.0)	4 (3.9)	3 (2.5)	4 (3.3)
Cisgender	98 (96.1)	94 (95.1)	110 (91.7)	106 (88.3)
Additional/prefer not to answer	4 (3.9)	5 (4.9)	7 (5.8)	7 (5.8)
Relationship status ^{a,c}				
Married	84 (81.6)	79 (76.7)	51 (42.5)	53 (44.2)
Engaged	10 (9.7)	10 (9.7)	20 (16.7)	22 (18.3)
Dating	2 (1.9)	1 (1.0)	26 (21.7)	20 (16.7)
Race/Ethnicity ^a				
Québécois or French Canadian	2 (1.9)	2 (1.9)	6 (5)	5 (4.2)
English Canadian	34 (33)	34 (33)	77 (64.2)	78 (65)
White	48 (46.6)	43 (41.7)	58 (48.3)	58 (48.3)
American	37 (35.9)	31 (30.1)	18 (15)	19 (15.8)
South/East/Southeast Asian	4 (3.9)	3 (2.9)	5 (4.2)	6 (5.0)

Western/Eastern European	12 (11.7)	12 (11.7)	11 (9.2)	9 (7.5)
Black/African American	5 (4.9)	2 (1.9)	3 (2.5)	1 (0.8)
Australian	4 (3.9)	5 (4.9)	0 (0.0)	0(0.0)
Additional ^d (each < 4.9% of each subsample)	7 (6.8)	10 (9.7)	13 (10.8)	10 (8.3)
Country of residence				
United States	43 (41.8)		16 (13.3)	
Canada	47 (45.6)		104 (86.7)	
Australia	5 (4.9)		0 (0.0)	
United Kingdom	8 (7.8)		0 (0.0)	
Household Income ^e	6.39 (2.74; 1–11)		5.19 (2.40; 1–11)	
Relationship length (years)	7.55 (3.98; 1.08–18.92)		9.06 (7.71; 1–41)	
Number of children	0.54 (0.81; 0-4)		0.74 (1.21; 0–6)	
Children living in home	0.48 (0.71; 0–3)		0.58 (1.14; 0–6)	
Couple relationship type	,	,		
Same-sex (female–female)	3 (2.9)		20 (16.7)	
Mixed-sex (female-male)	100 (97.1)		97 (80.8)	
Weeks pregnant when loss occurred ^f				
3 to 5	13 (12.6)			
6 to 10	43 (41.7)		_	
11 to 15	29 (28.2)			
16 to 20	2 (1.9)		_	
21 to 25	6 (5.8)		_	
26 to 30	4 (3.9)		_	
36 to 41	5 (4.9)		_	
Weeks since loss ^f	9.71 (5.36; 1.14–24.86)			
Pregnancy losses in last four months ^e				
1	92 (89.3)			
2	9 (8.7)		<u> </u>	

3	1 (1.0)	_
Pregnancy losses in lifetime ^f		
1	56 (54.4)	
2	30 (29.1)	
3	4 (3.9)	
4	7 (6.8)	
5 or more	6 (5.8)	

Note. M = mean. N = number of participants. SD = standard deviation. % = percentage of sample. Percentages do not add always add to 100% (and counts do not add to 103 or 120) due to missing data. The pregnancy loss sample includes gestational individuals assigned female at birth (AFAB) that were pregnant during the loss and partners of gestational individuals. The control sample includes control AFAB individuals (who were statistically compared with gestational individuals) and partners of control AFAB individuals (who were statistically compared to partners of gestational individuals).

^aParticipants could endorse multiple categories on this item.

^bIncludes additional categories not listed to avoid identifying participants.

^cPartners may have reported different relationship statuses due to missing data or disagreement about relationship status.

^dIncludes the following: Indigenous, First Nations, Métis, or Inuit; African; Middle Eastern/Central Asian; Latin American; Hispanic; Latino/a/x; Biracial/Multiracial; Native Hawaiian/Pacific Islander; and write-in categories.

[°]Options included 1 (\$0-\$19,999), 2 (\$20,000-\$39,999), 3 (\$40,000-\$59,999), 4 (\$60,000-\$79,000), 5 (\$80,000-\$99,999), 6 (\$100,000-\$119,999), 7 (\$120,000-\$139,999), 8 (\$140,000-\$159,999), 9 (\$160,000-\$179,999), 10 (\$180,000-\$199,999), and 11 (\$200,000 and over).

^fReported by gestational partner.

Table 2. Means, Standard Deviations, and Mean Differences on Sexual Well-Being Outcomes

	Mean (Standard Deviation)				
	Pregnancy Loss Sample (N = 103 couples)		Control Sample (N = 120 couples)		
Sexual Outcome	Gestational individuals	Partners	AFAB individuals	Partners	
Satisfaction	4.95 (1.34) ^{ac}	5.05 (1.33) ^{ab}	5.70 (1.20) ^{bd}	5.63 (1.41) ^{cd}	
Desire	4.40 (1.47) ^a	5.47 (1.05) ^b	4.87 (1.71) ^{ab}	5.06 (1.87) ^{ab}	
Function Problems	1.76 (1.68) ^a	1.17 (1.46) ^a	1.54 (1.48) ^a	1.37 (1.27) ^a	
Distress	1.15 (0.84) ^{ab}	0.96 (0.83) ^a	1.38 (0.85) ^{ab}	1.30 (1.01) ^b	
Couple Sexual					
Frequency per	2.06 (0.87) ^a		1.99 (0.99) ^a		
Month					

Note. The pregnancy loss sample includes gestational individuals assigned female at birth (AFAB) that were pregnant during the loss and partners of gestational individuals. The control sample includes control AFAB individuals (who were statistically compared with gestational individuals) and partners of control AFAB individuals (who were statistically compared to partners of gestational individuals). Within each sexual outcome, differing superscripts indicate groups significantly differ at p < .05 (p-values corrected via Holm-Bonferroni method) whereas shared superscripts indicate no significant differences between groups. For example, in terms of sexual satisfaction, gestational individuals (ac) differ from control AFAB individuals (bd), as they do not share a superscript, but gestational individuals do not differ from partners of gestational individuals (ab) or partners of control AFAB individuals (cd) as the superscripts "a" or "c" are respectively shared between gestational individuals and these groups.

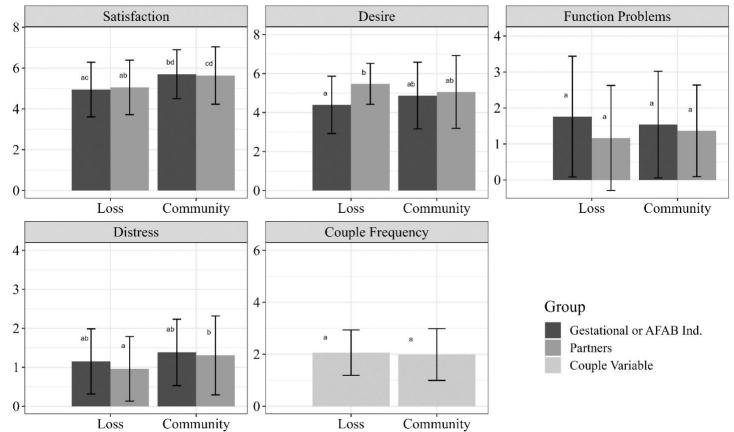


Figure 1. Mean Levels and Differences in Sexual Well-Being Outcomes

Note. C = Control; Ind = individuals." The pregnancy loss sample includes gestational individuals assigned female at birth (AFAB) that were pregnant during the loss and partners of gestational individuals. The control sample includes control AFAB individuals (who were statistically compared with gestational individuals) and partners of control AFAB individuals (who were statistically compared to partners of gestational individuals). Error bars represent plus or minus one standard deviation from mean. Within each sexual outcome, differing superscripts indicate groups significantly differ at p < .05 (p-values corrected via Holm-Bonferroni method) whereas shared superscripts indicate no significant differences between groups. For example, in terms of sexual satisfaction, gestational individuals (ac) differ from control AFAB individuals (bd), as they do not share a superscript, but gestational individuals do not differ from partners of gestational individuals (ab) or partners of control AFAB individuals (cd) as the superscripts "a" or "c" are respectively shared between gestational individuals and these groups.