BEDROOM BANTER: ASSOCIATIONS BETWEEN SEXUAL TALK AND SEXUAL AND RELATIONSHIP WELL-BEING IN SAME- AND MIXED-GENDER/SEX COUPLES IN LONG-TERM RELATIONSHIPS

by

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DEDICATION

This thesis is dedicated to my mother, Brenda Anderson, who taught me to me a scientist and researcher before I even knew what that meant. I could not have done any of this without you.

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ABSTRACT

Prior literature has demonstrated the importance of sexual well-being (e.g., sexual satisfaction, functioning, desire) and relationship satisfaction for physical, psychological, and relational well-being. Therefore, it can be distressing for the many couples who experience declines in sexual or relationship well-being. According to theoretical and empirical research, sexual communication is an important interpersonal factor for sexual and relational well-being. However, one aspect of sexual communication has largely been neglected—sexual talk (communication occurring *during* sexual encounters). There are two types of sexual talk: individualistic (i.e., statements of dominance, submission, sexual ownership, and sexual fantasies; self-focused) and mutualistic (i.e., statements of excitement/pleasure, feedback/compliments, instruction, and bonding/intimacy; sharing/partner-focused). My dissertation examined how sexual talk was associated with sexual and relationship well-being for long-term couples and examined potential moderators. I conducted one cross-sectional study with individuals and two studies (one cross-sectional, one daily diary) with a new sample of couples. At higher perceived partner responsiveness (i.e., partner's response is perceived as accepting, understanding, validating, and caring; PPR) greater mutualistic and individualistic talk was associated with less sexual distress and greater sexual satisfaction (respectively), whereas at lower PPR, greater mutualistic and individualistic talk was associated with more sexual distress and lower sexual satisfaction (respectively; Study 1). In Study 2, I found no gender/sex differences in sexual talk, although exploratory analyses with gender/sex diverse (GSD) couples suggested possible gender/sex and dyad type differences for individualistic talk. In Study 3, I found on days a person used more sexual talk, they reported greater sexual satisfaction (women only) and sexual desire, and their partner reported greater sexual satisfaction and (for individualistic talk only) sexual desire; exploratory analyses with GSD couples revealed potential differences from the binary couples. Overall, findings support the continued investigation of sexual talk in long-term couples, as it appears to be associated with sexual and relationship well-being for both members of a couple. Importantly, gender/sex and PPR demonstrated promise as moderators for when sexual talk is linked to greater sexual and relationship well-being. Interventions targeting sexual talk may facilitate greater sexual and relational well-being for long-term couples, who often face declines in these areas.

LIST OF ABBREVIATIONS AND SYMBOLS USED

%	Percentage
ANOVA	Analysis of Variance
APIM	Actor-Partner Interdependence Model
B	Unstandardized beta coefficient
BDSM	Bondage-discipline, dominance-submission, sadism-masochism
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CI	Confidence interval
CSI	Couples Satisfaction Index
df	Degrees of freedom
e	Error Term (unexplained variance)
EFA	Exploratory Factor Analysis
F	F-test Statistic
FSDS-R	Female Sexual Distress Scale—Revised
FSFI	Female Sexual Function Index
glb	Greatest Lower Bound (an estimate of the lowest possible value that a scale's reliability can have, and the 'true' scale reliability is by definition in the interval [glb, 1])
GMSEX	Global Measure of Sexual Satisfaction
GSD	Gender/Sex Diverse
ICC	Intraclass Correlation Coefficient
IEMSS	Interpersonal Exchange Model of Sexual Satisfaction

IIEF	Index of Erectile Function
J-N	Johnson-Neyman
LB	Lower Bound
M	Mean
MCAR	Missing Completely at Random
Mturk	Amazon Mechanical Turk (online recruitment source)
n	Sample Size
N	Population sample size
NFI	Normed Fit Index
NNFI	Non-Normed Fit Index
OSF	Open Science Framework
p	p-value for significance testing
PPR	Perceived Partner Responsiveness
PRQC	Perceived Relationship Quality Components
r	Correlation Coefficient
R^2	Proportion of the variance explained by the model
RMSEA	Root Mean Square Error of Approximation
SD	Standard Deviation
SDI	Sexual Desire Inventory
SE	Standard Error
SexTalk	Measure of Sexual Talk created by Jonason et al. (2016)
SPSS	Statistical Package for the Social Sciences
SRMR	Standardized Root Mean Squared Residual
t	t-value for t-tests

TLI	Tucker Lewis Index
TSS	Traditional Sexual Script
UB	Upper Bound
WEIRD	Western, Educated, Industrialized, Rich, and Democratic
WHO	World Health Organization
α	Cronbach's alpha (measure of internal consistency)
ΔR^2	Change in percent variance accounted for
χ^2	Chi-squared value
ω	Omega (measure of internal consistency)

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CHAPTER 1: INTRODUCTION

Sexual well-being refers to a person's subjective assessment of a range of cognitive, physical, emotional, and socio-cultural aspects related to their own sexuality (e.g., Lorimer et al., 2019). There is an abundance of empirical research demonstrating the importance of sexual well-being for a person's physical, psychological, and relational health and well-being, as well as overall quality of life (e.g., Birnbaum & Finkel, 2015; Dewitte & Mayer, 2018; Lee et al., 2016; Schmiedeberg et al., 2017). For example, a review by Diamond and Huebner (2012) found that sexual well-being is protective for long-term physical and mental health. Not surprisingly, it can be quite distressing when someone experiences a decline in their sexual well-being. Prior research has shown that people in long-term romantic relationships commonly experience declines in their sexual satisfaction and desire over time, beginning as early as the second year of their relationship (Schmiedeberg & Schröder, 2016). Further, this decline seems to be present regardless of relationship status (e.g., dating, cohabitating, married), frequency of sexual intercourse, or age (Klusmann, 2002; McNulty & Widman, 2013). It is paramount that research identify factors that may help couples in long-term relationships maintain or even enhance their sexual well-being over time. Once these factors have been identified, researchers and clinicians can begin to develop evidence-based interventions to aid couples. Both theoreticians and empirical researchers have acknowledged the importance of sexual communication as a key factor influencing sexual and relational well-being (e.g., MacNeil & Byers, 2005, 2009; Mark et al., 2018). The overarching aim of my dissertation was to examine the use of sexual talk— a type of sexual communication that occurs *during* sexual activity and is specific to a sexual encounter (Jonason et al., 2016)—in long-term relationships, how sexual talk may be associated with sexual and relational well-being, and potential moderators of these associations. First, I will

discuss the pertinent literature on sexual well-being and relationship satisfaction and provide an outline of the theoretical frameworks utilized in my dissertation. Next, I review the relevant literature on sexual communication and sexual talk, as well as the potential roles that perceived partner responsiveness and gender/sex[1] may play in the relationship between sexual talk and sexual and relationship outcomes. Finally, I discuss current gaps in the literature and provide an outline of my dissertation papers.

1.1 Sexual Well-being

Sexual well-being is an umbrella term that encompasses multiple facets, including sexual satisfaction, desire, functioning, and distress. Sexual satisfaction refers to an individual's subjective, affective evaluation of the positive and negative aspects of their sexual relationship (Lawrance & Byers, 1992). Sexual desire is characterized as an individual's motivation or interest in engaging in sexual activity (Diamond, 2004; Spector et al., 1996). Sexual functioning refers to the intra-individual experience of sexual arousal, desire, orgasm, and pain (Meston & Derogatis, 2002; Rosen et al., 2000; Rosen et al., 1997). Finally, sexual distress is conceptualized as negative emotions, such as worry, frustration, or anxiety, which are experienced in connection to sexual relationships (Derogatis et al., 2008). It is important to recognize that sexual well-being is holistic in nature; it is not simply the absence of sexual dysfunction or sexual distress, but also the presence of sexual functioning and sexual satisfaction (World Health Organization, 2015). Consequently, it is important to consider multiple facets of sexual well-being when attempting to identify factors that might help couples maintain this aspect of their well-being. Next, I will

[1] I utilize the term gender/sex throughout this dissertation because sex and gender are neither dichotomous nor independent of each other, and their specific impacts on sexual behavior, attitudes, and emotions are rarely separable (van Anders, 2015). For a more detailed discussion of this term and the choice to use it, please see section 1.7 below.

review four facets of sexual well-being, including how they change over time and evidence of gender/sex differences.

Existing research has found that sexual satisfaction decreases over the course of romantic relationships for both mixed- and same-gender/sex couples (e.g., McNulty & Widman, 2013; Schmiedeberg & Schröder, 2016; Scott et al., 2018). The literature has also pointed to some possible gender/sex differences in the trajectory of sexual satisfaction, although these findings are mixed. For example, Richters et al. (2003) found that women experience declines in sexual satisfaction over the course of a relationship, but that men experience an inverted U-shaped pattern. However, there is some contradictory evidence that women but not men report greater sexual satisfaction as their relationship duration increases (Heiman et al., 2011).

Prior research has also demonstrated that sexual desire decreases over the course of a relationship, although there is considerable evidence that this may only occur for women (e.g., Kontula & Haavio-Mannila, 2009; Murray & Milhausen, 2012). For example, both Klusmann (2002) and Murray and Milhausen (2012) found that women's—but not men's—sexual desire decreased over time. This pattern also seems to occur for women in same-gender/sex relationships (Rosenkrantz & Mark, 2018). In contrast, some findings indicate that men also experience a decline in sexual desire over time (Hatfield & Sprecher, 1986; Kontula & Haavio-Mannila, 2009; Sprecher & Regan, 1998). Further, qualitative research has found that—similarly to women (e.g., Murray et al., 2014)—many men report a lack of intimacy or emotional connection with a partner as inhibiting their sexual desire (Murray et al., 2017), suggesting that men's and women's sexual desire may be more similar than different in long-term relationships. Additionally, research has consistently found that *discrepancies* in sexual desire between partners are associated with significant distress and dissatisfaction (e.g., Bridges & Horne, 2007;

Girard, 2019; Mark, 2015). Accordingly, if women or men experience declines in sexual desire over time, then this may impact not only their own, but also their partner's sexual and relational well-being.

Large scale population-based studies have found that men and women experience poorer sexual functioning as they get older (e.g., Hendrickx et al., 2019; Jaafarpour et al., 2013; Mitchell et al., 2013). The few exceptions in the literature (see Heiman, 2002; Hendrickx et al., 2015), are likely due to the conflation of poor sexual functioning with clinical sexual dysfunctions and inconsistencies in how sexual function and dysfunction were measured (e.g., Hayes & Dennerstein, 2005). Indeed, it appears that while sexual functioning may decline over time, sexual dysfunctions—and importantly the diagnostically required *distress* about sexual difficulties—decline with age (Hendrickx et al., 2015, 2019). While age and relationship duration covary, (Rosen et al., 2016) found that both greater age and relationship length were unique predictors of lower sexual dysfunction. Further, while Mitchell et al. (2013) did not examine relationship duration specifically, they found that sexual functioning varied by relationship status—with those living with their partner reporting poorer functioning than those dating but not cohabitating. Despite some disagreement in the literature, findings suggest that both men and women may experience declines in sexual functioning over the course of long-term relationships.

Much of the literature on sexual distress indicates that men and women may be less distressed by sexual issues as they grow older (Byers et al., 2016; Hendrickx et al., 2015; Howard et al., 2006). However, sexual distress also seems to fluctuate depending on factors such as type of sexual dysfunction (Hendrickx et al., 2019), beliefs or values related to sexuality (Beck et al., 2013), relationship well-being (Stulhofer et al., 2020), and times of transition (e.g.,

transition to parenthood; Dawson et al., 2021). While sexual distress does not seem to have a steady trajectory for men or women, but rather varies over time based on a variety of factors, it is still an important facet of sexual well-being as it is associated with poorer relationship satisfaction and emotional well-being (e.g., Rosen et al., 2016).

As one might expect, the different aspects of sexual well-being are interconnected. For example, sexual functioning and satisfaction are strongly related, and one's own sexual functioning appears to be related to a partner's sexual satisfaction (e.g., Rosen et al., 2020). However, while the facets are related, they are all distinct constructs both conceptually, and as evidenced by different associations with theoretical antecedents and outcomes. For example, sexual distress and sexual satisfaction appear to be closely and inversely related—yet they show independent patterns of change over time (Stephenson & Meston, 2010a). Additionally, problems with sexual functioning are not always associated with high sexual distress (e.g., Stephenson & Meston, 2010b; Stephenson & Meston, 2015b). Considering the multifaceted nature of sexual well-being, it is essential to not examine each facet in isolation, but rather to consider the full picture by assessing multiple facets of sexual well-being in conjunction.

1.2 Relationship Satisfaction

In addition to sexual well-being, there is also extensive evidence that aspects of relationship well-being, such as relationship satisfaction, are vital for physical and mental health (e.g., Gómez-López et al., 2019; Uchino, 2013). In fact, one systematic review revealed that strong social relationships predict a 50% decreased risk of mortality, compared to those without strong social relationships, regardless of age, gender/sex, and initial health status (Holt-Lunstad et al., 2010). Further, the authors demonstrated that strong social relationships were as important for mortality and morbidity as physical health indicators such as obesity and smoking. For long-

term couples, the level of satisfaction a person has with their overall romantic relationship is associated with greater physical health (Robles et al., 2014) and a longitudinal study found that relationship satisfaction was the best predictor of a couple's adjustment, as well as relationship stability 10 years later (Ruffieux et al., 2014; see also Lavner & Bradbury, 2010). Not surprisingly, relationship dissatisfaction is also a strong predictor of relationship dissolution (e.g., Le et al., 2010; Røsand et al., 2012). Unfortunately, much like with sexual well-being, it is not uncommon for couples to experience declines in relationship satisfaction over time, regardless of age or gender/sex (e.g., Birditt et al., 2012; Kamp Dush et al., 2008). Moreover, there is extensive evidence that sexual and relationship well-being are closely connected, which I will detail next, making it important to consider both these aspects of well-being.

1.2.1 Associations between Relationship and Sexual Well-being

Strong positive links between sexual and relationship satisfaction have been found for both mixed- and same-gender/sex couples (Blumenstock & Papp, 2017; Holmberg et al., 2010; Newcomb et al., 2021; Quinn-Nilas, 2020). While there has been some debate about the directionality of these links, most studies point towards a bidirectional relationship (e.g., McNulty et al., 2016; Seiter et al., 2020). A recent study utilizing multivariate latent growth curve modeling, found that relationship and sexual satisfaction change together over time in a dynamic process. For example, high initial levels of sexual satisfaction were protective against declines in relationship satisfaction over a 20-year period; similarly, high initial levels of relationship satisfaction were protective against declines in sexual satisfaction over time (Quinn-Nilas, 2020).

The interconnectedness of sexual and relationship well-being, along with how integral these types of well-being are for physical and mental health (Diamond & Huebner, 2012; Holt-

Lunstad et al., 2010), points to the importance of research examining psychosocial factors that could help promote well-being in both areas. Existing research points towards interpersonal factors—such as sexual communication—for promoting well-being in sexual and romantic relationships (Debrot et al., 2017; Impett et al., 2015; Mark et al., 2018). Fortunately, there are several theories which provide a helpful framework from which to understand how couples in long-term relationships could build, maintain, and enhance their sexual and relational well-being, as well as the important role that sexual communication may have in this endeavor.

1.3 Theoretical Framework

Historically, sexuality research has not had a strong theoretical background, and theories on the interpersonal aspects of sexuality—especially sexual communication—have been scarce until more recently (for a review see Manning, 2021; see also Muise et al., 2018).[2] Accordingly, the existing theoretical groundwork in sexuality science has often used an integrational approach, typically drawing upon related research areas. Given the intersection of sexuality and relationships, the field of close relationships research has provided valuable theoretical frameworks and researchers have adapted and applied them to sexuality research (e.g., Muise et al., 2018). Consequently, in my dissertation, I bridge several stand-alone—yet related—theoretical frameworks, including: the relationship research-based theories of (a) interdependence theory and (b) the interpersonal process model of intimacy; as well as the

[2] This is not to say that sexuality research is atheoretical. Rather, sexuality research has not always had a strong basis in theory, nor a meta-theoretical tradition, until the late 1990s (see Weis, 1998 for a review on the use of theory in sexuality research). For example, two different content analyses of publications in two high-level sexuality journals (*The Journal of Sex Research* and *Archives of Sexual Behavior*) from 1971-1990 and 1980-1983 found that only 2-6% of articles were concerned with theory development or presenting a theoretical model (Allgeier, 1984 and Ruppel, 1994, as cited in Weis, 1998). As a field, there has been significant growth in and a focus on developing and using theoretical models in empirical research and many valid and valuable theoretical contributions have been generated in recent decades (e.g., MacNeil & Byers, 2005, 2009; Rosen & Bergeron, 2019; van Anders, 2015).

sexuality-based theories of (c) sexual script theory, (d) erotic plasticity, and (e) the interpersonal exchange model of sexual satisfaction; and the only theory specific to sexual communication (f) the two pathways model of sexual communication.

When applied to my dissertation, these theories collectively provide a framework to examine how sexual talk in long-term couples is associated with sexual well-being and relationship satisfaction, as well as a justification for examining potentially important moderators of these associations. In the following sections I begin with detailing each theoretical framework and how it informed my dissertation. The theoretical section is followed by a review of the sexual communication literature, as well as the sexual talk literature. Next, I consider the potential roles of perceived partner responsiveness to sexual talk and gender/sex in sexual talk. Finally, I outline my three dissertation studies.

1.3.1 Social Exchange Theories

Interdependence theory states that interpersonal experiences are inherently interdependent; people who interact will influence one another's thoughts, emotions, motives, behaviour, and outcomes (Kelley et al., 2003; Kelley & Thibaut, 1978; Thibaut & Kelley, 1959). Further, owing to its roots in social exchange theory, this framework considers the levels of rewards (i.e., exchanges that are pleasurable and gratifying to a person) and costs (i.e., exchanges that demand physical or mental effort, or which cause pain, embarrassment, or anxiety) that occur during interpersonal interactions (Thibaut & Kelley, 1959). When applied to close, intimate relationships, interdependence theory proposes that the more one's rewards exceed their costs, the more satisfying a relationship will be (e.g., Arriaga, 2013).

Lawrance and Byers (1992) built upon interdependence theory to develop the interpersonal exchange model of sexual satisfaction (IEMSS; see also Lawrance & Byers, 1995;

Byers, 1999). The IEMSS was the first application of a social exchange theory to *sexual* satisfaction. According to the IEMSS, there are four distinct aspects of a relationship that influence sexual satisfaction: (1) relationship satisfaction, (2) the extent to which the level of sexual rewards exceeds sexual costs, (2) the extent to which the level of sexual rewards/costs compares favourably to the levels a person *expects* to experience in the relationship, and (4) perceived equality between one's own and one's partner's level of sexual rewards/costs. There is considerable empirical support for this model for men and women in same- and mixed-gender/sex relationships (e.g., Byers & MacNeil, 2006; Calvillo et al., 2020; La France, 2010). Extrapolating from interdependence theory and the IEMSS, my dissertation will test whether one person's sexual talk (a type of behaviour) will be linked to not only their own sexual and relationship outcomes, but also their partner's sexual and relationship outcomes. In line with social exchange theories, if sexual talk leads to a higher sexual reward-to-cost ratio (e.g., the increased sexual pleasure experienced as a result of asking your partner to touch you in a certain way outweighs the anxiety about giving your partner this instruction during sex) then greater sexual talk may result in people becoming more satisfied with their general romantic and sexual relationship.

1.3.2 Interpersonal Process Model of Intimacy

According to the interpersonal process model of intimacy, closeness is key to all relationships and people communicate to become closer to one another (Reis & Shaver, 1988; see also Laurenceau et al., 1998; Reis et al., 2004). Intimacy is thought to emerge during an interpersonal process whereby two partners interact, experience, and express emotions, communicate (verbally and nonverbally), and become close (e.g., emotionally, and often physically). The key component of this model is a reciprocal process of self-disclosure and

responsiveness to this disclosure. Moreover, how a partner is perceived to respond to an individual's self-disclosure may be especially important in lasting and satisfying romantic relationships (Reis, 2012). Perceived partner responsiveness (PPR) is the extent to which a person perceives their partner's response to be accepting, understanding, validating, and caring (Reis, 2012).

A multitude of studies have found that PPR predicts greater sexual satisfaction and sexual functioning, lower sexual distress, and greater relationship satisfaction (e.g., Birnbaum & Reis, 2012; Birnbaum et al., 2016; Bois et al., 2016; Muise & Impett, 2015). According to this theory and relevant to my dissertation, when a person communicates with their partner during sex (i.e., uses sexual talk), this disclosure—along with how they perceive their partner's response to it—may increase feelings of intimacy, thereby leading to greater sexual and relationship well-being.

1.3.3 Sexual Script Theory

Sexual script theory guided my hypotheses related to gender/sex differences for two of my dissertation studies, and thus was extremely influential to my dissertation as a whole. Sexual script theory (Gagnon & Simon, 1973; Simon & Gagnon, 1986) is based on the foundational concept that all human behaviour, including sexual behaviour, is socially scripted. Sexual scripts are dynamic; scripts are learned and incorporated based on a person's involvement in a social group and help individuals make sense of sexual interactions. Gagnon and Simon (1973) proposed three levels of interactive sexual scripts: cultural (or 'social') scripts, interpersonal (or 'couple') scripts, and intrapersonal (or 'individual') scripts.

According to Gagnon and Simon (1973), cultural scripts act as a general guide to what is sexually desirable/undesirable or appropriate/inappropriate in a particular culture. These scripts are constructed from a multitude of sources (e.g., government, law, education, religion) and may

include information such as who should initiate sexual encounters and what physical activities need to occur for an interaction to be considered 'having sex.' The *inter*personal script acts as a guide to how two (or more) individuals engage in sexual encounters and is constructed through a process in which each individual involved integrates their own cultural scripts and personal experiences and adapts these to the present sexual encounter. Interpersonal level scripts help individuals navigate sexual interactions based on shared sets of expectations (e.g., how to initiate sex, preferences for certain sexual positions or acts, knowledge of what pleases each person, and what might signal the end of a sexual encounter). Finally, *intra*personal scripts represent each individual's unique sexuality, including sexual fantasies and memories, personal sexual preferences, meanings of sexual interactions, and individual physiological responses (e.g., physical indicators of arousal; Gagnon & Simon, 1973; Simon & Gagnon, 1986, 2003). Given the importance of cultural sexual scripts and how they inform and shape interpersonal sexual scripts, it is essential to consider the main cultural sexual script of the populations examined in this dissertation, which I will review next.

1.3.3.1 The Traditional Sexual Script

Sexual scripts are inherently intertwined with gender/sex roles, norms, and stereotypes within society (Gagnon & Simon, 1973; Wiederman, 2005). Sexual script research has almost exclusively focused on people who identify as heterosexual and cis gender and engage in mixed-gender/sex relationships. Additionally, most research in this area has largely been conducted in Western cultures. It is therefore unsurprising that the main cultural level script identified in the literature is the Traditional Sexual Script (TSS), which is highly gendered and rigid, as well as hetero- and cis-normative. According to the TSS, men and women think about, and approach sexuality differently based on the societal and cultural messages they receive (Simon & Gagnon,

1986, 2003; Wiederman, 2005). Men are positioned as the sexual 'initiators' who are sexually dominant and are supposed to desire sex in order to achieve physical sexual pleasure, whereas women are positioned as the sexual 'gatekeepers' who are sexually submissive and desire sex as a way to build emotional intimacy, rather than for sexual pleasure (Gagnon, 1990; Masters et al., 2013; Wiederman, 2005). There has been speculation that as Western culture becomes more egalitarian regarding gender/sex, the cultural sexual script might change and adherence to the TSS may decrease (e.g., Bay-Cheng & Zucker, 2007; Dworkin & O'Sullivan, 2004). However, recent research has demonstrated that the TSS is still the prevailing cultural sexual script in North America, including for those in long-term relationships (Coffelt & Hess, 2015; Klein et al., 2019; Masters et al., 2013).

Prior research has consistently demonstrated gender/sex differences that align with the TSS for men and women in mixed-gender/sex relationships and those who identify as heterosexual. For example, women are typically found to seek sex within the context of a relationship and as a means of increasing emotional intimacy, whereas men are more likely to pursue casual sex, be less interested in long-term relationships, and pursue sex for sexual gratification purposes (England & Bearak, 2014; Kuperberg & Padgett, 2016). One qualitative study sought to examine whether couple and individual level scripts were consistent with cultural level scripts (Masters et al., 2013). The results indicated that both heterosexual men's and women's (aged 18-25) descriptions of cultural sexual scripts were consistent with the TSS, including the highly rigid gender/sex roles (Masters et al., 2013). Additionally, while there is evidence that men of all ages largely endorse and follow the TSS, a minority of men report a desire to deviate from this script (Murray, 2018; Vannier & O'Sullivan, 2010). Much of the sexual script literature has explored what happens leading up to sex instead of focusing on what

sexual encounters look like. When it comes to what actually occurs *during* sexual encounters, a qualitative study found that women generated significantly longer foreplay phases compared to men when asked to describe sexual scripts within long-term, committed relationships (Landgraf et al., 2018). Yet this gender/sex difference was not apparent when participants were asked for sexual scripts for short-term, casual sexual encounters, suggesting the TSS may be more apparent during sexual encounters occurring in long-term relationships.

The TSS consists of a narrow conceptualization of what 'having sex' is, with research finding that in the TSS, sex is centered around penile-vaginal intercourse, which involves the assumption that one person will have a vulva and vagina and the other will have a penis (e.g., Byers et al., 2009). Given that the TSS tends to be hetero- and cis-normative, it may be less applicable to those in same-gender/sex relationships or those who identify as gender/sex diverse (GSD). It is presumed that sexual and gender/sex diverse couples may therefore create their own alternative sexual scripts to help guide sexual encounters (Patterson et al., 2013; Power et al., 2009). Unfortunately, there is a dearth of sexual script research with same-gender/sex couples, and even less with GSD individuals or couples. In fact, only a handful of studies have explicitly examined sexual scripts with these populations (Klinkenberg & Rose, 1994; Mutchler, 2000; Patterson et al., 2013).

Initial research on sexual scripts of men in same-gender/sex relationships found that they tended to be more sexually oriented and less intimacy-focused than heterosexual men who follow the TSS (Klinkenberg & Rose, 1994), indicating that men in same-gender/sex relationships may have sexual scripts in which they hold an exaggerated version of men's roles in the TSS. However, contrary to men's roles in the TSS and these initial findings (Klinkenberg & Rose, 1994), one qualitative study found that the dominant theme in young gay men's sexual

scripts was romantic love (Mutchler, 2000). Similarly, another qualitative study with young women in same-gender/sex relationships found that these women focused less on gender/sex roles and had more sexual script flexibility (Patterson et al., 2013). Considering the evidence that the sexual scripts of men and women in same-gender/sex relationships may differ from those in mixed-gender/sex relationships, it is possible that aspects of their scripts—such as sexual communication and its associations with sexual and relational well-being—may also differ. Owing to sexual script theory and existing literature, my dissertation proposes that a person's gender/sex, their partner's gender/sex, as well as dyad type (i.e., same- vs. mixed-gender/sex couples) may be associated with the type and amount of sexual talk used. Further, I anticipate that how certain types of sexual talk are associated with sexual and relational outcomes may vary based on gender/sex or dyad type.

1.3.4 Erotic Plasticity

Erotic plasticity refers to "the degree to which a person's sex drive can be shaped or altered by cultural and social factors, from formal socialization to situational pressures" (Baumeister, 2000, p. 348). (Note: in this literature, 'sex drive' is defined as a construct that includes sexual attitudes, responses, behaviours, and desires; Baumeister, 2000). According to the theory of erotic plasticity, on average women have greater erotic plasticity compared to men, meaning that women's sex drives are affected by situational, cultural, and social factors to a stronger degree. Men's sex drive can, within this theoretical framework, still be influenced by situational, social, and cultural factors; however, it should, on average, be more stable and less malleable. While there is significant qualitative and quantitative evidence supporting this theory (e.g., Baumeister, 2000; Baumeister, 2004; Diamond, 2003; Van Ness et al., 2017), contradictory findings also exist (e.g., Benuto & Meana, 2008). For example, in support of the theory of erotic

plasticity, there is considerable evidence that women's sexual attractions have a greater capacity for change over time compared to men's attractions (e.g., Diamond, 2003; for a review see Diamond, 2007). In contrast with the theory of erotic plasticity, Benuto and Meana (2008) found no evidence that acculturation (i.e., the process of adopting the customs, values, habits, beliefs, attitudes, and behaviours of the dominant culture) was differently associated with the sexual attitudes of ethnic minority men and women.

The theory of erotic plasticity offers three empirical predictions: (1) intraindividual variation in sexuality will be greater among women, (2) sociocultural factors will have a greater impact on women's sexuality, and (3) women's sexual behaviours will be less consistent with their sexual attitudes, whereas men will have higher sexual attitude-behaviour consistency (Baumeister, 2000). Consequently, one might expect that women's sexual behaviours, including sexual talk, would be more strongly influenced by cultural factors—such as cultural-level sexual scripts (e.g., the TSS). In addition, their sexual well-being (e.g., desire, satisfaction, functioning, and distress) would be more strongly influenced by situational factors, such as sexual talk. Accordingly, my dissertation proposes that gender/sex differences in erotic plasticity may be associated with the type and amount of sexual talk used. Additionally, how sexual talk is associated with sexual outcomes may also vary based on gender/sex.

1.3.5 Two Pathways Model of Sexual Communication

This model, which is specific to sexual communication, is informed by the sexual script, IEMSS, and interpersonal process model of intimacy theories and proposes that sexual communication leads to greater sexual satisfaction via two pathways (MacNeil & Byers, 2005; 2009; see also Cupach & Metts, 1991). This theory has also been extended to explain the associations between sexual communication and both sexual functioning and relationship

satisfaction (Merwin et al., 2017; Rancourt et al., 2016). The first pathway, the instrumental pathway, suggests that sexual communication helps couples establish a shared interpersonal sexual script, as well as influences the balance of sexual rewards to costs. Through this pathway, sexual communication helps partners to better understand each other's sexual preferences and develop a mutually satisfying sexual script, which leads to more satisfying sexual interactions in which both partners experience a higher sexual reward-to-cost ratio, and ultimately greater sexual and relationship well-being. The second pathway, the expressive pathway, proposes that sexual communication leads to greater intimacy. Through this pathway, both sexual and non-sexual communication enhance intimacy, which then leads to greater sexual and relationship well-being.

The two pathways theoretical model has been empirically supported with mixed-gender/sex couples in long-term relationships (MacNeil & Byers, 2005, 2009), and while it has not yet been examined in same-gender/sex couples, it is proposed to apply to all couples equally. Cross-sectional studies with couples in short- and long-term relationships found strong evidence of the instrumental pathway for both men and women (MacNeil & Byers, 2005, 2009). However, the results for the expressive pathway differed between men and women for couples in long-term relationships (MacNeil & Byers, 2009). Specifically, both sexual- and non-sexual disclosures were associated with men's sexual satisfaction, but only non-sexual self-disclosures were associated with women's sexual satisfaction (MacNeil & Byers, 2009). According to the two-pathways model and relevant to my dissertation, I propose that sexual talk may lead to greater sexual well-being by helping couples create more mutually satisfying sexual scripts and a greater sexual reward-to-cost ratio, while also enhancing emotional intimacy, ultimately resulting in greater sexual and relationship well-being.

1.3.6 Integrating Theoretical Influences

Collectively, by bridging the relationship- and sexuality-based theories outlined above, I provide a framework to explain how sexual talk may help couples in long-term relationships maintain their sexual and relationship well-being over time. The theories also informed my consideration of important moderators of the associations between sexual talk and sexual and relationship outcomes, including PPR to sexual talk and gender/sex. Beyond the strong theoretical basis for my dissertation, there is also important empirical literature that helped inform my dissertation and hypotheses, which I will now review.

1.4 Overview of Sexual Communication

Broadly, sexual communication refers to verbal and nonverbal communication concerning sexual matters (e.g., Mark & Jozkowski, 2013; Rehman et al., 2011). Within the context of intimate relationships, this can include nonverbal communication such as facial expressions that reflect pleasure, eye contact, and body language, as well as verbal communication such as sharing sexual likes and dislikes with a partner. Largely driven by the theoretical frameworks outlined above, researchers have investigated how sexual communication in relationships may be linked with greater sexual and relationship well-being, with a focus on the role of sharing sexual preferences with a partner (e.g., Brown & Weigel, 2018; MacNeil & Byers, 2005, 2009). For example, cross-sectional dyadic studies have found that more open verbal communication about sexual preferences is linked to greater sexual and relationship satisfaction for community couples (e.g., Coffelt & Hess, 2014; Jones et al., 2018). In a recent study with young, mixed-gender/sex couples, Roels and Janssen (2020) found that a person's own sexual communication was associated with their own—but not their partner's—greater sexual satisfaction and relationship satisfaction. There is also evidence that sexual communication is associated with greater sexual

and relationship satisfaction for sexual and gender/sex diverse individuals (e.g., Rubinsky & Hosek, 2020).

Unfortunately, the sexual communication literature has largely been limited to single-occasion cross-sectional studies; to the best of my knowledge there are only three studies that have used observational, longitudinal, and experimental methods, respectively (Pink, 2018; Rehman et al., 2017; Warshowsky et al., 2020). The observational study found that couples experience greater warmth during sexual discussions compared to non-sexual ones, which may suggest that sexual communication creates a greater sense of intimacy and closeness (Rehman et al., 2017). The longitudinal study was part of a doctoral dissertation which found that declines in women's sexual communication predicted declines in their sexual satisfaction (Pink, 2018). Finally, the experimental study found that a bibliotherapy intervention helped increase men's sexual communication compared to men in the waitlist control group; however, the differences between the two groups were no longer present three weeks later (Warshowsky et al., 2020).

For the most part, the literature has concentrated on communication that occurs outside of sexual encounters; however, there is some evidence that sexual communication that occurs *during* sex may also be relevant for sexual well-being. Of the studies to investigate sexual communication during sexual encounters, three studies focused on the *style* of communication (i.e., verbal vs. nonverbal). Brogan et al. (2009) found that when a person perceived their partner as using more verbal or nonverbal sexual communication during sex, they reported greater sexual satisfaction. Importantly, only some of the items in Brogan et al.'s (2009) measure specify that the verbal or nonverbal communication is occurring *during* sex, making it difficult to know whether participants are also reporting on more general sexual communication occurring outside of sexual encounters. Babin (2012) adapted Brogan et al.'s (2009) measure to assess one's own

verbal and nonverbal communication during sex and found that a person's perception of their own nonverbal—but not verbal—communication was associated with their own sexual satisfaction. In a doctoral dissertation with short-term couples using cross-sectional and longitudinal data, Millman (2018) found a person's perceptions of their partner's nonverbal—but not verbal—communication during sex was associated with their own and their partner's greater sexual satisfaction. However, Blunt-Vinti et al. (2019) found that perceptions of both one's own and partner's verbal sexual communication during sex were associated with a person's own sexual satisfaction. Overall, the existing literature on sexual communication during sex has produced mixed findings, with some finding support for the importance of both verbal and nonverbal communication during sex (Blunt-Vinti et al., 2019; Brogan et al., 2009) and others for only nonverbal communication (Babin, 2012; Millman, 2018). However, these studies are also limited by small sample sizes (e.g., Brogan et al., 2009) and the use of a measure that only assessed the use of verbal versus nonverbal communication during sex but not the content or type of verbal communication (Babin, 2012; Blunt-Vinti et al., 2019; Brogan et al., 2009; Millman, 2018). It may be that the amount or specific content of verbal communication during sex is important for a person's sexual satisfaction, though this has been rarely studied. Overall, research suggests that a person's own—as well as their partner's—verbal communication during sex may be linked with greater sexual satisfaction.

Couples' discussions of sexual topics can often be fraught with fears of being vulnerable, misunderstood, and even rejected by one's partner (Rehman et al., 2011). There seems to be a higher inherent interpersonal risk associated with sexual communication, which may make it difficult for couples to engage in, relative to more general communication. For instance, Theiss and Estlein (2013) found that perceiving sexual communication as more threatening (e.g., fearing

rejection, embarrassment) was associated with avoidance of sexual topics and more indirect sexual communication—both of which were then linked to poorer sexual satisfaction for women and, for sexual topic avoidance only, men. Since these fears are often reported about engaging in sexual communication outside of sexual activity (Rehman et al., 2017; Rehman et al., 2011), it is likely that the perceived interpersonal risk is higher and more salient when engaging in sexual communication *during* sex (e.g., verbally instructing a partner to touch you in a certain way), especially since sex is a time when people already experience increased feelings of vulnerability (Kleinplatz et al., 2009). It is evident that sexual communication *during* sex is a critical aspect of sexual communication that needs to be examined further, as it may be a potentially important target for future interventions aiming to promote sexual and relational well-being in couples.

1.5 Sexual Talk

As previously mentioned, sexual talk[3] is a type of verbal sexual communication that occurs exclusively during sex and which is specific to the sexual activity itself (Jonason et al., 2016). While largely neglected in past research, sexual talk appears to be commonly enjoyed. In fact, one non-peer-reviewed study of 17,400 Australians found that 62% of respondents enjoyed talking during sex (Redhotpie, 2014). Further, there is evidence that on average, both men and women report that they and their partners engage in high levels of verbal sexual communication during sex (Babin, 2012; Brogan et al., 2009). While previous researchers had examined the *style* of sexual communication during sex (i.e., verbal vs. nonverbal; e.g., Babin, 2012; Blunt-Vinti et al., 2019; Brogan et al., 2009), Jonason and colleagues (2016) were the first to examine

[3] While Jonason et al. (2016) coined this type of communication "erotic talk," I refer to it as "sexual talk," which I believe is a more accurate and descriptive name, especially given that some of the subtypes (e.g., statements of emotional bonding or intimacy) may not necessarily be conceptualized as erotic by some people.

the *content* of sexual talk, as well as the first to investigate how different types of sexual talk were associated with sexual and relationship satisfaction.

Jonason et al. (2016) first conducted a qualitative study with individuals to examine what they and their current/past partner's say during sex, including (but not limited to) statements said for excitement and expressions of emotions, as well as any statements they knew or believed men and women say during sex. A thematic analysis of the 569 statements reported by participants revealed a total of eight themes: sexual dominance, sexual submission, instructive statements, positive feedback/compliments, intimacy/emotional bonding, sexual ownership, speaking fantasies, and short statements of excitement/pleasure. Next, Jonason et al. (2016) constructed a measure of sexual talk and had 238 participants rate their use of each of the eight statement types, using an 8-item measure (with each item representing one of the eight themes identified during the thematic analysis). An exploratory factor analysis (EFA) identified two distinct types of sexual talk (mutualistic and individualistic sexual talk), which were each composed of four unique subtypes of sexual talk, with each subtype mapping onto one of the eight themes mentioned above. Mutualistic sexual talk consisted of (1) short statements of excitement or pleasure (e.g., *yes/yeah!*), (2) positive feedback or compliments directed towards a partner (e.g., *you taste so good*), (3) instructive statements (i.e., telling your partner to do something; e.g., *go harder/faster/slower*), and (4) statements of emotional bonding or intimacy (e.g., *I feel so close to you*). Individualistic sexual talk consisted of (1) sexually dominant statements (e.g., *who's my sex toy?*), (2) sexually submissive statements (e.g., *Let me be your dirty slut*), (3) statements of sexual ownership (i.e., over one's partner or their body; e.g., *whose pussy/cock is this?*), and (4) speaking sexual fantasies (e.g., *I'm imagining people are watching*

us fuck). The authors proposed that mutualistic talk focused on sharing the experience with one's partner, whereas individualistic talk focused on one's own sexual experience and pleasure.

Further, the authors found that using more individualistic talk was associated with greater sexual satisfaction and using more mutualistic talk was associated with both greater sexual and relationship satisfaction (Jonason et al., 2016). Both men and women reported using more mutualistic talk than individualistic talk and there were no gender/sex differences in use of mutualistic or individualistic talk. However, women reported using one subtype of mutualistic talk (i.e., statements of emotional bonding/intimacy) and one subtype of individualistic talk (i.e., submissive statements) more than men. Overall, it appears that sexual talk may be a type of communication that people in long-term relationships could utilize to help maintain their sexual and relationship well-being over time. However, we still do not know (1) if there are gender/sex differences in the use of mutualistic and individualistic sexual talk for long-term couples specifically, (2) how use of sexual talk for long-term couples is associated with a person's own and their partner's sexual well-being, (3) how gender/sex and dyad type or PPR to sexual talk might moderate those associations, or (4) what sexual talk looks like for sexual and gender/sex diverse couples. Next, I will review the literature relevant to the two moderators I examine in my dissertation: PPR and gender/sex.

1.6 Perceived Partner Responsiveness (PPR)

Sexual talk inherently occurs in a partnered context, as it involves one person saying something to their partner during a sexual encounter. As such, the perception of how a partner responds to sexual talk might have important implications. The interpersonal process model of intimacy asserts that perceptions of how a partner responds to communication is a key component of building intimacy in relationships (Laurenceau et al., 1998; Reis et al., 2004). PPR

refers to the extent to which a person perceives their partner's verbal and non-verbal responses to be accepting, validating, understanding, and caring (Reis, 2012). Experimental, longitudinal, and daily diary studies have shown that greater PPR is a robust predictor of greater sexual satisfaction, greater sexual functioning, lower sexual distress, and greater relationship satisfaction for both members of couples (Birnbaum & Reis, 2012; Birnbaum et al., 2016; Bois et al., 2016; Muise & Impett, 2015).

While PPR has not yet been directly examined in the context of sexual communication, it is reasonable to speculate that PPR to sexual talk may moderate how sexual talk is associated with sexual and relationship outcomes. For instance, if a person uses sexual talk and perceives their partner as responsive to their sexual talk (e.g., the partner follows instructive statements), they will likely—via the expressive and instrumental pathways—experience enhanced sexual and relational well-being. In contrast, if a person perceives their partner as unresponsive to their sexual talk (e.g., the partner ignores or invalidates a sexual fantasy), then this may cause the person to feel rejected, experience less feelings of emotional intimacy, and possibly not have their sexual needs met, resulting in lower sexual well-being and relationship satisfaction. Collectively, the interpersonal process model of intimacy (Reis & Shaver, 1988) and two-pathways model of sexual communication (MacNeil & Byers, 2005, 2009), as well as existing PPR literature informed my dissertation by leading me to hypothesize that PPR to sexual talk may moderate associations between sexual talk and sexual and relational outcomes (see section 1.8.1 below for more detail on these hypotheses).

1.7 Gender/Sex

A significant body of research emphasizes that neither sex or gender are dichotomous nor independent of each other (see van Anders, 2015 for a review). Additionally, the specific impacts

of sex and gender on sexual behaviour, attitudes, and emotions are rarely separable. Indeed, some researchers have argued that the distinction between sex (referring to biologically based differences between males and females) and gender (referring to sociocultural based differences between men and women) should be abandoned because biological and sociocultural factors are so intertwined (Yoder, 2003). Sexual Configurations Theory (SCT) proposes the use of gender/sex when referring to both gender and sex and gender/sex *sexuality* as an alternative term for sexual orientation (for which both prior theoretical and empirical literature largely rely on assumptions of sex—rather than gender—as well as of binaries; van Anders, 2015). SCT provides a dynamic framework for understanding diverse sexualities along several continuums (e.g., gender/sex sexuality, gender sexuality, and sex sexuality). My dissertation directly relies on two theories which have fundamental expectations based on gender and sex: sexual script theory (which assumes sociocultural gender role differences between men and women) and the theory of erotic plasticity (which assumes biological sex differences between female and males). Further, both the past theoretical and empirical literature have largely been cis-normative, making it difficult to separate gender and sex. Finally, two of my dissertation studies (Studies 2 and 3) focus on sexual talk amongst sexual and gender/sex diverse couples. Given the prior theoretical and empirical research, and my own research questions, it seems logical to conceptualize gender and sex from the dynamic SCT framework. Accordingly, I utilize the terminology of "gender/sex"—an umbrella term which encompasses both sex and gender and is appropriate for use in contexts in which gender and sex cannot easily (or at all) be disentangled (Shibley Hyde et al., 2019; see also van Anders, 2015)—throughout my dissertation.

1.7.1 Gender/Sex, Dyad Type, and Sexual Communication

Based on men's and women's highly gendered/sexed roles in the TSS, one might assume that the type or amount of sexual communication—including sexual talk—a person uses would be at least partially dependent on their gender/sex or even the composition of their relationship (i.e., same- vs. mixed-gender/sex couple). Past research provides mixed results about whether people engage in different amounts or types of sexual communication based on their gender/sex. Some research has found that both the type and amount of general sexual communication differs based on gender/sex (e.g., Blunt-Vinti et al., 2019; Willis et al., 2019). For example, while women seem to communicate more about sexual topics than men, they are also less likely to believe that their communication will lead to changes (e.g., different sexual behaviours; Greene & Faulkner, 2005). Additionally, there are some aspects of sexual communication that women report greater difficulty with compared to men, such as verbally communicating about sexual consent (Willis et al., 2019). In contrast, other studies have found that men and women communicate equally about sexual preferences with a partner (e.g., Holmberg & Blair, 2009; MacNeil & Byers, 2005, 2009). One cross-sectional study found no gender/sex differences in the use of verbal communication during sex but did find that women used more nonverbal communication during sex, compared to men (Blunt-Vinti et al., 2019).

There is a dearth of research on whether the type or amount of sexual communication varies by dyad type (i.e., same- vs. mixed-gender/sex) as most of the literature has not included participants in same-gender/sex relationships. In fact, only one study has examined communication about sexual likes and dislikes in a sample of men and women in same- and mixed-gender/sex relationships (Holmberg & Blair, 2009). The results of this study indicated that the amount of sexual communication was largely equivalent, regardless of dyad type. There

is a similar lack of literature with GSD individuals. One study examining sexual consent communication found that nonbinary participants were 2.2 times more likely to use direct verbal communication compared to those who did not identify as nonbinary (McKenna et al., 2021). The authors suggested that because GSD individuals do not have a cultural level sexual script to rely on, they are more likely to rely on direct and verbal sexual communication with partners and that traditional gender/sex roles are less important for them.

Regardless of whether there are gender/sex or dyad type differences in the amount or type of sexual communication used, it is possible that the role of sexual talk—and consequently how it is associated with sexual and relationship well-being—may be divergent across gender/sex or dyad type. Indeed, the theory of erotic plasticity proposes that situational factors may have a stronger influence on women's sexual well-being (Baumeister, 2000), implying that the associations between sexual talk and sexual well-being may depend on gender/sex (i.e., associations may be stronger for women than men). Moreover, sexual script theory suggests that sexual talk may be more or less important to a person's subjective appraisal of sexual activity, due to gender/sex roles (Gagnon, 1990; Masters et al., 2013). For example, it is possible that sexual talk which focuses on the relationship (i.e., mutualistic sexual talk) may be more strongly associated with women's (than men's) sexual well-being, given that this type of sexual talk would be more consistent with women's roles in the TSS.

The contention that the associations between sexual talk and sexual and relational outcomes may differ based on gender/sex is supported by the broader sexual communication literature (e.g., Mallory et al., 2019; Rehman et al., 2011). For instance, effect sizes for associations between sexual communication and sexual desire are consistently stronger for women compared to men (Mallory et al., 2019). It is also plausible that differences based on

dyad type might exist, given that people in same-gender/sex relationships may utilize more flexible sexual scripts (Gabb, 2019; Lamont, 2017; Lindley et al., 2020). While there is a lack of research investigating dyad type differences, one study did find that the effect size for the association between sexual communication and sexual satisfaction was significantly greater for gay men compared to heterosexual men, but did not formally test for moderation (Frederick et al., 2021). However, no other previous study has examined whether dyad type might moderate the associations between sexual communication and sexual satisfaction or desire.

In summary, the theoretical frameworks and prior research that informed my dissertation suggest that men and women may approach and experience sexual talk in diverse ways based on their gender/sex and possibly also the gender/sex of their partner. The literature broadly supports the contention of gender/sex differences in sexual talk, with gender/sex and some dyad type differences being found in the type and amount of sexual communication used, and how sexual communication is associated with a person's sexual and relationship well-being. Indeed, there is already initial evidence that men and women may use and enjoy different types of sexual talk (Jonason et al., 2016). Clearly, gender/sex and dyad type are important factors to consider when conducting research on sexual talk; if gender/sex and/or dyad type moderate how sexual talk is linked to sexual and relational outcomes, future interventions targeting sexual talk may need to be tailored based on a person's and/or their partner's gender/sex.

1.8 Limitations to Knowledge

By virtue of being a newly emerging research topic, there are several important gaps in the sexual talk literature which need to be addressed. First, no study to date has examined the use of sexual talk among sexually active people in long-term relationships. It is important to know whether the same two types of sexual talk will emerge when Jonason et al.'s (2016) sexual talk

measure is used with individuals in long-term relationships, especially since these couples tend to be at higher risk of declines in sexual and relationship well-being (Birditt et al., 2012; Kamp Dush et al., 2008; McNulty & Widman, 2013; Schmiedeberg & Schröder, 2016). Moreover, researchers have found that married individuals report more apprehension about engaging in sexual communication with their partner compared to people in committed dating relationships (Babin, 2012), suggesting that the type or amount of sexual talk may look different for people in long-term relationships. Second, only the links between sexual talk and sexual and relationship satisfaction have been examined, while other aspects of sexual well-being—such as sexual functioning, sexual distress, and sexual desire—have not been investigated. The World Health Organization (WHO), as well as researchers, have emphasized the importance of considering multiple domains when it comes to sexual well-being because each facet can be experienced, expressed, and interact with other aspects of health and well-being in different ways; without a holistic view of sexual well-being, important aspects may go unaddressed in research and treatment (Martin & Woodgate, 2017; World Health Organization, 2015).

Third, researchers have yet to examine sexual talk using data from both members of a couple. Sexual talk is inherently dyadic in nature (i.e., it is something a person says to their partner during sex) and investigating how one person's sexual talk may be linked to not only their own but also their partner's sexual and relational outcomes will shed light on the interpersonal implications of sexual talk. Fourth, prior literature has not considered potential moderators of the associations between sexual talk and sexual and relationship outcomes; knowing what factors may influence these associations may be beneficial when developing communication interventions for couples.

Finally, an important gap in the existing literature is that prior research has been limited in terms of study design and sample. Most sexual communication and sexual talk studies utilize single-occasion, retrospective data collection using samples that are young, cis gender, heterosexual, and in mixed-gender/sex relationships. Owing to this limitation, findings to date are not necessarily generalizable to people who are older, not heterosexual, in same-gender/sex relationships, and those who identify as GSD. In order to advance our knowledge of sexual talk in general, as well as to better understand how sexual talk is linked to outcomes and for whom, research with more diverse samples and which utilizes techniques such as daily diary data or longitudinal methodology is required.

1.9 Outline of Dissertation Papers

The overall objectives of my dissertation were to evaluate how two types of sexual talk (mutualistic and individualistic) were associated with sexual and relationship well-being for people in long-term relationships, and to examine PPR to sexual talk, gender/sex, and dyad type as potential moderators of these associations. Study 1 of my dissertation was a cross-sectional study in which I validated an existing measure of sexual talk (SexTalk; Jonason et al., 2016) using a community sample of individuals in long-term relationships, examined the associations between a person's use of mutualistic and individualistic sexual talk and their own sexual and relationship well-being, and evaluated PPR to sexual talk as a moderator of these associations. In Study 2 of my dissertation, a cross-sectional retrospective and 35-day daily diary study, I examined whether a person's own gender/sex, their partner's gender/sex, or the dyad type (i.e., same- vs. mixed-gender/sex) were associated with their own and their partner's average general or daily use of sexual talk in a sexual and gender/sex diverse sample of community couples in long-term relationships. Finally, in Study 3 of my dissertation, I used the same community

sample as in Study 2 to test whether a person's own or their partner's daily variations in sexual talk were associated with daily sexual satisfaction and dyadic sexual desire (above and beyond their previous-day levels of sexual satisfaction and desire) for both members of the couple. In Study 3 I also examined whether a person's own gender/sex, their partner's gender/sex, or dyad type moderated these aforementioned associations. The manuscript for each of these three studies is included in separate chapters within my dissertations (Chapters 2-4).[4] In Chapter 5, I provide a discussion of the overall results, the strengths and limitations of my dissertation, the implications of my research, and recommendations for future research.

1.8.1 Aims and Hypotheses of Chapter 2

My first study, as described in Chapter 2, was a cross-sectional investigation of the associations between a person's use of sexual talk and their own sexual satisfaction, sexual functioning, sexual distress, and relationship satisfaction. Simultaneously, I sought to examine whether PPR to sexual talk moderated the associations between sexual talk and sexual and relationship well-being. Based on prior theoretical (Lawrance & Byers, 1992; Reis & Shaver, 1988) and empirical research, I hypothesized that when an individual perceived their partner as *more responsive* to sexual talk, using more mutualistic or individualistic sexual talk would be associated with greater sexual satisfaction and functioning, lower sexual distress, and—for mutualistic talk only—greater relationship satisfaction. I also expected that when an individual perceived their partner as *less responsive* to sexual talk, using more mutualistic or individualistic talk would be associated with poorer sexual satisfaction and functioning, greater sexual distress, and—for individualistic talk only—poorer relationship satisfaction.

There were two secondary aims of the first study: (1) validating a novel measure of sexual talk (SexTalk; Jonason et al., 2016) and (2) adapting and validating a measure of

[4] Note: All data for the three studies were collected pre-COVID-19.

perceived partner responsiveness to sexual talk. While the SexTalk measure had only previously been validated using a combined sample of people in relationships and those who were single, I hypothesized that I would find a similar two-factor structure to that found by Jonason et al. (2016).

1.8.2 Aims and Hypotheses of Chapter 3

My second study, as described in Chapter 3, was a two-part investigation of whether there are gender/sex or dyad type differences in the use of sexual talk among a sexual and gender/sex diverse sample of community couples in long-term relationships. In line with sexual script theory and prior research (e.g., Masters et al., 2013; Simon & Gagnon, 1986; Wiederman, 2005), I expected that men would report greater individualistic talk than women, both in general and at an average daily level. I also hypothesized that there would be no gender/sex differences for mutualistic talk in general or at a daily level. Given the lack of research and theory pertaining to GSD individuals and men and women in same-gender/sex dyads, and because this was the first study to examine sexual talk in a dyadic context, I had no specific hypotheses regarding partner's gender/sex or dyad type, nor for the GSD couples.

1.8.3 Aims and Hypotheses of Chapter 4

My third study, as described in Chapter 4, aimed to examine how daily variations in sexual talk were associated with same-day sexual satisfaction and dyadic sexual desire, above and beyond the previous-day levels of satisfaction and desire. I simultaneously sought to examine how a person's own gender/sex, their partner's gender/sex, and the dyad type might moderate these associations. This study utilized the same sample as Study 3 (described in Chapter 3) and data was collected during a 35-day period during which participants completed daily online surveys. Based on sexual script theory (Simon & Gagnon, 1986) and the results of

Study 1 and 2, I hypothesized that on days that a person used more individualistic talk relative to their average across days, they would report greater sexual satisfaction and dyadic sexual desire, and that this association would be stronger for men than for women. Further, I expected that on days that a person used more mutualistic talk relative to their average across days, they would report greater sexual satisfaction and dyadic sexual desire, and that this association would be stronger for women than for men. Considering the lack of dyadic sexual talk literature and research or theory with same-gender/sex couples or GSD individuals, I had no specific hypotheses regarding partner effects, possible moderations by partner's gender/sex or dyad type, or for the GSD couples.

CHAPTER 2: PERCEIVED PARTNER RESPONSIVENESS MODERATES THE ASSOCIATIONS BETWEEN SEXUAL TALK AND SEXUAL AND RELATIONSHIP WELL-BEING IN INDIVIDUALS IN LONG-TERM RELATIONSHIPS

The manuscript prepared for this study is presented below. Readers are advised that Kathleen Merwin, under the supervision of Dr. Natalie Rosen, was responsible for developing the research questions and hypotheses, collecting data, preparing the dataset for analyses, conducting data analyses, and interpreting the study findings. Kathleen wrote the initial draft of the manuscript and received and incorporated feedback from her co-author. The manuscript underwent peer-review, and required 2 rounds of revision, which Kathleen led the response to, prior to the manuscript's acceptance in the *Journal of Sex Research* on April 6, 2019. The full reference for this manuscript is:

Merwin, K. E., & Rosen, N. O. (2020). Perceived partner responsiveness moderates the associations between sexual talk and sexual and relationship well-being in individuals in long-term relationships. *Journal of Sex Research, 57*(3), 351-364. https://doi.org/10.1080/00224499.2019.1610151

2.1 Abstract

Sexual communication promotes sexual and relationship well-being. Previous research has frequently neglected couples' communication that occurs exclusively during sexual activity, and that is specific to that sexual interaction (i.e., sexual talk). We examined associations between individualistic and mutualistic (i.e., self- and other-focused) sexual talk and sexual and relationship well-being, and the potential moderating role of perceived partner responsiveness to sexual talk (PPR). An MTurk community sample of 303 individuals (171 female) in committed relationships completed online measures assessing sexual satisfaction, sexual functioning, sexual distress, relationship satisfaction, sexual talk, and PPR. Greater mutualistic talk was associated with higher female sexual functioning, whereas greater individualistic talk was associated with lower relationship satisfaction. At higher levels of PPR, using more mutualistic talk was associated with less sexual distress and more individualistic talk was associated with greater sexual satisfaction. At lower levels of PPR, more mutualistic talk was associated with more sexual distress and more individualistic talk was linked to poorer sexual satisfaction. PPR may help buffer against the negative associations between self-focused (i.e., individualistic) sexual talk and sexual and relationship well-being, whereas other-focused (i.e., mutualistic) sexual talk may be beneficial for sexual and relationship well-being, unless a partner is perceived as very unresponsive.

Keywords: sexual talk; sexual communication; couples; sexual well-being; relationship satisfaction

2.2 Introduction

Couples in committed romantic relationships typically experience declines in sexual well-being (i.e., sexual satisfaction, sexual functioning, and sexual distress) over time, beginning as soon as after their first year together, and regardless of relationship status (e.g., dating, cohabitating, married; Klusmann, 2002; Liu, 2003; McNulty & Widman, 2013; Rosen et al., 2016; Schmiedeberg & Schröder, 2016). Similarly, longitudinal studies have shown that couples experience declines in relationship satisfaction (i.e., relationship satisfaction, commitment, intimacy, trust, passion, love; Fletcher et al., 2000) over time, irrespective of age or gender (e.g., Birditt et al., 2012; Kamp Dush et al., 2008). Sexual well-being and relationship satisfaction each contribute uniquely to better mental and physical health (Robles et al., 2014; Røsand et al., 2012; Rosen & Bachmann, 2008). In fact, a review by Diamond and Huebner (2012) demonstrated that sexual well-being is protective for long-term physical health, and a meta-analysis by Holt-Lunstad et al. (2010) found that strong social relationships are more important to morbidity and mortality than other physical health indicators (e.g., smoking, obesity, and physical activity).

While sexual well-being and relationship satisfaction are positively related, they are distinct constructs. Recent evidence suggests that they can follow unique trajectories over the course of a relationship and can at times be predicted by different variables (McNulty et al., 2016; Montesi et al., 2010; Schmiedeberg & Schröder, 2016). Given that sexual well-being and relationship satisfaction are vital components of quality of life (Impett et al., 2014), it is important to examine factors that may help couples in committed relationships, who often experience declines in these areas, maintain or enhance these aspects of their lives.

Prior research has emphasized the importance of interpersonal factors, such as attachment style, dyadic empathy, communal motivation, and affection, for promoting well-being in sexual

and romantic relationships (e.g., Debrot et al., 2017; Impett et al., 2015; Mark et al., 2018; Rosen et al., 2017). In particular, couples' sexual communication has been shown to be associated with greater sexual well-being and relationship satisfaction (e.g., Brown & Weigel, 2018; Byers, 2005, 2011; MacNeil & Byers, 2005; Merwin et al., 2017; Rancourt et al., 2016). It is theorized that sexual communication facilitates more mutually satisfying sexual scripts, thereby leading to greater sexual and relationship well-being (e.g., Byers, 2011). However, little is known about sexual communication that occurs *during* sexual interactions and how this may be associated with couples' sexual and relationship outcomes. The present study addresses this gap by examining the associations between sexual talk (i.e., communication *during* sexual activity) and sexual satisfaction, sexual functioning, sexual distress, and relationship satisfaction in romantic relationships.

2.2.1 Sexual Communication

Sexual communication refers to verbal and non-verbal interactions concerning sexual matters (e.g., sharing sexual preferences or disclosing sexual problems to a partner or facial expressions that reflect pleasure; Babin, 2012; Brogan et al., 2009; Mark & Jozkowski, 2013; Merwin et al., 2017; Rehman et al., 2011). Most sexual communication literature has focused on the role of verbal sexual communication (e.g., discussing sexual matters such as condom use, sexual initiation, sexual preferences, etc.; Greene & Faulkner, 2005; Vannier & O'Sullivan, 2011). Cross-sectional dyadic studies have found that more open verbal sexual communication is related to greater sexual and relationship satisfaction in community samples, and less sexual distress in couples where the woman experiences pain during intercourse (Coffelt & Hess, 2014; Greene & Faulkner, 2005; MacNeil & Byers, 2005, 2009; Pazmany et al., 2015).

Theories of sexual communication posit that greater sexual communication enhances sexual and relationship well-being by fostering mutually satisfying sexual scripts (i.e., a couples' sexual routine or shared set of expectations about their sexual relationships; Gauvin & Pukall, 2018) and by enhancing intimacy (MacNeil & Byers, 2005, 2009; Mark & Jozkowski, 2013; Montesi et al., 2010; Rehman et al., 2011). Specifically, MacNeil and Byers (2005; see also Cupach & Metts, 1991; 2009) proposed that sexual communication contributes to couples' sexual satisfaction through two pathways. Through the expressive pathway, sexual communication enhances feelings of intimacy thereby leading to greater sexual satisfaction. Via the instrumental pathway, sexual communication allows partners to better understand each other's sexual preferences, leading to greater sexual satisfaction. This theoretical model is empirically supported in long-term couples (MacNeil & Byers, 2005, 2009), and has been extended to understand the associations between sexual communication and greater sexual functioning and relationship satisfaction through similar mechanisms (e.g., Merwin et al., 2017; Rancourt et al., 2016). Prior work using MacNeil and Byers' (2009) two-pathway model of sexual communication has typically used a measure of sexual communication that did not specify when the sexual communication occurred; however it is generally assumed that this communication occurred *outside* of sexual activity. Although the two-pathway model has not yet been applied to couples' communication that occurs *exclusively during* sexual activity and that is specific to the sexual activity itself (i.e., their sexual talk), it is possible that the model may extend to this type of sexual communication.

2.2.2 Sexual Talk

Couples' discussions around sexual topics can be fraught with fears of being vulnerable, misunderstood, or even rejected (Rehman et al., 2011). Indeed, Rehman et al. (2017) found that

couples experienced higher levels of anxiety in advance of discussing sexual topics, compared to non-sexual topics. Moreover, Babin (2012) found that married individuals reported higher levels of apprehension about engaging in sexual communication compared to those in committed dating relationships, and that greater apprehension was associated with less verbal sexual communication with a partner. Such findings suggest that sexual communication is more difficult than other types of relationship communication, and that couples in longer-term relationships may be especially vulnerable to challenges in engaging in sexual communication. Moreover, Ménard and Offman (2009) argued that general sexual communication (e.g., discussing one's sexual likes and dislikes outside of a sexual interaction) is different from actively requesting one's preferences *during* sexual activity, which comes with greater interpersonal risk (i.e., rejection). Studies have found that communicating more about pleasure *during* sex was associated with greater sexual satisfaction (Babin, 2012; Blunt-Vinti et al., 2019; Brogan et al., 2009).

To our knowledge, very few studies have examined sexual communication that *specifically* occurs during sexual interactions and is specific to the interaction (i.e., sexual talk; e.g., Blunt-Vinti et al., 2019; Jonason et al., 2016), and to date, only one study has examined the *content* of couples' sexual talk (Jonason et al., 2016). Using both qualitative and quantitative methods the authors identified eight unique sexual talk themes, and a factor analysis revealed that these loaded into two subscales: *Individualistic* talk is self-focused and relates to one's own sexual experience and pleasure (i.e., statements of dominance, submission, and sexual ownership, and talking about sexual fantasies), whereas *mutualistic* talk is other-focused and relates to sharing the sexual experience with one's partner (i.e., short exclamations of sexual pleasure, instructional statements, positive feedback, and statements of intimacy/bonding).

Engaging in more mutualistic talk was associated with greater sexual and relationship satisfaction, whereas engaging in more individualistic talk was associated with greater sexual—but not relationship—satisfaction. The authors suggested that the self-focused nature of individualistic talk may prioritize the sexual enjoyment of the speaker above that of their partner, thereby leading to greater sexual—but not necessarily relationship—satisfaction (Jonason et al., 2016).

While informative, Jonason et al. (2016) did not require participants to be in a current romantic relationship, nor did they ask if participants were currently (or had ever been) sexually active. Thus, their findings may not be representative of individuals who are in committed, sexually active, romantic relationships—that is, those who are at higher risk of declines in sexual well-being and relationship satisfaction. Further, Jonason et al. (2016) neglected other aspects of sexual well-being, including sexual functioning and sexual distress. Sexual satisfaction is the subjective evaluation of the positive and negative aspects of one's sexual activity and the subsequent affective response to this evaluation (Lawrance & Byers, 1992). In contrast, sexual functioning refers to the intra-individual experience of sexual desire, arousal, orgasm, and pain, whereas sexual distress refers to negative emotions (e.g., worry, frustration, and anxiety) experienced in relation to one's sexual relationship (Derogatis et al., 2008; Meston & Derogatis, 2002; Rosen et al., 2000; Rosen et al., 1997). Sexual satisfaction, sexual functioning, and sexual distress are distinct constructs such that they can exhibit different patterns of change over time (Stephenson & Meston, 2010a), and an individual can report high or low levels in one of these areas, without necessarily experiencing corresponding changes in one of the other components (e.g., Stephenson & Meston, 2015b). Given that the World Health Organization (WHO) emphasizes that sexual well-being is not simply the absence of sexual dysfunction (WHO, 2015),

but also the presence of positive sexual functioning, it is important to assess multiple aspects of sexual well-being. Finally, since sexual talk typically happens in a partnered context, the perception of how a partner responds to sexual talk might have important implications.

2.2.3 Perceived Partner Responsiveness

Perceived partner responsiveness—the extent to which a person perceives their partner's verbal and non-verbal responses to be accepting, understanding, validating, and caring—is thought to be a key component to lasting and satisfying romantic relationships (Reis, 2012). The associations between perceived partner responsiveness and greater relationship well-being have been attributed to physical and emotional factors such as a reduced stress response (e.g., Slatcher et al., 2015) and greater feelings of intimacy in the relationship (e.g., Otto et al., 2015). In longitudinal, daily diary, and experimental studies, it has been shown to be a robust predictor of greater sexual satisfaction and functioning, lower sexual distress, and greater relationship satisfaction among couples (Birnbaum & Reis, 2012; Birnbaum et al., 2016; Bois et al., 2016; Muise & Impett, 2015). Following from this work, perceived partner responsiveness to sexual talk may play a key role in the associations between sexual talk and sexual and relationship outcomes, especially given the heightened sense of vulnerability and fear of rejection that communicating during sex may evoke (Ménard & Offman, 2009).

When perceived partner responsiveness to sexual talk is greater (e.g., a partner is perceived as more accepting, validating, caring, and understanding in response to sexual talk), then individuals may experience more intimacy, individual or shared pleasure though mutual sexual scripts, and the couple may be better able to meet each other's sexual needs. Under such circumstances, sexual talk may be associated with greater sexual well-being and relationship satisfaction, compared to when a partner is perceived to be less responsive to sexual talk. Indeed,

when a partner is viewed as less responsive to sexual talk (e.g., they ignore or invalidate) this may be associated with feelings of rejection, lower intimacy, and prevent the couple from meeting each other's sexual needs—and thus be associated with lower sexual well-being and relationship satisfaction. In other words, the positive associations between sexual talk and sexual well-being and relationship satisfaction may be strengthened when a partner is perceived as *more responsive*, but when a partner is perceived as *less responsive* this may weaken the beneficial effects. Understanding the conditions under which sexual talk may be more or less beneficial would provide further nuance to our understanding of the role of sexual communication in the sexual and relationship well-being of individuals in committed relationships.

2.2.4 Current Study

In a cross-sectional study of individuals in committed, sexually active, romantic relationships, we examined the associations between mutualistic and individualistic sexual talk and sexual satisfaction, functioning, and distress, and relationship satisfaction, as well as the moderating role of perceived partner responsiveness to sexual talk. Based on theories of sexual communication and perceived partner responsiveness, as well as prior research, we hypothesized that (1) when an individual perceived their partner as *more responsive* to sexual talk, using more mutualistic sexual talk would be associated with greater sexual satisfaction and functioning, lower sexual distress, and greater relationship satisfaction, compared to using less mutualistic talk, (2) when an individual perceived their partner as *less responsive* to sexual talk, using more mutualistic sexual talk would be associated with poorer sexual satisfaction and functioning, greater sexual distress, but not poorer relationship satisfaction, compared to using less mutualistic talk, (3) when an individual perceived their partner as *more responsive* to sexual talk, using more individualistic sexual talk would be associated with greater sexual satisfaction and

functioning, lower sexual distress, but not greater relationship satisfaction, compared to using less individualistic talk, (4) when an individual perceived their partner as *less responsive* to sexual talk, using more individualistic sexual talk would be associated with poorer sexual satisfaction and functioning, lower sexual distress, and poorer relationship satisfaction, compared to using less individualistic talk.

2.3 Method

2.3.1 Participants. The final sample included 303 participants (171 female, 131 male, 1 intersex). The inclusion criteria were as follows: (1) in a sexual and romantic relationship and living with their partner; (2) sexually active with their partner (engaged in manual stimulation, oral sex, or intercourse) at least once in the previous four weeks; (3) 18 years of age or older; and (4) comfortable reading and understanding in English. Using effect sizes from previous research (Jonason et al., 2016), an a-priori power analysis conducted using G*Power indicated that we would need a sample of 266 individuals to provide sufficient power for the planned hierarchical moderated regression analyses (Faul et al., 2009).

Of 361 potential participants (i.e., individuals who expressed interest in the study), 28 (7.76%) did not go on to complete the survey because they were deemed ineligible. Of the 333 eligible participants, 19 (5.71%) were excluded for failing one or more attention checks in the survey, 6 (1.80%) were excluded because of unreliable data (i.e., indicated that we should not use their data, said they were ‘unsure’ if we should use their data, or indicated that the data they provided were only ‘somewhat accurate’). A final 5 (1.50%) participants were removed because they were missing more than 20% of data on one or more of the core study measures, resulting in the final sample size of 303.

2.3.2 Procedure. Participants were recruited through an advertisement on Amazon Mechanical Turk (MTurk), an online recruitment source. The study was advertised as a survey about sexual experiences and communication within romantic relationships. Prior research has indicated that participants recruited through MTurk provide valid data and are more demographically diverse than both U.S. university samples and standard Internet samples (Chandler & Shapiro, 2016; Mortensen & Hughes, 2018). Interested participants followed a link to complete an online eligibility screening questionnaire through Qualtrics Research Suite, a secure online survey program. Eligible participants provided their informed consent online and completed a demographics questionnaire as well as standardized measures assessing their sexual satisfaction, sexual functioning, sexual distress, and relationship satisfaction. Participants also completed measures of their own sexual talk, and of perceived partner responsiveness to their own sexual talk. Following recommendations for enhancing the validity of online data collection, two attention-check questions were embedded within study measures to verify that participant's attention was engaged during the study (Thomas & Clifford, 2017). Additionally, at the end of the study, participants were asked to rate the accuracy of their own data on a scale of 1 (*not at all accurate*) to 5 (*extremely accurate*), and to indicate whether we should use their data (*yes* or *no* or *unsure*). Participants were compensated for completing the study with a payment of $1.40, in line with MTurk standards for compensation (Mason & Suir, 2012), and received a list of online resources about sexual health and problems, mental health, and relationships. The study was approved by our institutional research ethics board.

2.3.3 Measures

Demographics. Information on participants' age, ethnicity, sex, gender, sexual orientation, education, income, and relationship characteristics (i.e., partner's gender,

relationship status and duration) were collected through self-report questions. Participants were provided with the following response options for sex: *male, female, intersex*, and the following response options for own and partner's gender: *male, female, trans-identify as male, trans-identify as female, other (specify if you wish)*.

Sexual Talk. The sexual talk during sexual activity measure (SexTalk; Jonason et al., 2016) was used to assess participant's general use of individualistic and mutualistic talk during sexual activity. The measure contains 16 items assessing four types of individualistic talk (statements which are sexually dominant or submissive, messages of 'sexual ownership', and talking about sexual fantasies) and four types of mutualistic talk (short exclamations of excitement or pleasure, positive feedback or compliments, instructive statements, and messages that strengthen the intimate/emotional bond with one's partner). An exploratory factor analysis (EFA) supported the two factor structure of the measure (Jonason et al., 2016). Participants report on the frequency with which they engage in each type of sexual talk, and how exciting they find it to say each type of sexual talk with their current romantic partner during sexual activity on a 5-point Likert scale ranging from 1 (*Never* or *Not at all*) to 5 (*All the time* or *Extremely*). Jonason et al. (2016) found that scores for frequency of use and excitement had good-to-excellent internal consistency and averaged the scores to eliminate redundancy and reduce Type I error inflation. We found that frequency of use and excitement to say were indeed highly correlated in our sample (mutualistic talk: $r = .85$, $p < .01$; individualistic talk: $r = .87$, $p < .01$) and therefore followed the same procedure as (Jonason et al., 2016). Each subscale score could therefore range from 4 to 20, and higher scores indicated more frequent use of and excitement from saying sexual talk.

Given that the SexTalk measure is still novel, we conducted an EFA with our sample according to the best practices of Sakaluk and Short (2017). We conducted all analyses in SPSS and used O'Connor (2000) SPSS syntax for parallel analysis. Common factors were extracted using maximum likelihood estimation, and promax (i.e., oblique) rotation to achieve simple structure and estimate correlations between common factors. We determined how many factors to retain by conducting parallel analysis, using nested-model comparisons, and examining descriptive measures of model fit. The parallel analysis revealed that factor solutions containing 1 or 2 common factors explained more of the variance in the scale items than randomly simulated factors, and thus were plausible factor solutions. We subsequently extracted factor solutions of 1 and 2 common factors for further examination, anticipating that the 2-factor solution may be best given the results of the parallel analysis. The solution entailing only a single common factor had a poor model fit, $\chi^2(20) = 175.203$, $p < .001$, RMSEA = .156, NNFI = .80 (Little, 2013). A two-factor solution, alternatively, had an acceptable model fit, $\chi^2(13) = 43.803$, $p < .001$, RMSEA = .086, NNFI = .939 (Little, 2013), and was a significant improvement compared to the one-factor solution, $\Delta \chi^2 (7) = 131.4$, $p < .0001$. As this two-factor model was congruent with prior theory on the distinctions between individualistic and mutualistic sexual talk (Jonason et al., 2016), we selected it as the final model for the Sexual Talk scale.[1] Items 1, 2, 5, and 8 formed the mutualistic sexual talk factor, whereas items 3, 4, 6, and 7 formed the individualistic sexual talk factor. All rotated factor loadings and communalities for the final two-

[1]While a 3-factor model would have excellent fit, it was not used because the parallel analysis results showed that the eigenvalue for the real data (.1138) was smaller than that from the randomly generated data set (95th percentile = .1581). Sakaluk and Short (2017) encourage researchers to retain the number of factors that have eigenvalues from their real data that are larger than those from the randomly generated data set. The rationale is that factors should be retained only if they account for more meaningful variance than random statistical noise (Sakaluk & Short, 2017). Additionally, the 3rd factor would only have 1 item in it (item 4: submissive), and a factor with fewer than 3 items is generally weak and unstable (Costello & Osborne, 2005).

factor solution are presented in Supplemental Table B.1 (see Data Analyses section below for details). Mutualistic and individualistic sexual talk were positively correlated (r = .68). The internal consistency of the sexual talk measure in the present sample was α = .80 for the mutualistic subscale and α = .82 for the individualistic subscale.

Perceived Partner Responsiveness to Sexual Talk. To assess perceived partner responsiveness (PPR) to sexual talk, we administered a well-validated measure of PPR (Laurenceau et al., 2005), adapted to the context of sexual talk. The measure consists of 4 items asking participants to rate how understanding, validating, caring, and accepting they perceived their current partner to be to their own sexual talk (e.g., *When you use sexual talk with your partner during sexual activity, how much do you feel your partner accepts you as you are?*) on a 7-point Likert scale ranging from 1 (*Not at all*) to 7 (*Very much*). Total scores could therefore range from 4 to 28, and higher scores indicated greater PPR to sexual talk.

We initially developed and included an additional 5 behaviourally-oriented PPR items but a preliminary EFA (see Supplemental Table B.2) and previous literature supported the decision to only use the 4 pre-exisiting items that were adapted to be specific to sexual talk. A second EFA found that a single-factor solution was the best fit (see Supplemental Table B.3) for this 4 item measure of PPR to sexual talk. The internal consistency in the present sample was α = .93.

Sexual Satisfaction. To assess sexual satisfaction, the Global Measure of Sexual Satisfaction Questionnaire (GMSEX; a subscale of the Interpersonal Exchange Model of Sexual Satisfaction Questionnaire; Lawrance & Byers, 1998) was used. Participants were asked to select on a 7-point bipolar scale what best describes their overall sexual relationship with their current partner using five word-pairs, such as ‘Pleasant’ to ‘Unpleasant.’ The GMSEX provides a

summed score ranging from 5 to 35 with higher scores indicating higher levels of sexual satisfaction. The GMSEX has excellent reliability and validity (Lawrance & Byers, 1998). The internal consistency in the present sample was $\alpha = .97$.

Sexual Functioning. The well-validated Female Sexual Function Index (FSFI; Rosen et al., 2000) and the Index of Erectile Function (IIEF; Rosen et al., 1997) were used to assess sexual functioning for self-identified female and male participants, respectively. Individuals self-identifying as intersex were provided with an additional question to assess which, if any, sexual functioning measure they would prefer to complete. The FSFI assesses six domains of female sexual functioning: desire, lubrication, orgasm, pain, arousal, and satisfaction. This measure consists of 19 items that participants respond to on a 5- or 6-point Likert scale. Total scores can range from 2 to 36, and higher scores indicate better sexual functioning (Rosen et al., 2000). The IIEF consists of 15 items that assess five domains of male sexual functioning: erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction. Items are rated on 5- or 6-point Likert scales and total scores can range from 5 to 75, with higher scores indicating better sexual functioning (Rosen et al., 1997). To reduce overlap with the measure of sexual satisfaction (GMSEX) the sexual satisfaction subscales were removed from both the FSFI and IIEF. With the sexual satisfaction subscales removed the internal consistency in the present sample was $\alpha = 0.94$ (FSFI) and $\alpha = 0.88$ (IIEF).

Sexual Distress. The Female Sexual Distress Scale-Revised (FSDS-R; Derogatis et al., 2008) was used to assess sexual distress in all participants as it was recently validated for men (Santos-Iglesias et al., 2018). The FSDS-R consists of 13 items (e.g., *How often do you feel stressed about sex?*) that are rated on a 5-point Likert scale from 0 (*never*) to 4 (*always*), and

total scores can range from 0 to 52, with higher scores indicating greater sexual distress. The Cronbach's alpha in the current study was .96.

Relationship Satisfaction. The relationship satisfaction subscale of the Perceived Relationship Quality Components (PRQC; Fletcher et al., 2000) was used to measure satisfaction with the overall intimate relationship. This subscale has strong psychometric properties and consists of three items that participants respond to on a 7-point Likert scale, from 1 (*not at all*) to 7 (*extremely*). Total subscale scores can range from 3 to 21, and higher scores indicate greater relationship satisfaction. Fletcher et al. (2000) state that the PRQC subscales have the advantage of being brief, reliable, valid, and sufficient when measuring relationship quality components, such as relationship satisfaction. The internal consistency in the present sample was .95.

2.3.4 Data Analyses. Online Supplemental Material (including data, associated syntax, and supplemental tables) can be found on the Open Science Framework (OSF) page: https://osf.io/tj76w/?view_only=026ca06a1a51464d927563b45180fb6c.[2] Data were analyzed using SPSS (version 24.0). Of the 303 participants in this study, minimal data were missing for each measure (< 0.6% at the item-level) and data were missing completely at random (Scheffer, 2002), as indicated by a non-significant Little's (1988) MCAR test, $\chi^2 = 835.34$, $p = .568$. Expectation maximization was therefore used to impute item-level missing data. Pearson's and point biserial correlations were conducted to examine intercorrelations among study variables, and to evaluate potential sociodemographic covariates (i.e., age, relationship duration, years of schooling, annual household income). No sociodemographic variables were correlated with outcome variables at r .30 (Supplemental Table B.4). Thus, no sociodemographic variables were included as covariates in the primary analyses (Frigon & Laurencelle, 1993).

[2] Data file is password protected and to be used for research purposes only. Please contact the corresponding author for access.

Four hierarchical moderated linear regressions were conducted; that is, separate models were conducted for sexual satisfaction, sexual functioning, sexual distress, and relationship satisfaction. Different measures were used for sexual functioning depending on self-identified sex, thus the results for self-identified female and male participants were examined separately. The one self-identified intersex participant in our final sample chose to complete the female sexual functioning measure and was therefore included in analyses with the self-identified female participants. The predictors and moderator were grand mean centrered prior to analyses. The centered scores of sexual talk (individualistic and mutualistic) and perceived partner responsiveness to sexual talk were entered in Step 1, the individualistic x perceived partner responsiveness, mutualistic x perceived partner responsiveness, and mutualistic x individualistic interactions in Step 2, and the individualistic x mutualistic x perceived partner responsiveness interaction term in Step 3. Although we did not have specific hypotheses, for comprehensiveness we included in our models the 2-way interaction between individualistic and mutualistic talk as well as the 3-way interaction between individualistic talk, mutualistic talk, and perceived partner responsiveness. None of these 2 or 3-way interactions were significant in any of the models. All condition indices were less than 30, suggesting that multicollinearity was not a concern (Hair et al., 2006).

All significant interactions were followed up with simple slopes analyses and the Johnson-Neyman (J-N) technique (Carden et al., 2017). Simple slopes analyses involve choosing values for the moderator that are +/- 1 standard deviation (*SD*), and therefore only yield information for these somewhat arbitrary points (Carden et al., 2017). When the moderator is continuous, a more nuanced approach is the J-N technique. The J-N technique solves for the values of the moderator for which the association between the predictor and the dependent

variable becomes significant—thereby adding further specificity for interpreting the results (Carden et al., 2017). We therefore tested the simple effects at one *SD* above and below the mean of the moderator as high versus low levels of PPR in the moderated regression analysis, and then the J-N technique was performed using the SPSS PROCESS version 3 macro (Hayes, 2017) to identify the regions of significance across all levels of the moderator values. Mircrosoft Office Excel Workbook CAHOST (Carden et al., 2017) was used to create the J-N plots. Finally, we tested whether gender moderated any of the observed effects using the PROCESS macro.

2.4 Results

Descriptive characteristics for the sociodemographic variables of this sample are reported in Table 2.7.1. An independent samples t-test revealed no sex or gender differences for use of mutualistic talk, but that male participants ($M = 9.85$, $SD = 4.68$) used more individualistic talk compared to female participants ($M = 8.30$, $SD = 4.30$), $t(298) = 2.97$, $p = .003$. Intercorrelations between study variables are reported in Table 2.7.2.

2.4.1 Sexual Satisfaction

As seen in Table 2.7.3, the overall model for sexual satisfaction was significant. There were no significant main effects for individualistic or mutualistic talk. However, there was a significant main effect for perceived partner responsiveness (PPR) to sexual talk; greater PPR to sexual talk was associated with greater sexual satisfaction. PPR to sexual talk did not moderate the association between mutualistic talk and sexual satisfaction, but there was a significant interaction between individualistic talk and PPR. The simple slopes analyses indicated that at lower levels of PPR (-1 *SD*), greater individualistic talk was associated with lower sexual satisfaction [$B = -0.46$, $t(302) = -3.11$, $p < .01$], whereas at higher levels of PPR (+1 *SD*) the greater individualistic talk was associated with greater sexual satisfaction [$B = 0.30$, $t(302) =$

3.27, $p < .01$]. The J-N plot for this model (Figure 2.8.1A) showed that for values of PPR lower than 22.82 or greater than 26.88, the effect of individualistic talk on sexual satisfaction was significantly different from zero. Thus, when PPR was lower than 22.82, using more individualistic talk was associated with poorer sexual satisfaction, whereas when PPR was greater than 26.88, using more individualistic talk was associated with greater sexual satisfaction. It is worth noting that 44.88% of our sample reported PPR high enough to experience a positive association between individualistic talk and sexual satisfaction, whereas only 28.38% reported PPR low enough to experience a negative association.

2.4.2 Sexual Functioning

Female participants. As seen in Table 2.7.3, the overall model for female sexual functioning was significant. For female participants greater mutualistic talk was associated with greater sexual functioning, whereas use of individualistic talk was not associated with sexual functioning. There was a significant main effect for perceived partner responsiveness (PPR) to sexual talk, such that greater PPR was associated with greater sexual functioning. PPR to sexual talk did not moderate the association between mutualistic or individualistic talk and sexual functioning for female participants.

Male participants. As seen in Table 2.7.3, the overall model for male sexual functioning was significant. There was no significant main effect for individualistic or mutualistic talk and no significant interactions between individualistic or mutualistic talk and PPR to sexual talk for male sexual functioning. However, there was a significant main effect for PPR to sexual talk, such that greater PPR to sexual talk was associated with greater sexual functioning for male participants.

2.4.3 Sexual Distress

As seen in Table 2.7.3, the overall model for sexual distress was significant. There was no main effect of individualistic talk and no significant interaction between individualistic talk and PPR for sexual distress. There was a significant main effect for PPR to sexual talk, such that greater PPR to sexual talk was associated with less sexual distress. Mutualistic talk was not associated with sexual distress; however, there was a significant interaction between mutualistic talk and PPR. The simple slopes indicated that at lower levels of PPR (-1 *SD*), greater mutualistic talk was associated with greater sexual distress [$B = 0.82$, $t(302) = 4.49$, $p < .001$], whereas at higher levels of PPR (+1 *SD*), greater mutualistic talk was associated with less sexual distress [$B = -0.57$, $t(302) = -3.07$, $p < .01$]. The J-N plot for this model (Figure 2.8.1B) showed that for values of PPR lower than 22.72 or greater than 27.42, the effect of mutualistic talk on sexual distress was significantly different from zero. Thus, when PPR was lower than 22.72 (28.38% of the sample), using more mutualistic talk was associated with more sexual distress, whereas when PPR was greater than 27.42 (38.28% of the sample), using more mutualistic talk was associated with lower sexual distress. It is worth noting that the majority of our sample (71.62%) reported PPR high enough that using more mutualistic talk was either not significantly associated with sexual distress (33.34% of the sample) or was associated with lower sexual distress (38.28% of the sample).

2.4.4 Relationship Satisfaction

As seen in Table 2.7.3, the overall model for relationship satisfaction was significant. There was no significant main effect of mutualistic talk and no significant interaction between mutualistic talk and PPR for relationship satisfaction. Reporting greater individualistic sexual talk was associated with poorer relationship satisfaction; however, there was no significant

interaction between individualistic talk and PPR. Greater PPR to sexual talk was associated with greater relationship satisfaction, regardless of the use of individualistic or mutualistic sexual talk.

2.5 Discussion

The present study examined the associations between sexual talk and sexual well-being and relationship satisfaction in individuals in committed romantic relationships, and how perceived partner responsiveness to sexual talk moderated these associations. Findings indicated that engaging in more mutualistic talk was associated with lower sexual distress and higher female sexual functioning, whereas using more individualistic talk was associated with lower relationship satisfaction. Further, perceived partner responsiveness to sexual talk moderated two of the associations such that engaging in more sexual talk was associated with greater sexual satisfaction and less sexual distress when partners were perceived as more responsive and poorer sexual satisfaction and greater sexual distress when partners were perceived as less responsive. These findings are in line with theory suggesting that perceived partner responsiveness is an important contextual variable for understanding couple interactions as they relate to sexual outcomes (e.g., Reis, 2012). Results also suggested that the role of sexual talk for sexual functioning may be different for those who identify as female and male: sexual talk focused on sharing the experience with one's partner (i.e., mutualistic talk) was associated with greater sexual functioning—but only for female participants. Finally, the findings of the current study extend knowledge about sexual talk by examining its associations with novel domains of sexual well-being that have not been examined previously, including sexual functioning and sexual distress. The inclusion of multiple domains of sexual well-being is a more holistic approach, which is in accordance with WHO definitions (2015) and recent attempts to clarify and refine the meaning of sexual well-being (Martin & Woodgate, 2017).

2.5.1 Mutualistic Sexual Talk

Consistent with our hypotheses, as well as prior research (Jonason et al., 2016), engaging in more mutualistic talk was associated with greater sexual functioning for female participants. However, this association was not moderated by perceived partner responsiveness as we expected. Engaging in more mutualistic sexual talk, such as giving instructions and feedback to a partner about one's sexual pleasure, may—via the instrumental pathway—allow a partner to better understand one's sexual preferences and respond accordingly, leading to enhanced feelings of desire and arousal, and greater orgasmic capacity.

While perceived partner responsiveness did not moderate the above association, it did moderate the associations between mutualistic talk and sexual distress. At greater levels of perceived partner responsiveness, using more mutualistic talk was associated with less sexual distress, whereas at lower levels of perceived partner responsiveness it was associated with more distress. Sexual distress refers to feelings of frustration, anxiety, and worry regarding one's sexual activity and sexual relationship (Derogatis et al., 2008; Meston & Derogatis, 2002; Stephenson & Meston, 2010a). If someone is engaging in a lot of sexual talk that is focused on sharing the experience with their partner, and they do not perceive their partner as being responsive, then this perception may exacerbate and heighten thoughts and feelings of vulnerability during sex (e.g., worries about performance, concerns about body image) or relational insecurities (e.g., attachment anxiety), resulting in greater sexual distress. If someone is engaging in a lot of sexual talk that is focused on sharing the experience with their partner, and they perceive their partner as more responsive to this talk, then this situation may bolster feelings of intimacy and direct one's attention towards positive sexual cues (e.g., own and partner pleasure) thus soothing any sexual concerns they may have and ensuring that sexual needs are

met. Negative and positive cognitive-affective appraisals about sex have been linked to more and less sexual distress, respectively, in prior research (Bois et al., 2016; Robbins & Reissing, 2018; Stephenson & Meston, 2010a). Future longitudinal research should test the possible mechanisms through which sexual talk and perceived partner responsiveness to sexual talk may contribute to lower sexual distress.

The observed association between mutualistic talk and sexual functioning for female—but not male —participants is consistent with past literature that has found gender differences in erotic plasticity (i.e., the degree to which sexual attitudes, behaviour, and desire are shaped by social and cultural factors; see Baumeister, 2000). There is evidence that those who self-identify as women have greater erotic plasticity (Baumeister, 2000), so one might expect that social factors such as sexual talk would have a larger effect on sexual functioning for women, compared to those who identify as men. This finding is also consistent with research by (Rehman et al., 2011), who found that sexual self-disclosure (a component of sexual communication) was more relevant for women's sexual functioning than men's. However, given the cross-sectional design of the current study, these results should be replicated, and directionality should be examined in future research.

Surprisingly, contrary to the results of Jonason et al. (2016), mutualistic talk was not associated with relationship satisfaction. The current results suggest that mutualistic sexual talk is more important for sexual well-being and the potential benefits do not appear to extend to broader evaluations of the overall romantic relationship when perceived partner responsiveness is taken into account.

2.5.2 Individualistic Sexual Talk

Engaging in more individualistic talk was associated with lower relationship satisfaction, but was not significantly associated with sexual satisfaction, sexual functioning, or sexual distress. The findings stand in contrast to the results from Jonason et al. (2016), who found that engaging in more individualistic talk was associated with greater sexual satisfaction and was not significantly associated with relationship satisfaction. Our sample was comprised of people currently in committed, sexually active, romantic relationships, whereas Jonason et al.'s (2016) sample also included people who were single or in more casual relationships, and who may not have been sexually active. Perhaps the self-focused nature of individualistic talk can be experienced as neglecting the partner in what is an inherently dyadic sexual experience and is therefore linked to the relationship satisfaction of people in more committed relationships. This explanation suggests that perceived partner responsiveness should play an integral role in determining the associations between individualistic talk and outcomes; the current findings support this assertion.

Indeed, at lower levels of perceived partner responsiveness, engaging in more individualistic talk was associated with lower sexual satisfaction, whereas at higher levels of perceived partner responsiveness, engaging in more individualistic talk was associated with greater sexual satisfaction. When people engage in individualistic talk and feel understood and cared for by their partner and that their partner is open to participating in their sexual desires, this might foster an interpersonal context that facilitates sexual growth and connection (e.g., broadening of sexual scripts), resulting in enhanced sexual satisfaction. A recent study demonstrated that people who reported engaging in a wider variety of sexual experiences also reported greater sexual satisfaction, compared to those that engaged in less variety (Frederick et

al., 2017). Additionally, a study examining the components of 'optimal' sexual experiences found that a strong connection with one's sexual partner (regardless of relationship duration) was a key component of a great sex life (Kleinplatz et al., 2009). It is worth nothing that while approximately 44% of our sample perceived partner responsiveness to be high enough to indicate a positive association between individualistic talk and sexual satisfaction, almost 29% reported perceived partner responsiveness low enough to be less sexually satisfied when using more (compared to less) individualistic talk. When people engage in more self-focused sexual talk, such as talking about sexual fantasies, and do not perceive their partner as responsive (e.g., they perceive their partner as ignoring or invalidating their sexual fantasies) this may prevent the couple from meeting each other's sexual needs or make them feel rejected by their partner (which is common fear when communicating sexually; Ménard & Offman, 2009; Rehman et al., 2017; Rehman et al., 2011)—possibly contributing to lower sexual satisfaction.

However, the feelings of rejection experienced when someone uses individualistic sexual talk and perceives their partner as less responsive were not relevant to perceptions of relationship satisfaction. Prior research has consistently demonstrated that people experience lower satisfaction in their relationship when they perceive their partner to be less responsive (e.g., Reis, 2012). In the present study, individualistic talk was associated with lower relationship satisfaction, regardless of the level of perceived partner responsiveness. The self-focused nature of individualistic talk may neglect the couple experience and relate to lower feelings of connection and intimacy with a partner, and thus lower relationship satisfaction.

Finally, there were no significant associations between individualistic talk and sexual distress or sexual functioning, regardless of level of perceived partner responsiveness. It appears that despite reporting lower sexual satisfaction, those engaging in more individualistic talk did

not experience greater sexual distress or poorer sexual functioning—even when partners were perceived as less responsive. This finding highlights the importance of using a more holistic approach to examining sexual well-being, as sexual talk exhibited unique associations with the different domains of sexual well-being. It is worth noting that the level of sexual functioning in our sample was relatively high and the level of sexual distress was quite low overall. It is possible that an association between individualistic talk, perceived partner responsiveness, and sexual distress might emerge for couples experiencing sexual dysfunctions. It is important to note that this result contrasts with the findings for mutualistic talk, which was linked to sexual distress and sexual functioning for male participants. Thus, individualistic sexual talk appears to be more important for the interpersonal components of sexual well-being (i.e., sexual satisfaction), rather than the physical experience of sexual function.

2.5.3 Perceived Partner Responsiveness.

Interestingly, we also found that perceived partner responsiveness to sexual talk was consistently associated with all the outcome variables in the study, even when the sexual talk itself was not directly associated with these areas of well-being. Specifically, when partners were perceived as more responsive to sexual talk, regardless of the type of sexual talk used, this responsiveness was associated with greater sexual satisfaction and sexual functioning, lower sexual distress, and greater relationship satisfaction. These results suggest that perceiving a partner to be accepting validating, understanding, and caring in response to sexual talk matters above and beyond the type of sexual talk used. While we did not observe a significant association between mutualistic talk and relationship satisfaction in the regression model, these variables were positively correlated. It is possible that the inclusion of perceived partner responsiveness in this model overpowered the effects of mutualistic talk. This result helps to

explain the discrepancy between our findings and that of Jonason et al. (2016), who did not consider perceived partner responsiveness to sexual talk. When a partner is perceived to be responsive to sexual talk, it may reflect more compatible sexual scripts and shared pleasure, decreased anxiety, and greater feelings of intimacy—which may then contribute to greater sexual and relationship well-being. Indeed, previous research has found that greater perceived partner responsiveness is related to greater feelings of intimacy (e.g., Otto et al., 2015), as well as soothing emotional and physical stress responses (e.g., Slatcher et al., 2015), which are common feelings that occur during sexual communication (e.g., Ménard & Offman, 2009). Possible mediating factors for the associations between perceived partner responsiveness to sexual talk and sexual and relationship well-being should be explored in future longitudinal research.

2.5.4 Strengths and Limitations. This study was the first to our knowledge to examine sexual talk in a sample of sexually active individuals currently in committed romantic relationships. Individuals who are in committed, sexually active, relationships are at higher risk of declines in sexual well-being and relationship satisfaction (e.g., Birditt et al., 2012; Kamp Dush et al., 2008; McNulty & Widman, 2013; Schmiedeberg & Schröder, 2016). The current findings provide information about specific factors—sexual talk and perceived partner responsiveness to sexual talk—that might help these couples maintain or enhance these areas of their relationships, although further study is required to determine causality. The present study also confirmed the factor structure of the SexTalk measure designed by Jonason et al. (2016) by conducting an EFA according to best practices (Sakaluk & Short, 2017), providing further validation of the measure. Further, assessing the moderating role of perceived partner responsiveness to sexual talk answers the call for better integration of the interpersonal context in sex research (Muise et al., 2018), and provides a more nuanced understanding of contextual

factors that may be important for sexual communication variables. Finally, from a theoretical standpoint, this study elaborated on existing models of sexual communication (i.e., the two-pathways model of sexual communication), which have primarily been studied in relation to more general sexual communication that largely occurs outside of sexual interactions.

The limitations of this study are also worth noting. First, the study sample was relatively homogeneous in terms of ethnicity, socioeconomic status, education level, and gender identity (i.e., most of our sample self-identified as cis-gender), which limits the generalizability of our findings. While it is possible that the nature of an online study led to a W.E.I.R.D. sample (i.e., Western, educated, industrialized, rich, and democratic; Henrich et al., 2010), the enhanced anonymity and ability to reach larger and more diverse samples (e.g., better representation of LGBTQ+ individuals) provided by online studies make this methodology important in sex research, especially when discussing sensitive topics such as sexual talk (Robertson et al., 2018). Indeed, approximately 11% of the current sample self-identified as non-heterosexual (i.e., asexual, bisexual, lesbian, gay, gender-fluid, pansexual). Given that population-based surveys indicate that 4.0 to 5.6% of individuals in the United States identify as LGBT (Gates, 2014), the current sample actually over-represents this group. Second, although our hypotheses and interpretation of the findings had a strong theoretical basis, the cross-sectional design did not allow us to examine the direction of the associations. For example, being more sexually satisfied may promote greater engagement in sexual talk that is focused on sharing the experience with one's partner (i.e., mutualistic talk), whereas being less sexually satisfied may encourage more self-focused sexual talk (i.e., individualistic talk), such as speaking about sexual fantasies, in an attempt to increase one's own sexual satisfaction. It will be important for future research to use both longitudinal and experimental designs to examine the temporal order of these relationships

and determine causality. Third, the current sample was relatively satisfied sexually in their relationships, with high sexual functioning and low sexual distress overall. It is possible that the results might differ for people who struggle more in these areas (e.g., individuals coping with sexual dysfunctions), especially given evidence that sexual communication tends to be poorer among those with sexual dysfunctions compared to those without (Pazmany et al., 2015).

2.5.5 Conclusions. The present study addressed an important gap in knowledge by focusing on the associations between sexual talk that occurs during sexual activity; an area of sexual communication that has largely been neglected. The current results suggest that theoretical models of sexual communication should be expanded to consider communication that occurs exclusively during sexual activity and is specifically about the sexual activity being engaged in. Future research should examine whether patterns and styles of sexual talk, as well as their implications for sexual well-being and relationship satisfaction, might differ according to these contexts. The present study suggests that mutualistic and individualistic sexual talk are differentially associated with sexual well-being and relationship satisfaction. Moreover, the results emphasized the importance of considering contextual factors, such as PPR, when examining communication during sexual activity. Specifically, PPR may be especially important when it comes to engaging in sexual talk that is focused on the self (i.e., individualistic talk), whereas engaging in sexual talk that focuses on sharing the experience with one's partner (i.e., mutualistic talk) may be beneficial for both sexual well-being and relationship satisfaction, largely regardless of how understanding, validating, or caring a partner is perceived to be in response to this talk. Future research should examine the proposed mechanisms for the associations between sexual talk and sexual well-being and relationship satisfaction (e.g., intimacy, broadening sexual scripts, soothing concerns about vulnerability during sex) and

examine sexual talk using dyadic methodology to investigate how sexual talk and perceived partner responsiveness affects a partner's sexual and relational well-being. A better understanding of how, when, and why different types of sexual talk are beneficial for people in long-term relationships may help couples maintain or even enhance their sexual well-being and relationship satisfaction over time.

2.6 Acknowledgements

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2.7 Tables

Table 2.7.1 *Descriptive Statistics for all Participant Characteristics (N = 303)*

$0-9,999			
Years of schooling (starting from first grade)	15.47 (7 – 26) years	2.47	-

[a] Response options for self-identified gender and partner's gender were: Male, Female, Trans-identify as male, Trans-identify as female, Other (specify if you wish).

[b] Of these participants that self-identified as female most reported a congruent sex (i.e., female), but one identified their sex as male and one as intersex.

[c] This individual self-identified their sex as female.

[d] One participant self-identified as Genderless but reported their sex as Male.

[e] One participant self-identified as Gender Fluid and one participant self-identified as Pansexual

[f] 'Other' group for self-identified ethnicity consisted of: Aboriginal/Native American/American Indian/Alaska Native/First Nations (n = 3), Native Hawaiian/Other Pacific Islander (n = 2), East Indian (n = 1), Biracial/Multiracial (n = 2), European-American (n =1), and one did not specify.

Table 2.7.2 *Correlations between Sexual Talk, Perceived Partner Responsiveness, and Study Outcomes*

Variable	***M (SD)***	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
Sexual Satisfaction	29.94 (6.32)	-	-	-	-	-	-	-
Sexual Functioning (Female)	24.18 (4.99)	.77***	-	-	-	-	-	-
Sexual Functioning (Male)	44.31 (6.49)	.30**	-	-	-	-	-	-
Sexual Distress	7.64 (9.90)	-.68***	-.70***	-.36***	-	-	-	-
Relationship Satisfaction	18.41 (3.44)	.65***	.47***	.36***	-.52***	-	-	-
Individualistic Talk	8.98 (4.55)	.11	.22**	.12	-.02	-.06	-	-
Mutualistic Talk	13.71 (4.02)	.33***	.39***	.22*	-.16**	.13*	.61***	-
Perceived Partner Responsiveness	24.07 (5.05)	.59***	.49***	.22*	-.44***	.49***	.26***	.47***

Note. The possible range for the perceived partner responsiveness measure is 4 to 28. *$p < .05$; **$p < .01$; ***$p < .001$

Table 2.7.3 *Results of Moderated Regression Analyses*

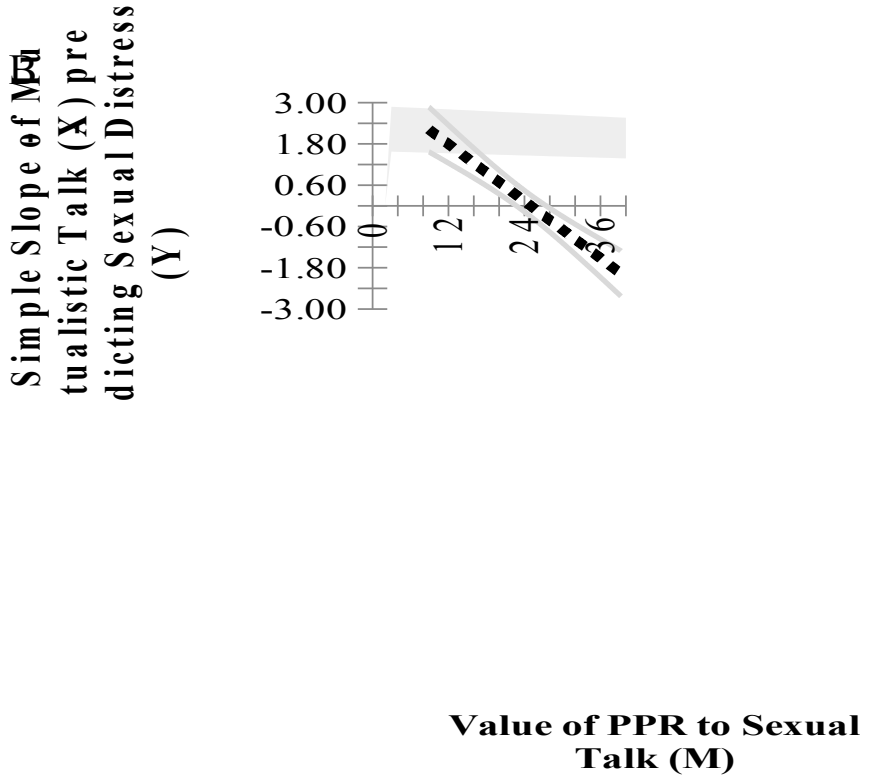
	Sexual Satisfaction	Sexual Functioning		Sexual Distress	Relationship Satisfaction
		Female	Male		
	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Step 1 (Main effects)					
Individualistic	-0.05 (.06)	0.00 (.10)	0.03(.09)	-0.02 (.07)	-0.03 (.01)*
Mutualistic	0.10 (.07)	0.24 (.10)*	0.05 (.11)	0.06 (.08)	.007 (.02)
PPR	0.45 (.06)***	0.21 (.08)**	0.46 (.10)***	-0.36 (.06)***	0.48 (.06)***
	R^2 = .24 (.87)***	R^2 = .15 (.92)***	R^2 = .19 (.90)***	R^2 = .10 (.95)***	R^2 = .22(.89)***
Step 2 (Interactions)					
PPR x Individualistic	0.19 (.09)*	0.19 (.13)	0.00 (.13)	-.12 (.09)	0.11 (.09)
PPR x Mutualistic	0.07 (.06)	0.12 (.09)	-0.16 (.09)	-0.23 (.06)***	.06 (.06)
	ΔR^2 = .06 (.84)***	ΔR^2 = .09 (.88)***	ΔR^2 = .02 (.89)	ΔR^2 = .12 (.89)***	ΔR^2 = .04 (.87)**

Note. Only main effects and interactions of interest are included in this table. B = unstandardized beta coefficient; SE = standardized error; PPR = perceived partner responsiveness to sexual talk*;* R^2 = proportion of the variance explained by the model; ΔR^2 = change in percent variance accounted for between steps 1 and 2. * $p < .05$; ** $p < .01$; *** $p < .001$

2.8 Figures

Figure 2.8.1 *The Johnson-Neyman graphs for the models showing how sexual talk predicts sexual satisfaction (A) or sexual distress (B) at each observed level of perceived partner responsiveness (PPR) to sexual talk*

A



Note. (A) The simple slope of individualistic talk predicting sexual satisfaction (y-axis) and the moderating effect of perceived partner responsiveness (PPR) to sexual talk (x-axis). At 95% confidence levels the effect of individualistic talk on sexual satisfaction is significant only when PPR to sexual talk is ≤ 22.82 or 26.88. When PPR to sexual talk is ≤ 22.82 (i.e., regression line is below the x-

axis), using more individualistic talk is associated with lower sexual satisfaction, whereas when PPR to sexual talk is 26.88 (i.e., regression line is above the x-axis), using more individualistic talk is associated with higher sexual satisfaction. (B) The simple slope of mutualistic talk predicting sexual distress (y-axis) and the moderating effect of PPR to sexual talk (x-axis). At 95% confidence levels the effect of mutualistic talk on sexual distress is significant only when perceived partner responsiveness is ≤ 22.72 or 27.42. When PPR to sexual talk is ≤ 22.72 (i.e., regression line is above the x-axis), using more mutualistic talk is associated with higher sexual distress, whereas when PPR to sexual talk is 27.42 (i.e., regression line is below the x-axis), using more mutualistic talk is associated with lower sexual distress.

2.9 References

Babin, E. A. (2012). An examination of predictors of nonverbal and verbal communication of pleasure during sex and sexual satisfaction. *Journal of Social and Personal Relationships, 30*(3), 270-292. https://doi.org/10.1177/0265407512454523

Baumeister, R. F. (2000). Gender differences in erotic plasticity: The female sex drive as socially flexible and responsive. *Psychological Bulletin, 126*, 347-374. https://doi.org/10.1037/0033-2909.126.3.347

Birditt, K. S., Hope, S., Brown, E., & Orbuch, T. (2012). Developmental trajectories of marital happiness over 16 years. *Research in Human Development, 9*, 126-144. https://doi.org/10.1080/15427609.2012.680844

Birnbaum, G. E., & Reis, H. T. (2012). When does responsiveness pique sexual interest? Attachment and sexual desire in initial acquaintanceships. *Personality and Social Psychology Bulletin, 38*, 946-958. https://doi.org/10.1177/0146167212441028

Birnbaum, G. E., Reis, H. T., Mizrahi, M., Kanat-Maymon, Y., Sass, O., & Granovski-Milner, C. (2016). Intimately connected: The importance of partner responsiveness for experiencing sexual desire. *Journal of Personality and Social Psychology, 111*, 530-546. https://doi.org/10.1037/pspi0000069

Blunt-Vinti, H., Jozkowski, K. N., & Hunt, M. (2019). Show or tell? Does verbal and/or nonverbal sexual communication matter for sexual satisfaction? *Journal of Sex & Marital Therapy, 45*(3), 206-217. https://doi.org/10.1080/0092623X.2018.1501446

Bois, K., Bergeron, S., Rosen, N., Mayrand, M. H., Brassard, A., & Sadikaj, G. (2016). Intimacy, sexual satisfaction, and sexual distress in vulvodynia couples: An observational study. *Health Psychology, 35*, 531-540. https://doi.org/10.1037/hea0000289

Brogan, S. M., Fiore, A., & Wrench, J. S. (2009). Understanding the psychometric properties of the sexual communication style scale. *Human Communication, 12*(4), 421-445. http://www.jasonswrench.com/pdf/articles/sex_comm_style.pdf

Brown, R. D., & Weigel, D. J. (2018). Exploring a contextual model of sexual self-disclosure and sexual satisfaction. *Journal of Sex Research, 55*(2), 202-213. https://doi.org/10.1080/00224499.2017.1295299

Byers, E. S. (2005). Relationship satisfaction and sexual satisfaction: A longitudinal study of individuals in long−term relationships. *Journal of Sex Research, 42*(2), 113-118. https://doi.org/10.1080/00224490509552264

Byers, E. S. (2011). Beyond the birds and the bees and was it good for you? Thirty years of research on sexual communication. *Canadian Psychology, 52*(1), 20-28. https://doi.org/10.1037/a0022048

Carden, S. W., Holtzman, N. S., & Strube, M. J. (2017). CAHOST: An excel workbook for facilitating the johnson-neyman technique for two-way interactions in multiple regression. *Frontiers in Psychology, 8*, 1-7. https://doi.org/10.3389/fpsyg.2017.01293

Chandler, J., & Shapiro, D. (2016). Conducting clinical research using crowdsourced convenience samples. *Annual Review of Clinical Psychology, 12*, 53-81. https://doi.org/10.1146/annurev-clinpsy-021815-093623

Coffelt, T. A., & Hess, J. A. (2014). Sexual disclosures: Connections to relational satisfaction and closeness. *Journal of Sex & Marital Therapy, 40*(6), 577-591. https://doi.org/10.1080/0092623X.2013.811449

Costello, A. B., & Osborne, J. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research, and Evaluation, 10*, 1-9, Article 7. https://doi.org//10.7275/jyj1-4868

Cupach, W. R., & Metts, S. (1991). Sexuality and communication in close relationships. In K. McKinney & S. Sprecher (Eds.), *Sexuality in close relationships*. Lawrence Erlbaum.

Debrot, A., Meuwly, N., Muise, A., Impett, E. A., & Schoebi, D. (2017). More than just sex: Affection mediates the association between sexual activity and well-being. *Personality and Social Psychology Bulletin, 43*, 287-299. https://doi.org/10.1177/0146167216684124

Derogatis, L., Clayton, A., Lewis-D'Agostino, D., Wunderlich, G., & Fu, Y. (2008). Validation of the female sexual distress scale-revised for assessing distress in women with hypoactive sexual desire disorder. *Journal of Sexual Medicine, 5*, 357-364. https://doi.org/10.1111/j.1743-6109.2007.00672.x

Diamond, L. M., & Huebner, D. (2012). Is good sex good for you? Rethinking sexuality and health. *Social and Personality Psychology Compass, 6*, 54-69. https://doi.org/10.1111/J.1751-9004.2011.00408.X

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Research Methods, 41*, 1149-1160.

Fletcher, G. J. O., Simpson, J. A., & Thomas, G. (2000). The measurement of perceived relationship quality components: A confirmatory factor analytic approach. *Personality and Social Psychology Bulletin, 26*, 340-354. https://doi.org/10.1177/0146167200265007

Frederick, D. A., Lever, J., Gillespie, B. J., & Garcia, J. R. (2017). What keeps passion alive? Sexual satisfaction is associated with sexual communication, mood setting, sexual

variety, oral sex, orgasm, and sex frequency in a national U.S. study. *Journal of Sex Research, 54*(2), 186-201. https://doi.org/10.1080/00224499.2015.1137854

Frigon, J.-Y., & Laurencelle, L. (1993). Analysis of covariance: A proposed algorithm. *Educational and Psychological Measurement, 53*, 1-18. https://doi.org/10.1177/0013164493053001001

Gates, G. J. (2014). *LGBT Demographics: Comparisons among population-based surveys*. https://williamsinstitute.law.ucla.edu/wp-content/uploads/lgbt-demogs-sep-2014.pdf

Gauvin, S., & Pukall, C. F. (2018). Sexual problems and sexual scripts: Overview and future directions for bisexual-identified individuals. *Sexual and Relationship Therapy, 33*(1-2), 34-44. https://doi.org/10.1080/14681994.2018.1426851

Greene, K., & Faulkner, S. L. (2005). Gender, belief in the sexual double standard, and sexual talk in heterosexual dating relationships. *Sex Roles, 53*(3-4), 239-251. https://doi.org/10.1007/s11199-005-5682-6

Hair, J. F., Black, B., Babin, B., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6 ed.). Pearson.

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences, 33*, 61-83. https://doi.org/10.1017/S0140525X0999152X

Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Med, 7*, e1000316. https://doi.org/10.1371/journal.pmed.1000316

Impett, E. A., Muise, A., & Peragine, D. (2014). Sexuality in the context of relationships. In D. L. Tolman, L. M. Diamond, J. A. Bauermeister, W. H. George, J. G. Pfaus, & L. M. Ward (Eds.), *APA handbook of sexuality and psychology* (Vol. 1, pp. 269-315). American Psychological Association.

Impett, E. A., Muise, A., & Rosen, N. O. (2015). Is it good to be giving in the bedroom? A prosocial perspective on sexual health and well-being in romantic relationships. *Current Sexual Health Reports, 7*, 180-190. https://doi.org/10.1007/s11930-015-0055-9

Jonason, P. K., Betteridge, G. L., & Kneebone, I. I. (2016). An examination of the nature of erotic talk. *Archives of Sexual Behavior, 45*(1), 21-31. https://doi.org/10.1007/s10508-015-0585-2

Kamp Dush, C. M., Taylor, M. G., & Kroeger, R. A. (2008). Marital happiness and psychological well-being across the life course. *Family Relations, 57*, 211-226. https://doi.org/10.1111/j.1741-3729.2008.00495.x

Kleinplatz, P. J., Ménard, A. D., Paquet, M.-P., Paradis, N., Campbell, M., Zuccarino, D., & Mehak, L. (2009). The components of optimal sexuality: A portrait of "great sex". *The Canadian Journal of Human Sexuality, 18*, 1-13. https://www.utpjournals.press/loi/cjhs

Klusmann, D. (2002). Sexual motivation and the duration of partnership. *Archives of Sexual Behavior, 31*(3), 275-287. https://doi.org/10.1023/A:1015205020769

Laurenceau, J. P., Barrett, L. F., & Rovine, M. J. (2005). The interpersonal process model of intimacy in marriage: A daily-diary and multilevel modeling approach. *Journal of Family Psychology, 19*(2), 314-323. https://doi.org/10.1037/0893-3200.19.2.314

Lawrance, K.-a., & Byers, E. S. (1992). Development of the interpersonal exchange model of sexual satisfaction in long-term relationships. *Canadian Journal of Human Sexuality, 1*(3), 123-128.

Lawrance, K.-a., & Byers, E. S. (1998). Interpersonal exchange model of sexual satisfaction questionnaire. In C. M. Davis, W. L. Yarber, R. Bauserman, G. Schreer, & S. L. Davis (Eds.), *Sexuality-related measures: A compendium* (2nd ed.). Sage.

Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*, 1198-1202. https://www.jstor.org/stable/2290157

Little, T. D. (2013). *Longitudinal structural equation modeling*. Guilford Press.

Liu, C. (2003). Does quality of marital sex decline with duration? *Archives of Sexual Behavior, 32*(1), 55-60. https://doi.org/10.1023/A:1021893329377

MacNeil, S., & Byers, E. S. (2005). Dyadic assessment of sexual self-disclosure and sexual satisfaction in heterosexual dating couples. *Journal of Social and Personal Relationships, 22*(2), 169-181. https://doi.org/10.1177/0265407505050942

MacNeil, S., & Byers, E. S. (2009). Role of sexual self-disclosure in the sexual satisfaction of long-term heterosexual couples. *Journal of Sex Research, 46*(1), 3-14. https://doi.org/10.1080/00224490802398399

Mark, K. P., & Jozkowski, K. N. (2013). The mediating role of sexual and nonsexual communication between relationship and sexual satisfaction in a sample of college-age heterosexual couples. *Journal of Sex & Marital Therapy, 39*, 410-427. https://doi.org/10.1080/0092623X.2011.644652

Mark, K. P., Vowels, L. M., & Murray, S. H. (2018). The impact of attachment style on sexual satisfaction and sexual desire in a sexually diverse sample. *Journal of Sex & Marital Therapy, 44*(5), 450-458. http://doi.org/10.1080/0092623X.2017.1405310

Martin, K. M., & Woodgate, R. L. (2017). Concept analysis: The holistic nature of sexual well-being. *Sexual and Relationship Therapy, 35*(1), 15-29. http://doi.org/10.1080/14681994.2017.1419567

Mason, W., & Suir, S. (2012). Conducting behavioral research on Amazon's mechanical turk. *Behavior Research Methods, 44*, 1-23. https://doi.org/10.3758/s13428-011-0124-6

McNulty, J. K., Wenner, C. A., & Fisher, T. D. (2016). Longitudinal associations among relationship satisfaction, sexual satisfaction, and frequency of sex in early marriage. *Archives of Sexual Behavior, 45*, 85-97. https://doi.org/10.1007/s10508-014-0444-6

McNulty, J. K., & Widman, L. (2013). The implications of sexual narcissism for sexual and marital satisfaction. *Archives of Sexual Behavior, 42*(6), 1021-1032. https://doi.org/10.1007/s10508-012-0041-5

Ménard, A. D., & Offman, A. (2009). The interrelationships between sexual self-esteem, sexual assertiveness and sexual satisfaction. *Canadian Journal of Human Sexuality, 18*(1-2), 35-45.

Merwin, K. E., O'Sullivan, L. F., & Rosen, N. O. (2017). We need to talk: Disclosure of sexual problems is associated with depression, sexual functioning, and relationship satisfaction in women. *Journal of Sex & Marital Therapy, 43*, 786-800. https://doi.org/10.1080/0092623X.2017.1283378

Meston, C. M., & Derogatis, L. R. (2002). Validated instruments for assessing female sexual function. *Journal of Sex & Marital Therapy, 28*, 155-164. https://doi.org/10.1080/00926230252851276

Montesi, J. L., Fauber, R. L., Gordon, E. A., & Heimberg, R. G. (2010). The specific importance of communicating about sex to couples' sexual and overall relationship satisfaction. *Journal of Social and Personal Relationships, 28*, 591-609. https://doi.org/10.1177/0265407510386833

Mortensen, K., & Hughes, T. L. (2018). Comparing Amazon's mechanical turk platform to conventional data collection methods in the health and medical research literature. *Journal of General Internal Medicine, 33*, 533-538. https://doi.org/10.1007/s11606-017-4246-0

Muise, A., & Impett, E. A. (2015). Good, giving, and game: The relationship benefits of communal sexual motivation. *Social Psychological and Personality Science, 6*, 164-172. https://doi.org/10.1177/1948550614553641

Muise, A., Maxwell, J. A., & Impett, E. A. (2018). What theories and methods from relationship research can contribute to sex research. *Journal of Sex Research, 55*, 540-562. https://doi.org/10.1080/00224499.2017.1421608

O'Connor, B. P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instruments, & Computers, 32*, 396-402. https://doi.org/10.3758/BF03200807

Otto, A. K., Laurenceau, J. P., Siegel, S. D., & Belcher, A. J. (2015). Capitalizing on everyday positive events uniquely predicts daily intimacy and well-being in couples coping with

breast cancer. *Journal of Family Psychology, 29*, 69-79. https://doi.org/10.1037/fam0000042

Pazmany, E., Bergeron, S., Verhaeghe, J., Van Oudenhove, L., & Enzlin, P. (2015). Dyadic sexual communication in pre-menopausal women with self-reported dyspareunia and their partners: Associations with sexual function, sexual distress and dyadic adjustment. *Journal of Sexual Medicine, 12*(2), 516-528. https://doi.org/10.1111/jsm.12787

Rancourt, K. M., Rosen, N. O., Bergeron, S., & Nealis, L. J. (2016). Talking about sex when sex is painful: Dyadic sexual communication is associated with women's pain, and couples' sexual and psychological outcomes in provoked vestibulodynia. *Archives of Sexual Behavior, 45*, 1933-1944. https://doi.org/10.1007/s10508-015-0670-6

Rehman, U. S., Lizdek, I., Fallis, E. E., Sutherland, S., & Goodnight, J. A. (2017). How is sexual communication different from nonsexual communication? A moment-by-moment analysis of discussions between romantic partners. *Archives of Sexual Behavior, 46*(8), 2339-2352. https://doi.org/10.1007/s10508-017-1006-5

Rehman, U. S., Rellini, A. H., & Fallis, E. (2011). The importance of sexual self-disclosure to sexual satisfaction and functioning in committed relationships. *Journal of Sexual Medicine, 8*, 3108-3115. https://doi.org/10.1111/j.1743-6109.2011.02439.x

Reis, H. T. (2012). Perceived partner responsiveness as an organizing theme for the study of relationships and well-being. In L. Campbell & T. J. Loving (Eds.), *Interdisciplinary research on close relationships: The case for integration* (pp. 27-52). American Psychological Association. https://doi.org/http://dx.doi.org/10.1037/13486-002

Robbins, A. R., & Reissing, E. D. (2018). Appearance dissatisfaction, body appreciation, and sexual health in women across adulthood. *Archives of Sexual Behavior, 47*, 703-714. https://doi.org/10.1007/s10508-017-0982-9

Robertson, R. E., Tran, F. W., Lewark, L. N., & Epstein, R. (2018). Estimates of non-heterosexual prevalence: The roles of anonymity and privacy in survey methodology. *Archives of Sexual Behavior, 47*, 1069-1084. https://doi.org/10.1007/s10508-017-1044-z

Robles, T. F., Slatcher, R. B., Trombello, J. M., & McGinn, M. M. (2014). Marital quality and health: A meta-analytic review. *Psychological Bulletin, 140*, 140-187. https://doi.org/10.1037/a0031859

Røsand, G. M., Slinning, K., Eberhard-Gran, M., Roysamb, E., & Tambs, K. (2012). The buffering effect of relationship satisfaction on emotional distress in couples. *BMC Public Health, 12*, 66. https://doi.org/10.1186/1471-2458-12-66

Rosen, N. O., Mooney, K., & Muise, A. (2017). Dyadic empathy predicts sexual and relationship well-being in couples transitioning to parenthood. *Journal of Sex & Marital Therapy, 43*, 543-559. https://doi.org/10.1080/0092623X.2016.1208698

Rosen, R., Brown, C., Heiman, J., Leiblum, S., Meston, C., Shabsigh, R., Ferguson, D., & D'Agostino, R., Jr. (2000). The female sexual function index (FSFI): A multidimensional self-report instrument for the assessment of female sexual function. *Journal of Sex & Marital Therapy, 26*, 191-208. https://doi.org/10.1080/009262300278597

Rosen, R. C., & Bachmann, G. A. (2008). Sexual well-being, happiness, and satisfaction in women: The case for a new conceptual paradigm. *Journal of Sex & Marital Therapy, 34*(4), 291-297. https://doi.org/10.1080/00926230802096234

Rosen, R. C., Heiman, J. R., Long, J. S., Fisher, W. A., & Sand, M. S. (2016). Men with sexual problems and their partners: Findings from the international survey of relationships. *Archives of Sexual Behavior, 45*(1), 159-173. https://doi.org/10.1007/s10508-015-0568-3

Rosen, R. C., Riley, A., Wagner, G., Osterloh, I. H., Kirkpatrick, J., & Mishra, A. (1997). The international index of erectile function (IIEF): A multidimensional scale for assessment of erectile dysfunction. *Urology, 49*, 822-830. https://doi.org/10.1016/S0090-4295(97)00238-0

Sakaluk, J. K., & Short, S. D. (2017). A methodological review of exploratory factor analysis in sexuality research: Used practices, best practices, and data analysis resources. *Journal of Sex Research, 54*(1), 1-9. https://doi.org/10.1080/00224499.2015.1137538

Santos-Iglesias, P., Mohamed, B., Danko, A., & Walker, L. M. (2018). Psychometric validation of the female sexual distress scale in male samples. *Archives of Sexual Behavior, 47*, 1733-1743. https://doi.org/10.1007/s10508-018-1146-2

Scheffer, J. (2002). Dealing with missing data. *Research Letters in the Information and Mathematical Sciences, 3*, 153-160. http://hdl.handle.net/10179/4355

Schmiedeberg, C., & Schröder, J. (2016). Does sexual satisfaction change with relationship duration. *Archives of Sexual Behavior, 45*(1), 99-107. https://doi.org/10.1007/s10508-015-0587-0

Slatcher, R. B., Selcuk, E., & Ong, A. D. (2015). Perceived partner responsiveness predicts diurnal cortisol profiles 10 years later. *Psychological Science, 26*, 972-982. https://doi.org/10.1177/0956797615575022

Stephenson, K. R., & Meston, C. M. (2010). Differentiating components of sexual well-being in women: Are sexual satisfaction and sexual distress independent constructs? *Journal of Sexual Medicine, 7*(7), 2458-2468. https://doi.org/10.1111/j.1743-6109.2010.01836.x

Stephenson, K. R., & Meston, C. M. (2015). Why is impaired sexual function distressing to women? The primacy of pleasure in female sexual dysfunction. *Journal of Sexual Medicine, 12*, 728-737. https://doi.org/10.1111/jsm.12804

Thomas, K. A., & Clifford, S. (2017). Validity and mechanical turk: An assessment of exclusion methods and interactive experiments. *Computers in Human Behavior, 77*, 184-197. https://doi.org/10.1016/j.chb.2017.08.038

Vannier, S. A., & O'Sullivan, L. F. (2011). Communicating interest in sex: Verbal and nonverbal initiation of sexual activity in young adults' romantic dating relationships. *Archives of Sexual Behavior, 40*, 961-969. https://doi.org/10.1007/s10508-010-9663-7

World Health Organization. (2015). *Sexual health, human rights and the law*. www.who.int

2.10 Transition to Study 2

In Study 1, I validated a measure of sexual talk (created by Jonason et al., 2016) using a sample of currently sexually active individuals in long-term relationships. Findings from an exploratory factor analysis (EFA) indicated that the 8-item SexTalk scale was composed of two factors: individualistic sexual talk (i.e., statements which are sexually dominant, statements which are sexually submissive, messages of sexual 'ownership', and speaking fantasies) and mutualistic sexual talk (i.e., short exclamations of excitement or pleasure, positive feedback or compliments, instructive statements, and messages that strengthen the intimate/emotional bond with your partner). The two factors were significantly correlated with each other and the EFA replicated the factor structure found by Jonason et al. (2016).

Additionally, in Study 1, I adapted a well-validated measure of PPR (Laurenceau et al., 2005) to the context of sexual talk, and then validated the measure. The constructed measure included four items asking participants to rate how understanding, validating, caring, and accepting they perceived their current partner to be to the participant's own sexual talk. Initially, the PPR to sexual talk also included five behaviourally-oriented items (e.g., *When you use sexual talk with your partner, how much does you partner act on the instructive statements or feedback that you provide [e.g., "Go down on me", "That feels so good, keep going"]?*) that I developed. However, the results of an EFA and evidence from previous literature supported my decision to remove the five behaviourally-oriented items and only use the four pre-existing PPR items which were adapted to be specific to sexual talk. A second EFA using the four adapted items was then conducted to ensure that the items loaded well together onto a single factor like the original PPR measure (Laurenceau et al., 2005). Findings from the second EFA supported a single-factor structure.

The results of Study 1 demonstrated that when a partner was perceived to be more responsive to sexual talk, using more mutualistic talk was associated with lower sexual distress and using more individualistic talk was associated with greater sexual satisfaction. In contrast, when a partner was perceived to be less responsive to sexual talk, using more mutualistic talk was associated with greater sexual distress and lower sexual satisfaction. Further, Study 1 highlighted the potential importance of gender/sex[0] in the associations between sexual talk and sexual functioning, showing that using more mutualistic talk was associated with greater sexual functioning for women, but not men. (Of note, gender/sex differences were not examined for the other outcome variables in Study 1.) Additionally, a secondary analysis of the data from Study 1 (not included in Chapter 2) revealed a gender/sex difference in the use of sexual talk. Specifically, an independent samples t-test found that men (M = 9.78, SD = 4.68) used more individualistic talk than women [M = 8.30, SD = 4.28; t(300) = 2.86, p = .005] and that there were no gender/sex differences for mutualistic talk [men: M = 14.09, SD = 3.87; women: M = 13.37, SD = 4.10; t(300) = 1.54, p = .124; see Supplementary Syntax C.1 for syntax). Thus, the only research with a sample of individuals in long-term relationships (secondary analyses of Study 1) indicates that there may be gender/sex differences in the use of individualistic but not mutualistic sexual talk.

Sexual talk occurs in an inherently dyadic context and both theoretical frameworks (e.g., interdependence theory; Arriaga, 2013) and empirical research (e.g., Blunt-Vinti et al., 2019; Coffelt & Hess, 2014; Rehman et al., 2011) suggest that an individual's sexual talk might influence not only their own—but also their partner's—sexual well-being. Further, sexual script

[0] My understanding of gender/sex—and consequently my measurement, analyses, and language regarding gender/sex—evolved over the course of my dissertation. This can be been seen in the different measurement approaches regarding gender/sex in Study 1 and those utilized in Studies 2 and 3, as well as the adoption of the term gender/sex in Studies 2 and 3 (but not in Study 1).

theory (Wiederman, 2005) and erotic plasticity research (Baumeister, 2000), as well as the initial gender/sex difference found for sexual functioning in Study 1 and secondary analysis of Study 1 data, suggest it is imperative for future research to examine how a person's own gender/sex, their partner's gender/sex, and the interaction between the two (i.e., same- vs. mixed-gender/sex dyads) may be linked to the use of sexual talk. If the two types of sexual talk are differentially associated with sexual and relationship well-being, it is important to know the characteristics of those more or less likely to use each type of talk (e.g., gender/sex) as this may have important implications for sexual and relational outcomes in long-term couples. The objective of Study 2 therefore was to examine gender/sex and dyad type differences in the use of mutualistic and individualistic talk both in general retrospectively and over a daily-diary period using dyadic data. A secondary objective of Study 2 was to better understand how sexual and gender/sex diverse couples, who have thus far been excluded from the theoretical and empirical research on this topic, use the different types of sexual talk as this may provide valuable knowledge about how to promote sexual well-being for *all* couples in long-term relationships.

2.10.1 References

Arriaga, X. B. (2013). An interdependence theory analysis of close relaitonships. In J. A. Simpson & L. Campbell (Eds.), *Oxford library of psychology. The Oxford handhook of close relationships* (pp. 39-65). Oxford Univeristy Press.

Baumeister, R. F. (2000). Gender differences in erotic plasticity: The female sex drive as socially flexible and responsive. *Psychological Bulletin, 126*, 347-374. https://doi.org/10.1037/0033-2909.126.3.347

Blunt-Vinti, H., Jozkowski, K. N., & Hunt, M. (2019). Show or tell? Does verbal and/or nonverbal sexual communication matter for sexual satisfaction? *Journal of Sex & Marital Therapy, 45*(3), 206-217. https://doi.org/10.1080/0092623X.2018.1501446

Coffelt, T. A., & Hess, J. A. (2014). Sexual disclosures: Connections to relational satisfaction and closeness. *Journal of Sex & Marital Therapy, 40*(6), 577-591. https://doi.org/10.1080/0092623X.2013.811449

Jonason, P. K., Betteridge, G. L., & Kneebone, I. I. (2016). An examination of the nature of erotic talk. *Archives of Sexual Behavior, 45*(1), 21-31. https://doi.org/10.1007/s10508-015-0585-2

Laurenceau, J. P., Barrett, L. F., & Rovine, M. J. (2005). The interpersonal process model of intimacy in marriage: A daily-diary and multilevel modeling approach. *Journal of Family Psychology, 19*(2), 314-323. https://doi.org/10.1037/0893-3200.19.2.314

Rehman, U. S., Rellini, A. H., & Fallis, E. (2011). The importance of sexual self-disclosure to sexual satisfaction and functioning in committed relationships. *Journal of Sexual Medicine, 8*, 3108-3115. https://doi.org/10.1111/j.1743-6109.2011.02439.x

Wiederman, M. W. (2005). The gendered nature of sexual scripts. *Family Journal: Counseling and Therapy for Couples and Families, 13*(4), 496-502. https://doi.org/10.1177/1066480705278729

CHAPTER 3: FEW DIFFERENCES IN SEXUAL TALK BY GENDER/SEX AND DYAD TYPE: A RETROSPECTIVE AND DAILY DIARY STUDY WITH COUPLES

The manuscript prepared for this study is presented below. Readers are advised that Kathleen Merwin, under the supervision of Dr. Natalie Rosen, was responsible for developing the research questions and hypotheses, recruiting study participants, collecting data (telephone calls to screen for eligibility, describe the study protocol, and obtain verbal consent; weekly reminder calls during the daily diary portion of the study), preparing the datasets for analyses, conducting data analyses, and interpreting the study findings. Kathleen wrote the initial draft of the manuscript and received and incorporated feedback from her co-authors. The manuscript was submitted for peer-review on March 22, 2021 and received a revise and resubmit request on June 8, 2021. The manuscript underwent 1 round of revisions, which Kathleen led the response to, and was resubmitted for peer-review on July 14, 2021 and a provisional acceptance (with minor revision) was received on August 28, 2021.The current full reference for this manuscript is:

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3.1 Abstract

Sexual talk is a type of verbal communication that occurs exclusively *during* sexual activity and that is specific to the sexual activity itself. Previous research has identified two types of sexual talk: individualistic (i.e., self-focused) and mutualistic (i.e., sharing/partner-focused), which have generally been linked to greater sexual and relationship well-being. Whether sexual talk use varies by gender/sex (i.e., men, women, gender/sex diverse individuals [GSD]) or dyad type (i.e., same- vs. mixed-gender/sex) has not been examined. Given initial evidence that the types of sexual talk may contribute differently to sexual and relationship well-being, it is important to identify factors (e.g., gender/sex) that may be associated with the amount of sexual talk used. We examined differences by gender/sex and dyad type in the average sexual talk use among long-term couples ($N = 229$; 69 same-gender/sex) using retrospective cross-sectional dyadic data. We also examined these differences in the same sample ($N = 217$) using a 35-day dyadic daily diary study. Retrospectively, but not daily, women reported using more mutualistic talk than men, especially when partnered with a woman. There were no gender/sex or dyad type differences in use of individualistic talk retrospectively or daily. Exploratory analyses with the GSD couples suggested that there may be gender/sex and dyad type differences retrospectively and daily, for individualistic but not mutualistic talk; however, these analyses must be interpreted with caution due to the small subsample size of GSD couples. Findings suggest that people in long-term relationships generally use sexual talk with similar frequency, regardless of gender/sex or dyad type.

Keywords: sexual talk; sexual communication; couples; gender/sex differences; gender/sex diverse

3.2 Introduction

Sexual communication, which includes verbal and non-verbal interactions concerning sexual matters, such as sharing sexual likes/dislikes or facial expressions that convey pleasure, is important in romantic relationships (e.g., Byers & Demmons, 1999; MacNeil & Byers, 2009). Through sexual communication, couples are able to negotiate important aspects of their sexual relationship (e.g., sexual frequency, consent, safer sex practices) and to establish mutually satisfying sexual scripts (i.e., a shared set of expectations about their sexual relationship; Gauvin & Pukall, 2018). Both individual and dyadic cross-sectional studies have found that community and clinical couples alike report greater sexual and relationship satisfaction when they engage in more open verbal sexual communication (Coffelt & Hess, 2014; Greene & Faulkner, 2005; Pazmany et al., 2015).

Most prior research has focused on sexual communication that occurs outside of sexual activity, with limited attention to sexual talk— i.e., verbal sexual communication that occurs exclusively *during* sexual activity and that is specific to the sexual activity itself (Jonason et al., 2016; Merwin & Rosen, 2020). Yet, sexual talk is common and thought to influence how satisfied each member is with that sexual encounter or with their relationship in general (e.g., Jonason et al., 2016; Merwin & Rosen, 2020), making it an important and distinct component of sexual scripts. Based on sexual script theory (Simon & Gagnon, 1986, 2003; Wiederman, 2005), sexual talk can be viewed as a sexual behavior that is likely to vary depending on gender and sexual orientation, or dyad type. Yet, there are few studies examining sexual talk in romantic relationships, particularly the role of gender/sex and dyad type therein.

Sexual script theory suggests that there are differences in the ways men and women think about and approach sexuality, based on the different societal and cultural messages they have

received (Simon & Gagnon, 1986, 2003; Wiederman, 2005). The traditional sexual script (TSS) is highly gendered and rigid; it positions men as the initiators who focus on their own sexual pleasure, and women as the gatekeepers who focus on emotional intimacy above sexual pleasure (Gagnon, 1990; Masters et al., 2013). While there is some evidence that TSS adherence has decreased over time (e.g., Eaton & Rose, 2011), recent studies have found it is still the prevailing cultural sexual script in North America (e.g., Klein et al., 2019; Masters et al., 2013). Sexual script theory would suggest that the type and amount of sexual communication will differ between men and women. For example, women may be more likely to engage in sexual communication that focuses on increasing intimacy in the relationship, whereas men may be more likely to engage in sexual communication that focuses on increasing sexual pleasure; indeed, there is some empirical evidence to support this assertion (e.g., MacNeil & Byers, 2005). The TSS also tends to be hetero- and cis-normative and thus may be less applicable to those in same-gender/sex relationships and those who identify as gender/sex diverse (GSD). Accordingly, these individuals may be compelled to develop their own alternative sexual scripts that rely less on gender/sex and are more flexible, including with respect to sexual communication (Gabb, 2019; Gauvin & Pukall, 2018). There are no prior studies examining how sexual talk might differ depending on gender/sex or dyad type, nor have any utilized a rigorous multi-method study design necessary to do so. The present study focuses on gender/sex and dyad type differences in sexual talk among same- and mixed-gender/sex couples at both a retrospective and daily level.

Considering that sex and gender are neither dichotomous nor independent of each other, and that their specific impacts on sexual behavior, attitudes, and emotions are rarely separable, we adopted the recently recommended term *gender/sex* within this paper. Gender/sex is an umbrella term that encompasses both sex and gender, and is appropriate for use in contexts in

which gender and sex cannot be easily or at all disentangled (for a review of this topic, see: van Anders, 2015).

3.2.1 Gender/Sex, Dyad Type, and Sexual Communication

Several studies that have explored gender/sex differences in general sexual communication largely support the idea that both the type and amount of sexual communication differ between men and women (e.g., Jozkowski & Peterson, 2013; Willis et al., 2019; Willis & Jozkowski, 2018). Specifically, there is evidence that women communicate more about sexual topics than men (Byers & Demmons, 1999; Greene & Faulkner, 2005), although women also report greater difficulty communicating about some sexual topics (e.g., verbal communication about consent) and are less likely to believe that their communication will lead to concrete changes (e.g., different sexual behaviors; Greene & Faulkner, 2005; Willis et al., 2019). However, in a sample of mixed-gender/sex couples in long-term relationships, MacNeil and Byers (2009) found that men and women did not differ in the extent to which they shared sexual preferences with their partner.

Sexual communication research has largely excluded people in same-gender/sex relationships, as well as individuals who identify as GSD (for a review see Blair & Goldberg, 2016). In a mixed-methods study with LGBTQ-identified (lesbian, gay, bisexual, transgender, and queer) individuals in relationships, Rubinsky and Hosek (2020) found no gender/sex differences in sharing sexual preferences. The only study to our knowledge which examined dyad type (i.e., same- vs. mixed-gender/sex) differences in sexual communication also found no differences (Holmberg & Blair, 2009). There is, however, some qualitative evidence of differences between GSD and non-GSD individuals in the type and amount of sexual communication used (Kosenko, 2010, 2011; Rubinsky & Hosek, 2020). For example, one study

found that GSD individuals reported modifying either the type or amount of sexual communication they used to avoid feelings of gender dysphoria (e.g., when uncomfortable talking about specific body parts; Rubinsky & Hosek, 2020). Similarly, Kosenko (2010, 2011) reported that the unique challenges in sexual communication that GSD individuals experience may make sexual communication both more difficult and more dangerous (e.g., lack of language to talk about bodies that is not medicalized or vulgar, fear of bringing a partner's attention to genitalia); this may lead GSD individuals to use less of certain types of sexual talk, or even less sexual talk overall, compared to men and women.

Overall, there are mixed findings for gender/sex and dyad type differences in both the frequency and type of sexual communication. However, the existing literature has largely been limited in terms of study design (e.g., single-occasion, retrospective, intra-individual rather than dyadic) and sample (e.g., young, cis gender, heterosexual, mixed-gender/sex couples, no GSD participants). Additionally, only one study has used a daily diary methodology (Vannier & O'Sullivan, 2011) meaning that findings to date are limited by the accuracy of participants' retrospective reporting. Daily diary methodology reduces recall biases (Graham et al., 2003) and may better reflect daily variability in sexual communication. Further, using methodological triangulation (e.g., utilizing a combination of retrospective and daily diary methods) allows increased confidence in the robustness of the results if the results replicate across methods (Mertens & Hesse-Biber, 2012; Thurmond, 2001). Addressing these gaps in the sexual communication literature may inform research-based interventions aimed at helping different types of couples (e.g., older, same-gender/sex, GSD) maintain or enhance their sexual and relationship well-being.

3.2.2 Sexual Talk

Considering the importance of sexual communication for couples' sexual and relationship well-being, it is striking that so few studies have examined sexual talk—a type of sexual communication that occurs exclusively *during* sexual activity and that is specific to the sexual activity itself (Babin, 2012; Blunt-Vinti et al., 2019; Brogan et al., 2009; Jonason et al., 2016; Merwin & Rosen, 2020). In a cross-sectional study with individuals, Blunt-Vinti et al. (2019) found that—consistent with sexual script theory—women reported higher levels of nonverbal communication during sex than men, but—in contrast to what might be expected based on sexual script theory—found no gender/sex differences for verbal communication during sex. However, Blunt-Vinti et al. (2019) only examined the communication during sex that was verbal or non-verbal and did not examine the *content* of the verbal sexual communication.

In the first study to examine the content of sexual talk, Jonason et al. (2016) used a mixed-methods design to identify two types of sexual talk: *individualistic* talk, which consists of statements of dominance (e.g., "who's my sex toy?"), submission (e.g., "I'm all yours"), sexual ownership (e.g., "whose pussy/cock is this?"), and talking about sexual fantasies (e.g., "I'm imagining people are watching us fuck"); and *mutualistic* talk, which includes short exclamations of excitement/pleasure (e.g., "yes/yeah!"), instructional statements (e.g., "go harder/faster/slower"), positive feedback/compliments (e.g., "you taste so good"), and statements of intimacy/bonding (e.g., "I feel so close to you"). The authors found that using more mutualistic talk (theorized to be focused on sharing the sexual experience with one's partner) was associated with greater sexual and relationship satisfaction, whereas using more individualistic talk (theorized to be focused on one's own sexual pleasure) was associated with greater sexual—but not relationship—satisfaction (Jonason et al., 2016). In a cross-sectional

study among individuals in committed relationships, Merwin and Rosen (2020; see Chapter 2) found that when women—but not men—engaged in more mutualistic talk, they reported higher sexual functioning, and that both men and women reported lower relationship satisfaction when they reported engaging in more individualistic talk. These results suggest that the two types of sexual talk contribute differently to sexual and relationship well-being, although directionality and causality have yet to be confirmed. Understanding factors (such as gender/sex and dyad type) that may influence the type and amount of sexual talk used is important for informing future research examining the effects of sexual talk on sexual and relational outcomes, as well as potential future interventions aimed to improve sexual and relationship well-being, such as cognitive-behavioral interventions that target increasing sexual talk.

Based on sexual script theory (Simon & Gagnon, 1986, 2003), one might expect men to use more individualistic talk, which focuses on a person's own sexual pleasure, and women to use more mutualistic talk, which focuses on intimacy and sharing the experience with one's partner, since these are more consistent with their gendered roles and beliefs in the TSS. Indeed, Jonason et al. (2016) found that women reported using a sub-type of mutualistic talk (i.e., statements of bonding/intimacy) more than men. Further, the authors found no gender/sex differences in the overall use of mutualistic and individualistic talk; however, their sample included single individuals and it is possible that sexual talk usage may be different within long-term relationships as partners develop a couple-level sexual script. Merwin and Rosen (2020) did not examine gender/sex differences in the use of sexual talk for a sample of people in long-term relationships; however, a secondary analysis of their publicly archived data (Merwin & Rosen, 2019) revealed that men used more individualistic talk than women and that there were no gender/sex differences for mutualistic talk (see Supplementary Syntax C.1 of current study for

syntax of these analyses). Thus, while empirical findings are mixed, the only research with a sample of individuals in long-term relationships indicates that there may be gender/sex differences in the use of individualistic but not mutualistic sexual talk. Finally, while the sexual talk literature has not included GSD individuals or examined whether dyad type differences exist, individuals in same-gender/sex relationships or those identifying as GSD may—in lieu of the TSS—may develop their own script, resulting in different uses of sexual talk compared to those in mixed-gender/sex relationships and those who do not identify as GSD.

3.2.4 Current Study

The objective of this two-part study was to examine whether there are gender/sex or dyad type (i.e., same- vs. mixed-gender/sex) differences in the use of mutualistic and individualistic sexual talk among a sexual and gender/sex diverse sample of community couples. We pursued this objective with the same sample of participants but utilizing two datasets using distinct methodologies. First, average use of sexual talk was examined using dyadic cross-sectional data (i.e., when recalling general use of sexual talk in the relationship, retrospectively). Next, average *daily* use of sexual talk was examined (i.e., use of sexual talk on days of sexual activity) using data from a 35-day dyadic daily diary study. Based on prior research and sexual script theory, we hypothesized that (1) men would report using more individualistic talk than women, both retrospectively and at an average daily level; and (2) there would be no gender/sex differences for mutualistic talk in general or at a daily level. There is no existing research on sexual talk with GSD individuals, and as such we had no specific hypotheses regarding gender/sex differences between GSD individuals and men or women; thus, these analyses were exploratory. Additionally, prior research has not examined the role of gender/sex in sexual talk in a dyadic context or taken dyad type into account, so we did not have any specific hypotheses about how a

partner's gender/sex or couple's dyad type would be associated with an individual's use of mutualistic or individualistic sexual talk in general or at a daily level. The largely descriptive information provided in the current study regarding *who* uses sexual talk may inform future sexual talk research, as well as provide valuable information about whether sexual script theory (Simon & Gagnon, 1986, 2003) is a relevant theoretical framework for sexual talk. For instance, if no gender/sex or dyad type differences are observed it may suggest that both types of sexual talk are used similarly among people of all genders/sexes. In contrast, if gender/sex or dyad type differences are observed, this would indicate that it is important to account for differences in gender/sex when considering how sexual talk functions in relationships.

3.3 Retrospective Study

3.3.1 Method

The present study was part of a larger, multi-site, longitudinal research project of factors associated with the sexual well-being of couples in long-term relationships; three previous papers have been published utilizing this dataset. Two studies examined pornography use and sexual and relationship outcomes (Vaillancourt-Morel et al., 2021; Vaillancourt-Morel et al., 2020) and one examined sexual desire discrepancies and sexual distress (Jodouin et al., 2021). The present study utilizes data from the baseline (retrospective survey) and daily diary portion of this larger project.

3.3.1.1 Participants

Recruitment occurred from April 2017 to June 2018. Couples were recruited from across Canada and the United States using print and online advertisements, by contacting past participants of other studies in the two laboratories associated with this project, and via word of mouth. To ensure sufficient diversity in the sample in terms of gender/sex and dyad type,

recruitment also specifically targeted the LGBTQ+ community (e.g., posting on LGBTQ+ Facebook groups, poster advertisements at local LGBTQ+ businesses). Couples ($N = 352$) were screened via telephone to confirm eligibility. The inclusion criteria were as follows: (1) both members 18 years of age or older; (2) in a committed romantic relationship and living together for at least 1 year; (3) sexually active with each other at least once a month over the past three months; (4) fluent in English and/or French; (5) currently residing in Canada or the United States. Exclusion criteria included: (1) presence of a self-reported major medical and/or psychiatric illness that significantly interfered with sexual activity or functioning and (2) current pregnancy or breastfeeding. Participants were not required to be in a monogamous relationship but were asked to complete the study measures based on their relationship with the partner who was also participating in the study.

Of the 352 couples screened for eligibility, 48 (13.6%) were deemed ineligible for the following reasons: 12 reported the presence of a major medical and/or psychiatric illness that significantly interfered with sexual activity or functioning, 17 reported current pregnancy or breastfeeding, 18 did not meet the relationship and/or sexual activity criteria, and one did not reside in North America. Of the 304 eligible couples, 23 (7.6%) declined participation after eligibility screening and 16 (5.3%) agreed to participate but did not complete the consent form or survey (no reason provided). A total of 238 couples were enrolled in the study and nine (3.8%) were subsequently withdrawn for the following reasons: one or both members of the couple failed at least two of the three attention checks embedded within the survey ($n = 5$), one member of the couple did not complete the survey ($n = 3$), and the couple dropped out ($n = 1$).

The final sample included 229 couples. An a priori power analysis using effect sizes from prior studies of sexual talk (Jonason et al., 2016; Merwin & Rosen, 2020), an alpha of .05, and

accounting for a 20% attrition rate at the end of the larger longitudinal study, indicated that 198 couples were sufficient to achieve a power of .80 for both actor and partner effects (Ackerman & Kenny, 2016).

The final sample consisted of 160 (69.9%) mixed-gender/sex couples (138 women coupled with men, nine men coupled with GSD partners, and 13 women coupled with GSD partners) and 69 (30.1%) same-gender/sex couples (20 men coupled with men, 46 women coupled with women, and three GSD coupled with GSD). This sample included 243 women (53.1%), 187 men (40.8 %), and 28 GSD individuals (6.1%). The 28 GSD participants included individuals who self-identified as the following: agender (n = 10), genderfluid and/or gender queer (n = 7), non-binary (n = 6), androgyne (n = 1), butch (n = 1), non-binary with a transmasculine history (n = 1), transmasculine non-binary (n = 1), and transmasculine gender queer (n = 1).

Approximately half of the sample identified as heterosexual (n = 251; 54.8%), while the other half identified with sexually diverse identities (n = 207, 45.2%): 18.6% (n = 85) identified as gay/lesbian, 10.7% (n = 49) as bisexual, 9.2% (n = 42) as queer, 4.1% (n = 19) as pansexual, 0.9% (n = 4) as uncertain or confused, 0.2% (n = 1) as asexual, and 1.5% (n = 7) as 'other.'[0] Participants ranged in age from 18 to 70 years (M = 30.40, SD = 8.42) and on average, participants reported 16.64 years of education (SD = 2.92). Couples reported being in their current relationship from 1 to 38 years (M = 5.98, SD = 5.10) and most described their current relationship status as cohabiting without being married (39.9%; n = 91) or cohabiting and

[0] Participants who did not identify with any of the provided sexual orientation labels were able to select 'Other' and provide a written response with their sexual orientation. These responses included: mostly straight (n = 1), homoromantic demisexual (n = 1), homoflexible (n = 1), dyke (n = 2), demisexual (n = 1), and bisexual but designation is irrelevant given the length of the marriage (n = 1).

common-law (33.3%; *n* = 76), and 26.8% of couples (*n* = 61) were married. Additional demographic information for the sample can be found in Table 3.8.1.

3.3.1.2 Procedure

Couples participated in a structured telephone interview with a research assistant to determine eligibility. Eligible participants were emailed a link to complete an online survey through Qualtrics Research Suite, a secure online survey program. The links expired after 4 weeks. Participants provided their informed consent online and then proceeded to complete online questionnaires of the study measures independently from one another. The online survey consisted of a demographic questionnaire and a standardized measure of sexual talk, as well as additional measures that are not within the scope of this paper. Following recommendations for enhancing the validity of online data collection, three attention-check questions were embedded within study measures to verify that participant's attention was engaged during the study (Thomas & Clifford, 2017). Participants were sent emails reminders through Qualtrics at 1 and 2 weeks if they had not completed the survey. Each participant received a $10 (CAD) Amazon gift card to compensate them for their time. The study was approved by the institutional research ethics boards of both study sites.

3.3.1.3 Measures

Demographics

Both members of the couple completed questions about their age, sexual orientation, level of education, income, number of children, cultural identity, relationship status, and relationship length.

Gender/Sex

Gender identity was assessed with one question (*What is the gender identity with which you most identify?*) with the following response options: man, woman, trans-identify as man, trans-identify as woman, agender, and an 'other' option that prompted participants to specify their gender identity in an open textbox. Participants were also asked to self-report their biological sex with the following response options: male, female, and intersex. These two questions are similar to the two-step method for assessing gender/sex outlined in Bauer et al. (2017; see also The GenIUSS Group, 2014). The question about gender identity was added to the survey after data had already been collected for 64 individuals. To avoid excluding these participants (Streiner, 2002), we used their responses from the same item at the 6-month timepoint of the larger longitudinal study.

Participants were assigned to one of three gender/sex categories (i.e., woman, man, GSD) based on their self-reported responses to the questions about sex and gender at baseline. Cis and trans women were grouped together, cis and trans men were grouped together, and individuals that self-reported other gender identities (e.g., agender, non-binary, genderqueer) were grouped together in a third category: gender/sex diverse individuals (GSD). The decision to group trans men and women with cis men and women (respectively), rather than with the GSD individuals, was based on existing empirical and theoretical research suggesting that, for example, there are more differences between trans women and cis men (who share a birth-assigned sex) and more similarities between cis and trans women (e.g., for a review see Shibley Hyde et al., 2019; see also Jacobson & Joel, 2019; Tate et al., 2014).

Sexual Talk

The sexual talk during sexual activity measure (SexTalk) assessed participant's general use of individualistic and mutualistic talk during sexual activity in their current relationship

(Jonason et al., 2016). For the purposes of the current study, participants were asked to report retrospectively on their general use of sexual talk in their current relationship (no time-frame was specified). The measure contains eight items, which assess how frequently a person uses two types of sexual talk: the individualistic sexual talk subscale consists of four items (i.e., sexually dominant statements, sexually submissive statements, messages of 'sexual ownership', and talking about sexual fantasies) and the mutualistic sexual talk subscale consists of four items (i.e., short exclamations of excitement or pleasure, positive feedback or compliments, instructive statements, and messages that strengthen the intimate/emotional bond with one's partner). Participants report on the frequency with which they engage in each type of sexual talk with their current romantic partner during sexual activity on a 5-point Likert scale ranging from 1 (*Never*) to 5 (*All the time*). Each subscale score can range from 4 to 20, with higher scores indicating more frequent use of sexual talk.

Two previous exploratory factor analyses (EFAs) have supported the two factor structure of the measure (Jonason et al., 2016; Merwin & Rosen, 2020). However, since the SexTalk measure is still novel and the French language version has not previously been validated, we conducted an EFA for the French-speaking participants according to the best practices recommended in Sakaluk and Short (2017) and a confirmatory factor analysis (CFA) for the entire sample using best practices (e.g., Jackson et al., 2009; Worthington & Whittaker, 2006). The EFA for French-speaking couples and the CFA for all couples supported the two-factor structure of the SexTalk measure. A full description of the method and results of the EFA and the CFA can be found in the supplemental materials on the OSF page (Supplementary Methods C.2 and C.3). Mutualistic and individualistic sexual talk were positively correlated ($r = 0.47$, $p < .001$).

Reliability of the SexTalk measure was evaluated using the greatest lower bound (glb; Sijtsma, 2009) approach instead of Cronbach's alpha, because the measure violated the first assumption of Cronbach's alpha (i.e., that the scale adheres to tau equivalence; McNeish, 2018). The glb is an estimate of the lowest possible value that a scale's reliability can have and the 'true' scale reliability is by definition in the interval [glb, 1] (Sijtsma, 2009). There was good internal consistency for both of the subscales of the SexTalk measure for women (mutualistic glb = 0.73; individualistic glb = 0.73), men (mutualistic glb = 0.75; individualistic glb = 0.79), and GSD individuals (mutualistic glb = 0.78; individualistic glb = 0.77).

3.3.1.4 Data Analyses

Online supplemental material (including data, associated syntax, supplemental materials, and study measures) can be found on the OSF page: https://osf.io/dcnvw/?view_only=447b0753ddbc4809903f73840ecc0f88.[0] Data were analysed using SPSS (version 25.0; for the primary and exploratory study analyses, and the EFA) and MPlus (8.0; Muthén & Muthén, 2017; for the CFA). Internal consistency was calculated in R (version 3.6.2; RCoreTeam, 2019) using the glb.algebraic function from the 'psych' package (Revelle, 2020). Of the 458 participants (229 couples) in this study, minimal data were missing for the sexual talk measure (< 3% at an item-level) and assumptions for expectation maximization imputation were met. Expectation maximization was therefore used to impute item-level missing data. Spearman's and point-biserial correlations were conducted to examine intercorrelations among study variables, and to evaluate potential demographic covariates (i.e., age, culture, survey language, personal income, relationship status, relationship duration, sexual orientation, and number of children). No demographic variables were correlated with the outcome variables (i.e.,

[0] Data file is password protected and to be used for research purposes only. Please contact the corresponding author for access.

mutualistic and individualistic sexual talk) at r .30 (Supplementary Table C.4); thus, no demographic variables were included as covariates in the primary analyses (Frigon & Laurencelle, 1993).[0]

Indistinguishability and Nonindependence

Given the mixed sample of same- and mixed-gender/sex couples in the study, the dataset was comprised of indistinguishable dyads because there was no variable to distinguish between members within a couple across all dyads (Kenny et al., 2006; Mustanski et al., 2014). Nonindependence was assessed by computing the intraclass correlations (Kenny et al., 2006). The intraclass correlations were all positive and moderate in size, ranging from .46 to .54, supporting the hypothesis of nonindependence of the data (West et al., 2008). To account for this, we used multilevel modeling guided by the actor-partner interdependence model (APIM) to test our hypotheses (Kenny et al., 2006). Conducting APIMs with indistinguishable dyads results in one overall actor effect and one overall partner effect (see Figure 3.8.1).

Gender/Sex

Analyses were conducted for couples in which both members identified on the gender binary (i.e., identified as women or men; primary analyses) and separate analyses were conducted for the full sample—including couples in which at least one member identified as GSD. Due to the small sample size of GSD individuals, analyses including both binary and GSD couples were exploratory. Gender/sex was treated as a categorical variable and main effects and interactions were calculated using Type III Sums of Squares F-tests.

Primary Analyses

[0] Based on reviewer feedback we re-ran all analyses controlling for relationship satisfaction, relationship duration, and age; the pattern of statistical significance remained the same. The estimated marginal means changed on average 0.24 points after including covariates.

To address the objective of the first part of this study—that is, to examine whether there were gender/sex or dyad type (i.e., same- vs. mixed-gender/sex couples) differences in the use of sexual talk using retrospective reports of general sexual talk use—we conducted two multilevel mixed regression models guided by the APIM (i.e., individuals nested within couples). Separate models were conducted for each outcome variable (i.e., mutualistic sexual talk, individualistic sexual talk). To estimate gender/sex and dyad type effects in our indistinguishable dataset we utilized the factorial method developed by West et al. (2008). This approach requires the inclusion of three gender/sex terms in a given model: (a) gender/sex of individual, (b) gender/sex of partner, and (c) interaction between individual's gender/sex and partner's gender/sex (i.e., dyad type). Essentially, this analysis conducts a 2 (actor's gender/sex: woman, man) x 2 (partner's gender/sex: woman, man) factorial ANOVA but in a multilevel regression guided by the APIM. These analyses were conducted using only the 'binary couples'—those in which both members identified on the gender binary (i.e., as men or women; n = 204 couples)[0]. Significant interactions were followed up with pairwise comparisons.

Exploratory Analyses

Exploratory analyses were the same as the primary analyses, but also included the 'GSD couples'—a subsample of couples in which one or both members identified as GSD (n = 33 couples). Due to the small sample size, as well as the fact that previous sexual talk literature has not examined sexual talk in individuals identifying as GSD, these analyses were exploratory. Essentially, this analysis conducts a 3 (actor's gender/sex: woman, man, GSD) x 3 (partner's gender/sex: woman, man, GSD) factorial ANOVA but in a multilevel regression guided by the APIM. Significant interactions were not followed up with pairwise comparisons due to low

[0] Couples in which one or both members identified as GSD were excluded from primary analyses due to small subsample size.

power; however, we did inspect the visual depiction of these results to describe the overall pattern.

3.3.2 Results

3.3.2.1 Descriptive Statistics

Estimated marginal means, standard errors, and 95% confidence intervals for mutualistic and individualistic talk subscales for gender/sex and dyad type are provided in Table 3.7.2.

3.3.2.2 Primary Analyses

Individualistic Sexual Talk

For binary couples, no significant main effects or interactions were observed for individualistic talk (Table 3.7.3). Thus, there were no significant gender/sex or dyad type differences in the use of individualistic sexual talk.

Mutualistic Sexual Talk

For binary couples, a significant main effect was observed for actor's gender/sex for mutualistic talk (Table 3.7.3). Specifically, women actors scored 1.3 points (SE = 0.43) higher than men actors on the mutualistic sexual talk subscale (p = .003; Table 3.7.2). The main effect for partner's gender/sex was non-significant. However, there was a statistically significant two-way interaction between actor's gender/sex and partner's gender/sex (i.e., dyad type), which showed that the actor effect for women was larger for those in same-gender/sex couples ($M_{\text{difference}}$ = 2.3, SE 0.54, p < .001) than for those in mixed-gender/sex couples ($M_{\text{difference}}$ = 0.3, SE = 0.74, p = .698). See Figure 3.8.2D for a visual depiction.

3.3.2.3 Exploratory Analyses

For the exploratory multilevel models that included the GSD couples, no significant actor or partner main effects were observed for mutualistic talk (Table 3.7.3). The two-way interaction

between actor's gender/sex and partner's gender/sex was trending towards significance (p = .067). The visual depiction of the results (Figure 3.8.2B) suggests that GSD individuals partnered with women used more mutualistic talk than men partnered with women. For individualistic talk, a significant main effect for partner's gender/sex was observed (Table 3.7.3). The visual depiction of the results (Figure 3.8.2A) suggests that those with a GSD partner reported using more individualistic talk compared to those with a man partner. The main effect for actor's gender/sex was non-significant. There was a statistically significant two-way interaction between actor's gender/sex and partner's gender/sex. The visual depiction of the results (Figure 3.8.2A) suggests that GSD individuals reported using more individualistic talk when partnered with a woman or GSD individual, compared to when partnered with a man.

3.4 Daily Diary Study

The objective of the second part of this study was to examine whether gender/sex and dyad type differences would be observed in the average *daily* use of sexual talk in the same sample of long-term couples, using event-level data from a 35-day dyadic daily diary. Our hypotheses remained the same as for the retrospective survey (i.e., that men would report using more daily individualistic talk than women, and there would be no differences between men and women for daily mutualistic talk).

3.4.1 Method

3.4.1.1 Participants

Of the 229 couples that completed the retrospective survey, eight (3.5%) dropped out before being enrolled in the daily diaries for the following reasons: three were unwilling to make the time commitment, two were unreachable, two couples declined because they found the daily questions too personal, and one couple ended their relationship, rendering them ineligible. A

total of 221 couples were enrolled in the daily diaries and four (1.7%) were removed before analyses: three couples dropped out in the first two days of the daily diaries for various reasons (i.e., time commitment, illness in family, survey items too personal) and one couple was removed due to researcher error in data collection. This resulted in a final sample of 217 couples: 153 (70.5%) mixed-gender/sex couples (133 women coupled with men, seven men coupled with GSD partners, and 13 women coupled with GSD partners) and 64 (29.5%) same-gender/sex couples (20 men coupled with men, 42 women coupled with women, and two GSD coupled with GSD). The demographics of the sample largely remained the same as the retrospective sample (full descriptive characteristics for daily diary sample can be found in Supplementary Table C.5).

3.4.1.2 Procedure

Participants were recruited as described for the retrospective data. Following completion of the retrospective study, couples were contacted via telephone to begin a 35-day daily diary study. The daily questionnaires were hosted through Qualtrics Research Suite, a secure online survey program, and took an average of 8.71 minutes to complete (SD = 31.50), including measures unrelated to the current study. Both members of each couple were sent an email containing a link to their daily diary for 35 consecutive days. Participants were instructed to complete the survey at the end of each day without consulting their partner and considering their experiences in the past 24 hours. Daily diaries were available for a 12-hour period (i.e., 6pm one day to 6am the next day). Both members of each couple were contacted by a research assistant via telephone or email once a week to encourage high completion rates, and to provide participants with the opportunity to address any questions or concerns with a member of the research team. Participants were compensated with an Amazon gift card based on the proportion of diaries they completed: less than 18 diaries received $20 each, between 18-22 diaries received

$32 each, between 23-25 diaries received $37 each, between 26-29 diaries received $42 each, and those who completed at least 30 received $50 each. This study was approved by the institutional research ethics boards at both research sites.

3.4.1.3 Measures

Sexual Activity Days

A single item identified the days when participants had engaged in any sexual activity (*"I have had sexual activity within the last 24 hours"*) and participants who endorsed this item were given a second item to determine whether that sexual activity was with the partner who was also participating in the study. Sexual activity was defined as: "*...can include (but is not limited to): kissing, fondling, caressing, foreplay, vaginal penetration (with penis, fingers, sex-toys, etc.), anal penetration (with penis, fingers, sex-toys, etc.), manual stimulation, oral sex, using sex-toys, etc."* In the present study, "sexual activity day" refers to days on which participants engaged in sexual activity with their partner and only data from these days were utilized in analyses. If participants had engaged in sexual activity more than once in the last 24 hours, they were instructed to answer questions about their most recent sexual activity.

Sexual Talk

To assess the use of mutualistic and individualistic sexual talk on sexual activity days, we administered the same validated measure of sexual talk utilized in the retrospective study (SexTalk measure; Jonason et al., 2016). The measure was adapted so that participants reported on the frequency with which they engaged in each type of sexual talk with their current romantic partner during sexual activity in the previous 24 hours on a 5-point Likert scale ranging from 1 (*Never*) to 5 (*All the time*). Given that the SexTalk measure had not previously been utilized at a daily level, a multilevel confirmatory factor analysis (CFA) was conducted and supported the

two-factor structure of the daily SexTalk measure. A full description of the method and results of the multilevel CFA can be found in the supplemental materials (Supplementary Methods C.6). Daily total scores for the mutualistic and individualistic sexual talk subscales were calculated by summing all items in the measure. Mutualistic and individualistic sexual talk were positively correlated ($r = 0.48$, $p < .01$). There was good internal consistency for both of the SexTalk subscales for women (mutualistic glb = 0.76; individualistic glb = 0.76), men (mutualistic glb = 0.81; individualistic glb = 0.77), and GSD participants (mutualistic glb = 0.78; individualistic glb = 0.79). Retrospective mutualistic sexual talk was moderately positively correlated with daily aggregated mutualistic ($r = .55$) and individualistic ($r = .31$) sexual talk; retrospective individualistic sexual talk was also moderately positively correlated with daily aggregated mutualistic ($r = .33$) and individualistic ($r = .64$) sexual talk.

3.4.1.4 Data Analyses

To examine differences in sexual talk use across a 35-day period, aggregate scores were calculated for mutualistic and individualistic sexual talk, resulting in scores that reflected a person's average daily use of mutualistic (or individualistic) sexual talk. Missing data for sexual activity days was handled using the maximum likelihood method.

The primary analyses were conducted using only couples in which both members identified on the gender binary (binary couples; $n = 195$ couples). As in the retrospective study, we used the factorial method (West et al., 2008) with two multilevel mixed linear regression models (with individuals nested within couples) to examine the effects of own gender/sex, partner's gender/sex, and dyad type on average daily use of mutualistic and individualistic sexual talk.[0] Exploratory analyses examined data from all couples, including the GSD couples ($n = 22$

[0] Based on reviewer feedback, we also re-ran all analyses controlling for relationship satisfaction, relationship duration, and age; the pattern of statistical significance remained the same. The estimated marginal means changed on average points 0.28 points after including covariates.

couples). We used Type III Sums of Squares F-tests for main effects and interactions in the exploratory analyses, in a similar fashion to the retrospective study. Significant interactions in the exploratory analyses were not followed up with pairwise comparisons due to low power; however, we did inspect the visual depiction of these results to describe the overall pattern.

3.4.2 Results

Descriptive Statistics

Overall, data were collected for 13,134 (86.5%) of the total possible daily diaries (15,554 possible daily diaries). Only data from days where (1) both partners completed the survey and (2) both partners reported a sexual activity day were included in the current analyses. Almost all couples reported at least one sexual activity day during the 35-day period (95.9%, $n = 208$) and both partners reported engaging in sexual activity with each other on the same day 97.8% of the time (disagreement occurred 2.2% of the time), resulting in a total of 2562 entries for sexual activity days to be included in analyses. The average number of sexual activity days was 6.61 ($SD = 4.56$) per couple, ranging from 1 to 26. Estimated marginal means, standard errors, and 95% confidence intervals for mutualistic and individualistic talk subscales for each gender/sex and dyad type combination are provided in Table 3.7.4.

Primary Analyses

For binary couples, no significant main effects or interactions were observed for the mutualistic or individualistic sexual talk models (Table 3.7.5). Thus, there were no significant differences in the daily average use of mutualistic or individualistic talk based on actor's gender/sex, partner's gender/sex, or dyad type. For a visual depiction see Figure 3.8.3C and 3.8.3D.

Exploratory Analyses

For the exploratory multilevel models that also included the GSD couples, no significant actor or partner main effects were observed for mutualistic talk (Table 3.7.5). For individualistic talk, there was a significant main effect of partner's gender/sex (Table 3.7.5). The visual depiction of the results (Figure 3.8.3A), suggests that people with a GSD partner scored higher on the individualistic sexual talk subscale, compared to those who had a man or woman partner. The main effect for actor's gender/sex and the two-way interaction between actor's gender/sex and partner's gender/sex were nonsignificant ($p = .063$, $p = .052$, respectively), though the pattern of means suggested some modest trends. While no post-hoc comparisons were conducted for these effects, the visual depiction of the results (Figure 3.8.3A) suggests that (a) GSD actor report using more individualistic talk when partnered with a GSD individual, compared to when partnered with a woman or man; and (b) when they have a GSD partner, women use less individualistic talk compared to men and GSD individuals.

3.5 Discussion

The present two-part study examined whether there were gender/sex or dyad type differences in the use of sexual talk among a sexual and gender/sex diverse sample of community couples in long-term relationships. We hypothesized that (1) men would use more individualistic talk than women, both in general (retrospectively) and at the daily level, and that (2) there would be no gender/sex differences in the use of mutualistic talk, either retrospectively or at the daily level. We had no specific hypotheses regarding the effects of partner's gender/sex or dyad type, or regarding differences between GSD individuals and men or women, given that there was no prior sexual talk research to guide these hypotheses. When considering their average *general* use of sexual talk in their relationship, women used more mutualistic talk compared to men, and this effect was larger for women partnered with women than women

partnered with men; this result is contrary to our original hypotheses. Consistent with our hypotheses, there were no gender/sex differences in the average *daily* use of mutualistic talk. Further, inconsistent with our hypotheses, there were no gender/sex differences in use of individualistic talk at the retrospective or daily level. When couples in which at least one partner identified as GSD were included in the analyses, there were no significant differences in the average general or daily use of mutualistic sexual talk based on actor's or partner's gender/sex or dyad type. However, there were some gender/sex and dyad type differences in the average general and daily use of individualistic talk. When considering their average general and daily use of sexual talk, people partnered with a GSD individual tended to use more individualistic talk compared to those partnered with a man (both general and daily) or woman (daily only). Additionally, GSD individuals tended to use more *general* individualistic talk when partnered with a woman or GSD individual, compared to GSD individuals partnered with a man; there was a similar pattern for *daily* individualistic talk, however it was not statistically significant.

In contrast to our original hypotheses, we found that women reported using more mutualistic talk than men and that this difference was larger when partnered with a woman compared to when partnered with a man. There is some evidence that individuals in same-gender/sex relationships may adhere more strongly to the TSS (Courtice & Shaughnessy, 2018; Klinkenberg & Rose, 1994), which might help explain why women reported using more mutualistic talk compared to men, but only when they were in a same-gender/sex dyad. However, we only found this dyad-type difference when mutualistic talk was assessed retrospectively and not when it was assessed daily. While it is possible that the women in same-gender/sex dyads and/or the men in mixed-gender/sex dyads in this study changed their use of mutualistic talk over time (e.g., if sexual talk use changed between the retrospective survey and

the daily diary period), a more parsimonious explanation may be that the dyad type difference in the retrospective study is an artifact of when or how sexual talk was measured (i.e., it may reflect the influence of gender stereotypes on recall and/or observation biases; Fisher, 2013). Prior studies have found that people who believe strongly in gender stereotypes are more likely to be biased in their recall of autobiographical information, such that it is more consistent with their gender beliefs than their actual history (e.g., Chatard et al., 2007). Thus, according to sexual script theory, women may be more likely to recall sexual talk that focuses on increasing intimacy in the relationship (i.e., mutualistic talk; Masters et al., 2013) than men. Indeed, McCall et al. (2007) found that women were more likely than men to recall love and emotional bonding details of a story, whereas men were more likely to recall the erotic or explicit details of a story. Further, Fisher (2013) found that gender/sex and acceptance of traditional gender roles influenced men's and women's reports of sexual but not non-sexual behaviors. It is therefore possible that women —especially those in same gender/sex dyads—were more likely to recall or report information consistent with their gendered role in traditional sexual scripts, resulting in women reporting greater use of mutualistic sexual talk than men when reporting retrospectively on their relationship in general (retrospectively); this recall and/or observation bias would arguably be less salient when reporting on events having happened within the last 24 hours (daily level). In addition, there were no significant differences in mutualistic talk based on partner's gender/sex for the binary couples and no significant actor or partner gender/sex differences in mutualistic talk when GSD couples were included in the analyses; this was not unexpected as the lack of dyadic sexual talk and/or GSD-inclusive literature meant we had no specific hypotheses for partner gender/sex differences for the binary couples and the analyses which included the GSD couples were exploratory in nature.

In contrast to our hypotheses and prior research, we did not find any gender/sex differences in the use of individualistic sexual talk for the binary couples, nor did we find any dyad type differences. When GSD couples were included in the retrospective and daily analyses for individualistic talk, there was a significant main effect of partner's gender/sex and a significant two-way interaction between actor's gender/sex and partner's gender/sex. Specifically, people partnered with a GSD individual used more individualistic talk than people partnered with a woman (daily only) or a man (retrospective and daily). Additionally, GSD individuals used more individualistic talk when partnered with a woman or GSD individual than GSD individuals partnered with a man (retrospective only). However, we strongly caution the interpretation of the results involving GSD participants because the small subsample size means that the observed differences may not be generalizable beyond the present sample.

Given that we found the same results for individualistic sexual talk both retrospectively and at the daily level for binary couples, it appears that regardless of when and how we assessed the use of individualistic talk, there are no gender/sex or dyad type differences for men and women in long-term relationships. While previous research found that men used more individualistic talk than women, participants in that sample were, on average, older and had longer relationship duration compared to those in the present sample (Merwin & Rosen, 2019, 2020). Perhaps couples in the present study were less likely to adhere to the TSS due to generational differences in gender/sex beliefs. Indeed, prior research has found that beliefs about gender/sex roles and conformity to societal norms differ across generations, with younger cohorts being more likely to challenge traditional gender/sex roles (Lyons et al., 2005; Passuth Lynott & McCandless, 2000; Shen Johfre & Saperstein, 2019). Thus, it is possible that there is a cohort effect, such that women and men from older generations are more likely to conform to the

TSS, whereas those from younger generations—such as those in the present study—may rely less heavily on the TSS, resulting in generally similar frequency of both mutualistic and individualistic sexual talk. However, it should be noted that when relationship duration and age were controlled for in the present study all results remained the same, suggesting that there may be an alternative explanation for these discrepant results.

Finally, while some of our findings were contrary to hypotheses, they do not necessarily contradict sexual script theory. Even though gender/sex and dyad type were largely not associated with the *amount* of sexual talk used, it is still possible that the associations between sexual talk and sexual well-being may be different depending on a person's gender/sex, their partner's gender/sex, or the dyad type. Indeed, several studies, including a meta-analysis by Mallory et al. (2019), have found that the importance of general sexual communication for a person's sexual and relational well-being does differ based on gender/sex. Future research should examine whether the types of sexual talk used are associated with sexual well-being for couples in long-term relationships, as well as whether these associations might differ according to gender/sex and/or dyad type. Additionally, some of our findings when GSD couples were included in the analyses suggest that there may be some differences between GSD individuals/people partnered with GSD individuals and people in binary relationships. However, it is extremely important to interpret this with caution due to the exploratory and underpowered nature of these analyses. Future research should seek to replicate the results with a larger sample of GSD individuals and couples.

3.5.1 Strengths & Limitations

This study was the first to our knowledge to examine the use of sexual talk from a dyadic perspective, using daily diary methodology, and with a large sample of community couples in

long-term relationships. Further, this study was the first to examine whether a person's use of mutualistic or individualistic talk depended on their own gender/sex, their partner's gender/sex, or the dyad type (i.e., same- or mixed-gender/sex couple). The use of a daily diary methodology reduced recall biases and increased the ecological validity of our findings, while using both daily diary and retrospective methods provided conclusions that are likely to be more reliable (Williamson et al., 2002). Utilizing a dyadic design allowed us to examine both actor and partner effects of gender/sex, while accounting for the interdependence of the data. Additionally, we also included a subsample of same-gender/sex couples and GSD individuals who are frequently understudied and excluded from research. The analyses with the GSD couples were exploratory due to the small subsample; however, while concerns over low power often lead researchers to exclude GSD participants from analyses, as Fraser (2018) and Fraser et al. (2020) emphasize, this practice hinders the advancement of scientific knowledge and there is value to including these participants, even if only for exploratory analyses. Further, we utilized participant responses from the 6-month timepoint of the larger longitudinal study to avoid excluding the 64 participants who were not asked the demographic question about gender identity in the retrospective study. While this is an imperfect methodology given that gender identity can change over time (Bauer et al., 2017; Kuper et al., 2012; Kuper et al., 2018; Richards et al., 2016; van Anders, 2015), we felt this was a better option than excluding these participants (Streiner, 2002).

The demographics of our sample may limit the generalizability of the findings. Our sample was largely young, well educated, childless, unmarried, French- and/or English-speaking, living in North America, required access to technology, and we had relatively low cultural diversity. Further, while we over-sampled GSD individuals (6.1% vs. 0.15-1.14% based on

population-based estimates in Canada and the US; Barr et al., 2016; Flores et al., 2016; James et al., 2016; Mikalson et al., 2013), the resultant small subsample meant that the analyses were exploratory due to power concerns. Given the small sample size for the GSD analyses, we caution the interpretation of these results; the findings may not be generalizable beyond the present sample and further studies with larger sample sizes need to be conducted. Further, given that an exclusion criterion for this study was the presence of a self-reported major medical and/or psychiatric illness that significantly interfered with sexual activity or functioning, the results of this study may not generalize to those with sexual dysfunctions. Another limitation of the present study is that—at least for men and women in same- and mixed-gender/sex couples—individualistic sexual talk was infrequently reported at the daily level. Future research examining associations between daily sexual talk and sexual outcomes might consider utilizing zero-inflated regression models in their analyses for individualistic talk. Additionally, as the present study was focused on examining gender/sex and dyad type differences in the use of sexual talk, we did not address some potentially important covariates or moderators that future research should consider examining. For example, belief in gender stereotypes or in the TSS may affect the type of sexual talk that people choose to use in their relationships. Another important area for future research is to examine motivations and reasons for engaging in sexual talk, as this has not yet, to our knowledge, been studied. Finally, it is important to note that this study was correlational, thus, directionality and causality cannot be determined.

3.5.2 Conclusions

Overall, findings of the present study suggest that for men, women, and GSD individuals in long-term relationships, the use of sexual talk is fairly similar regardless of a person's gender/sex, their partner's gender/sex, or dyad type. This study provided evidence that both

same-gender/sex and mixed-gender/sex couples, as well as binary couples and GSD couples, may be more similar than different when it comes to their use of sexual talk.

3.6 Acknowledgements

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3.7 Tables

Table 3.7.1 *Descriptive Characteristics of the Sample for Retrospective Data (Baseline; N = 458 individuals; 229 couples)*

Variable	*M* (*SD*) or *n*	Range	*% of final sample*
Age	30.43 (8.42)	18 - 70	
Gender/sex			
Woman	243	-	53.1
Man	187	-	40.8
GSD[a]	28	-	6.1
Dyad Type (number of *couples*)			
Total Same-Gender/sex couples	**69**	**-**	**30.1**
Man-Man	20	-	8.7
Woman-Woman	46	-	20.1
GSD-GSD	3	-	1.3
Total Mixed-Gender/sex couples	**160**	**-**	**69.9**
Man-Woman	138	-	60.3
Man-GSD	9	-	3.9
Woman-GSD	13	-	5.7

Language (for study)			
English	280	-	61.1
French	178	-	38.9
Place of Birth			
Canada	345	-	75.3
United States	59	-	12.9
Western Europe	27	-	5.9
Latin America/South America	8	-	1.7
Asia	7	-	1.5
Africa	3	-	0.7
Eastern Europe	3	-	0.7
Caribbean	2	-	0.4
Other[b]	4	-	0.9
Personal Annual Income			
$0-9,999	80	-	17.5
$10,000-39,999	200	-	43.7

$40,000-69,999	125	-	27.3
$70,000-99,999	38	-	8.3
$100,000 and over	15	-	3.3
Number of children at home	0.43 (0.96)	0 - 5	-

Note. GSD = gender/sex diverse.

[a] Participants identified as: Agender (*n* = 10), Gender-queer/fluid (*n* = 7), Non-binary (*n* = 6), Androgyne (*n* = 1), Butch (*n* =1), Non-binary with a transmasculine history (*n* = 1), Transmasculine gender-queer (*n* =1), and Transmasculine non-binary (*n* = 1).

[b] Participants who did not identify with any of the provided locations were able to select 'Other' and provide their place of birth in an open textbox. These responses included the following: Romania (*n* = 2) and Vietnam (*n* = 2).

Table 3.7.2 *Estimated Marginal Means, Standard Errors, and 95% Confidence Intervals for Sexual Talk subscales for each Gender/sex and Dyad Type Combination (Retrospective)*

Group		Mutualistic Sexual Talk			Individualistic Sexual Talk		
	n[a]	*M (SE)*	95% CI		*M (SE)*	95% CI	
			LB	UB		LB	UB
Women partnered with women	92	14.71 (0.44)	13.85	15.58	7.76 (0.44)	6.90	8.63
Men partnered with men	40	13.51 (0.67)	12.19	14.82	8.35 (0.66)	7.05	9.66
Women partnered with men	138	13.79 (0.30)	13.21	14.38	7.36 (0.29)	6.80	7.92
Men partnered with women	138	12.42 (0.30)	11.84	13.00	7.65 (0.29)	7.08	8.21
GSD partnered with men	9	13.22 (1.16)	10.94	15.51	6.22 (1.12)	4.02	8.43
GSD partnered with women	13	15.54 (0.97)	13.63	17.44	9.31 (0.93)	7.47	11.14
GSD partnered with GSD	6	14.83 (1.73)	11.43	18.23	10.00 (1.71)	6.63	13.37
Women partnered with GSD	13	14.54 (0.97)	12.64	16.44	7.65 (0.93)	5.82	9.49
Men partnered with GSD	9	14.11 (1.16)	11.83	16.40	9.78 (1.12)	7.57	11.98

Note. GSD = gender/sex diverse. CI = confidence interval. LB = lower bound. UB = upper bound. SE = standard error.

[a]Number of individuals (not couples)

Table 3.7.3 *Type III Tests of Fixed Effects from Multilevel Mixed Linear Regression Models for Gender/Sex, Dyad Type, and Sexual Talk (Retrospective)*

Variable	Mutualistic Sexual Talk	Individualistic Sexual Talk
Binary Couples (n = 204)		
Actor's Gender/Sex	$F(1, 261.73) = 8.95$, $p = .003$	$F(1, 249.07) = 1.07$, $p = .301$
Partner's Gender/Sex	$F(1, 261.73) = 0.04$, $p = .849$	$F(1, 249.07) = 0.13$, $p = .720$
Dyad Type (Actor's Gender/Sex x Partner's Gender/Sex)	$F(1, 204) = 4.42$, $p = .037$	$F(1, 204) = 1.37$, $p = .243$
All Couples (GSD couples: n = 25; Binary couples: n = 204)		
Actor's Gender/Sex	$F(2, 366.42) = 1.87$, $p = .155$	$F(2, 342.65) = 1.79$, $p = .168$
Partner's Gender/Sex	$F(2, 366.42)$, 1.09, $p = .337$	$F(2, 342.65) = 3.10$, $p = .046$
Dyad Type (Actor's Gender/Sex x Partner's Gender/Sex)	$F(4, 229) = 2.23$, $p = .067$	$F(4, 229) = 3.56$, $p = .008$

Note. GSD = gender/sex diverse. The first model was run with only binary couples (i.e., couples in which both members of the couple identified as either a man or woman). The second model was run with all couples (i.e., included both binary and GSD couples).

Table 3.7.4 *Estimated Marginal Means, Standard Errors, and 95% Confidence Intervals for Average Daily Sexual Talk subscales for each Gender/Sex and Dyad Type Combination (Daily Diary)*

Group	n^a (number of daily observations)	Mutualistic Sexual Talk			Individualistic Sexual Talk		
		M (SE)	95% CI		*M (SE)*	95% CI	
			LB	UB		LB	UB
Women partnered with women	84 (2391)	10.28 (0.47)	9.36	11.20	5.17 (0.31)	4.57	5.77
Men partnered with men	40 (1239)	9.21 (0.66)	7.91	10.51	5.34 (0.43)	4.48	6.19
Women partnered with men	133 (4077)	9.39 (0.29)	8.82	9.96	5.14 (0.19)	4.77	5.50
Men partnered with women	133 (3908)	9.31 (0.30)	8.73	9.89	5.49 (0.19)	5.12	5.86
GSD partnered with men	7 (217)	8.92 (1.25)	6.47	11.37	4.85 (0.81)	3.26	6.44
GSD partnered with women	13 (312)	9.65 (0.98)	7.72	11.58	5.78 (0.63)	4.53	7.02
GSD partnered with GSD	4 (136)	8.72 (2.07)	4.63	12.80	7.91 (1.36)	5.23	10.59
Women partnered with GSD	13 (337)	10.52 (0.95)	8.65	12.40	5.87 (0.62)	4.66	7.09
Men partnered with GSD	7 (186)	11.28 (1.25)	8.83	13.73	7.97 (0.81)	6.39	9.56

Note. GSD = gender/sex diverse. CI = confidence interval. LB = lower bound. UB = upper bound. SE = standard error.

[a]Number of individuals (not couples)

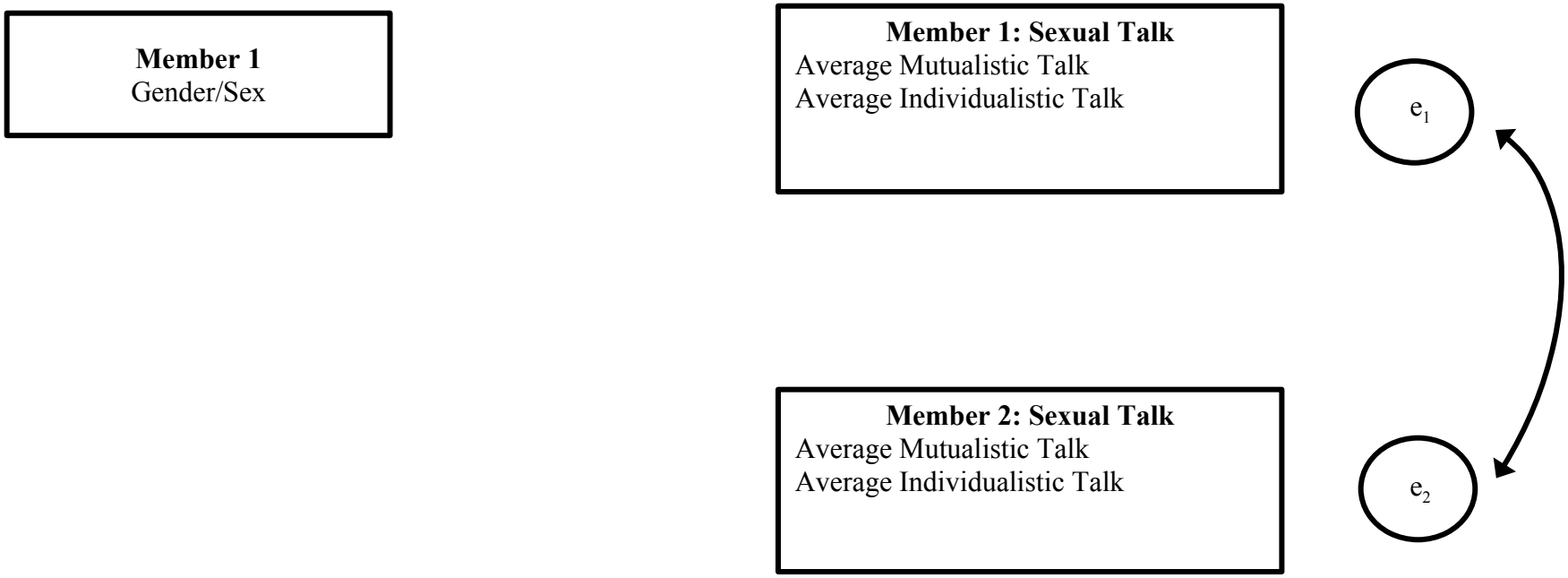
Table 3.7.5 *Type III Tests of Fixed Effects from Multilevel Mixed Linear Regression Models for Gender/Sex, Dyad Type, and Sexual Talk (Daily Diary)*

Variable	Mutualistic Sexual Talk	Individualistic Sexual Talk
Binary Couples (n = 204) Model		
Actor's Gender/Sex	$F(1, 232.07) = 1.74$, $p = .188$	$F(1, 226.41) = 0.92$, $p = .338$
Partner's Gender/Sex	$F(1, 232.07) = 1.32$, $p = .251$	$F(1, 226.41) = 0.12$, $p = .729$
Dyad Type (Actor's Gender/Sex x Partner's Gender/Sex)	$F(1, 192.45) = 0.65$, $p = .422$	$F(1, 192.36) = 0.04$, $p = .848$
All Couples Model (GSD couples: n = 25; Binary couples: n = 204)		
Actor's Gender/Sex	$F(2, 301.07) = 0.62$, $p = .541$	$F(2, 290.51) = 2.79$, $p = .063$
Partner's Gender/Sex	$F(2, 302.91) = 0.82$, $p = .441$	$F(2, 292.25) = 7.10$, $p = .001$
Dyad Type (Actor's Gender/Sex x Partner's Gender/Sex)	$F(4, 208.90) = 0.63$, $p = .640$	$F(4, 209.18) = 2.39$, $p = .052$

Note. GSD = gender/sex diverse. The first model was run with only binary couples (i.e., couples in which both members of the couple identified as either a man or woman). The second model was run with all couples (i.e., included both binary and GSD couples).

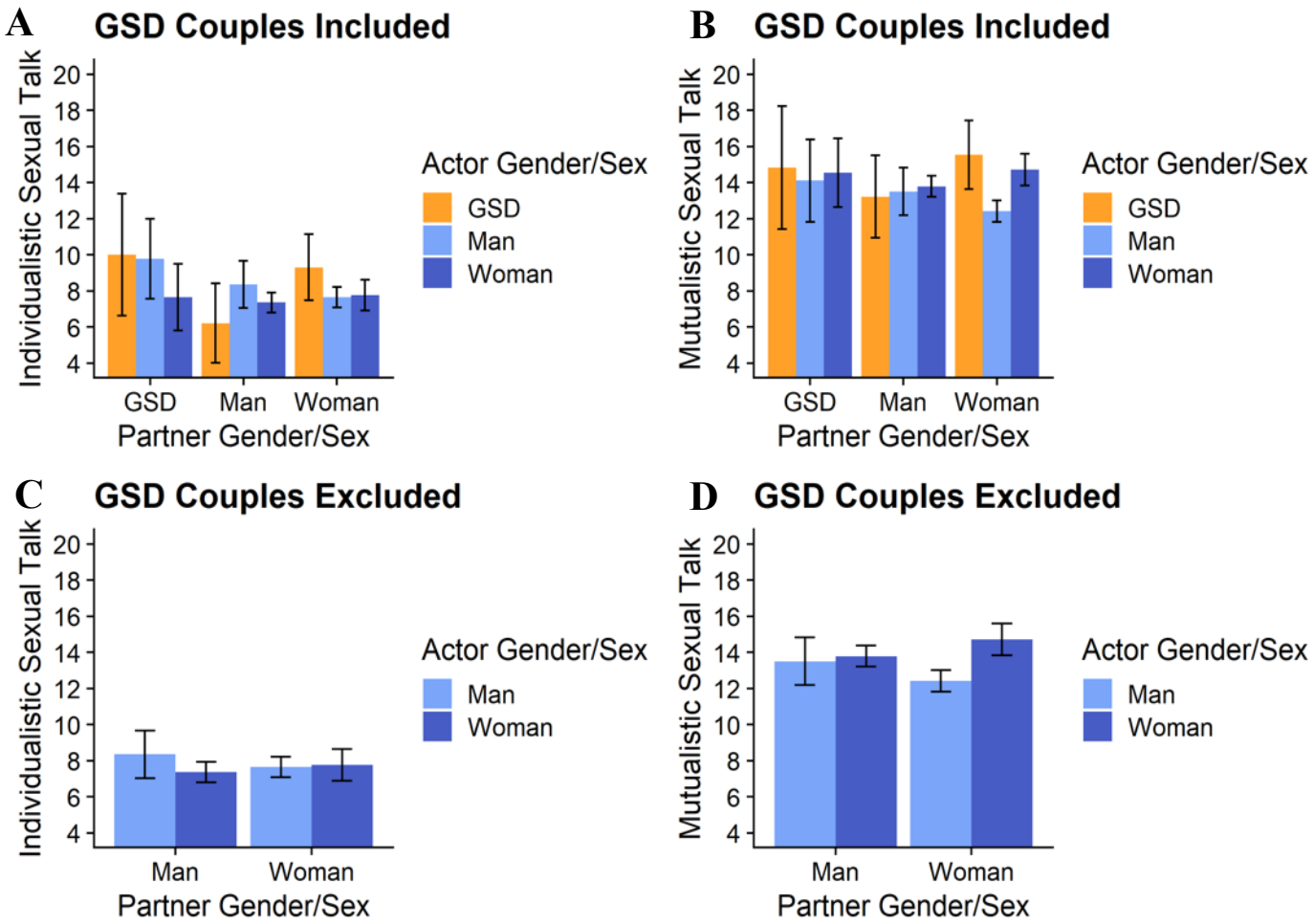
3.8 Figures

Figure 3.8.1 *Depiction of Actor-Partner Interdependence Model (APIM) with Indistinguishable Dyads*



Note. This indistinguishable APIM shows associations between Member 1's gender/sex and their own and their partner's use of sexual talk. The bold line represents the actor effect, and the dotted line represents the partner effect.

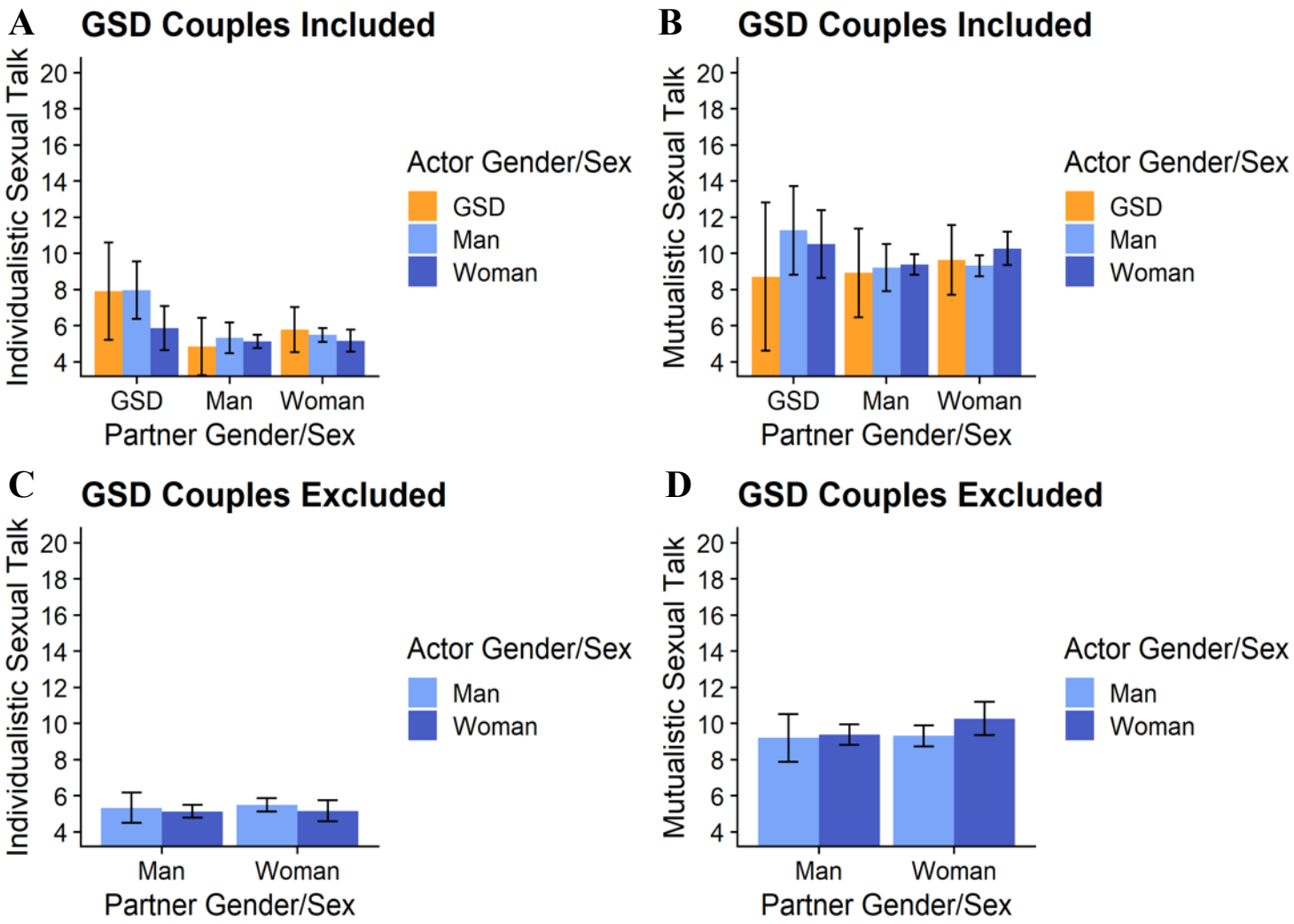
Figure 3.8.2 *Estimated Marginal Means of Sexual Talk for Different Gender/Sex and Dyad Type Combinations (Retrospective)*



Note. Estimated marginal means for sexual talk for women, men, and GSD individuals in same- and mixed-gender/sex couples. Error bars show 95% confidence intervals (CI). GSD = gender/sex diverse. Panel A: Estimated means for individualistic sexual talk for full

sample. Panel B: Estimated means for mutualistic sexual talk for full sample. Panel C: Estimated means for individualistic sexual talk for only binary couples. Panel D: Estimated means for mutualistic sexual talk for only binary couples. Post-hoc comparison tests were not conducted for analyses with all couples (Panels A and B) due to the small subsample of GSD couples. Post-hoc pairwise comparisons conducted for the analyses with only binary couples (Panels C and D) found no significant differences in the use of individualistic talk based on actor's gender/sex, partner's gender/sex, or dyad type (Panel C) and a significant difference in the use of mutualistic talk based on the interaction between actor's gender/sex and partner's gender/sex (i.e., dyad type; Panel D). Specifically, women reported using significantly more mutualistic talk than men, and this effect was larger for women partnered with women than women partnered with men.

Figure 3.8.3 *Estimated Marginal Means of Sexual Talk for Different Gender/Sex and Dyad Type Combinations (Daily Diary)*



Note. Estimated marginal means for sexual talk for women, men, and GSD individuals in same- and mixed-gender/sex couples. Error bars show 95% confidence intervals. GSD = gender/sex diverse. Panel A: Estimated means for daily individualistic sexual talk for full sample. Panel B: Estimated means for daily mutualistic sexual talk for full sample. Panel C: Estimated means for daily individualistic sexual talk for only binary couples. Panel D: Estimated means for daily mutualistic sexual talk for only binary couples. Post-hoc comparison tests were not conducted for analyses with all couples (Panels A and B) due to the small subsample of GSD couples. Post-hoc pairwise comparisons conducted for the analyses with only binary couples (Panels C and D) found no significant differences in the use of individualistic talk (Panel C) or mutualistic talk (Panel D) based on actor's gender/sex, partner's gender/sex, or dyad type.

3.9 References

Ackerman, R. A., & Kenny, D. A. (2016). *APIMPowerR: An interactive tool for actor-partner interdependence model power analysis.* https://robert−a−ackerman.shinyapps.io/APIMPowerRdis/

Babin, E. A. (2012). An examination of predictors of nonverbal and verbal communication of pleasure during sex and sexual satisfaction. *Journal of Social and Personal Relationships, 30*(3), 270-292. https://doi.org/10.1177/0265407512454523

Barr, S. M., Budge, S. L., & Adelson, J. L. (2016). Transgender community belongingness as a mediator between strength of transgender identity and well-being. *Journal of Counseling Psychology, 63*(1), 87-97. https://doi.org/10.1037/cou0000127

Bauer, G. R., Braimoh, J., Scheim, A. I., & Dharma, C. (2017). Transgender-inclusive measures of sex/gender for population surveys: Mixed-methods evaluation and recommendations. *PLoS One, 12*(5), 1-28. https://doi.org/10.1371/journal.pone.0178043

Blair, K. L., & Goldberg, A. E. (2016). Ethical research with sexual and gender minorities. In *The SAGE encyclopedia of LGBTQ studies*. SAGE. https://doi.org/10.4135/9781483371283.n139

Blunt-Vinti, H., Jozkowski, K. N., & Hunt, M. (2019). Show or tell? Does verbal and/or nonverbal sexual communication matter for sexual satisfaction? *Journal of Sex & Marital Therapy, 45*(3), 206-217. https://doi.org/10.1080/0092623X.2018.1501446

Brogan, S. M., Fiore, A., & Wrench, J. S. (2009). Understanding the psychometric properties of the sexual communication style scale. *Human Communication, 12*(4), 421-445. http://www.jasonswrench.com/pdf/articles/sex_comm_style.pdf

Byers, E. S., & Demmons, S. (1999). Sexual satisfaction and sexual self-disclosure within dating relationships. *Journal of Sex Research, 36*(2), 180-189.

Chatard, A., Guimond, S., & Selimbegovic, L. (2007). "How good are you in math?" The effect of gender stereotypes on students' recollection of their school marks. *Journal of Experimental Social Psychology, 43*(6), 1017-1024. https://doi.org/10.1016/j.jesp.2006.10.024

Coffelt, T. A., & Hess, J. A. (2014). Sexual disclosures: Connections to relational satisfaction and closeness. *Journal of Sex & Marital Therapy, 40*(6), 577-591. https://doi.org/10.1080/0092623X.2013.811449

Courtice, E. L., & Shaughnessy, K. (2018). The partner context of sexual minority women's and men's cybersex experiences: Implications for the traditional sexual script. *Sex Roles, 78*, 272-285. https://doi.org/10.1007/s11199-017-0792-5

Eaton, A. A., & Rose, S. (2011). Has dating become more egalitarian? A 35 year review using *Sex Roles*. *Sex Roles, 64*, 843-862. https://doi.org/10.1007/s11199-011-9957-9

Fisher, T. (2013). Gender roles and pressure to be truthful: The bogus pipeline modifies gender differences in sexual but not non-sexual behavior. *Sex Roles, 68*(7-8), 401-414. https://doi.org/10.1007/s11199-013-0266-3

Flores, A. R., Herman, J. L., Gates, G. J., & Brown, T. N. T. (2016). *How many adults identify as transgender in the United States*. https://williamsinstitute.law.ucla.edu/wp-content/uploads/Trans-Adults-US-Aug-2016.pdf

Fraser, G. (2018). Evaluating inclusive gender identity measures for use in quantitative psychological research. *Psychology and Sexuality, 9*(4), 343-357. https://doi.org/10.1080/19419899.2018.1497693

Fraser, G., Bulbulia, J., Greaves, L. M., Wilson, M. S., & Sibley, C. G. (2020). Coding responses to an open-ended gender measure in a New Zealand national sample. *Journal of Sex Research, 57*(8), 979-986. https://doi.org/10.1080/00224499.2019.1687640

Frigon, J.-Y., & Laurencelle, L. (1993). Analysis of covariance: A proposed algorithm. *Educational and Psychological Measurement, 53*, 1-18. https://doi.org/10.1177/0013164493053001001

Gabb, J. (2019). The relationship work of sexual intimacy in long-term heterosexual and LGBTQ partnerships. Advance online publication. *Current Sociology*, 1-8. https://doi.org/10.1177/0011392119826619

Gagnon, J. H. (1990). The explicit and implicit use of scripting perspective in sex research. *Annual Review of Sex Research, 1*(1), 1-43. https://doi.org/10.1080/10532528.1990.10559854

Gauvin, S., & Pukall, C. F. (2018). Sexual problems and sexual scripts: Overview and future directions for bisexual-identified individuals. *Sexual and Relationship Therapy, 33*(1-2), 34-44. https://doi.org/10.1080/14681994.2018.1426851

Graham, C. A., Catania, J. A., Brand, R., Duong, T., & Canchola, J. A. (2003). Recalling sexual behavior: A methodological analysis of memory recall bias via interview using the diary as the gold standard. *Journal of Sex Research, 40*(4), 325-332. https://doi.org/10.1080/00224490209552198

Greene, K., & Faulkner, S. L. (2005). Gender, belief in the sexual double standard, and sexual talk in heterosexual dating relationships. *Sex Roles, 53*(3-4), 239-251. https://doi.org/10.1007/s11199-005-5682-6

Holmberg, D., & Blair, K. L. (2009). Sexual desire, communication, satisfaction, and preferences of men and women in same-sex versus mixed-sex relationships. *Journal of Sex Research, 46*(1), 57-66. https://doi.org/10.1080/00224490802645294

Jackson, D. L., Gillaspy, J. A., & Purc-Stephenson, R., Jr. (2009). Reporting practices in confirmatory factor analysis: An overview and some recommendations. *Psychological Methods, 14*(1), 6-23. https://doi.org/10.1037/a0014694

Jacobson, R., & Joel, D. (2019). Self-reported gender identity and sexuality in an online sample of cisgender, transgender, and gender-diverse individuals: An exploratory study. *Journal of Sex Research, 56*(2), 249-263. https://doi.org/10.1080/00224499.2018.1523998

James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). *The report of the 2015 U.S. transgender survey*. https://www.transequality.org/sites/default/files/docs/USTS-Full-Report-FINAL.PDF

Jonason, P. K., Betteridge, G. L., & Kneebone, I. I. (2016). An examination of the nature of erotic talk. *Archives of Sexual Behavior, 45*(1), 21-31. https://doi.org/10.1007/s10508-015-0585-2

Jozkowski, K. N., & Peterson, Z. D. (2013). College students and sexual consent: Unique insights. *Journal of Sex Research, 50*(6), 517-523. https://doi.org/10.1080/00224499.2012.700739

Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. Guilford.

Klein, V., Imhoff, R., Reininger, K. M., & Briken, P. (2019). Perceptions of sexual script deviation in women and men. *Archives of Sexual Behavior, 48*(2), 631-644. https://doi.org/10.1007/s10508-018-1280-x

Klinkenberg, D., & Rose, S. (1994). Dating scripts of gay men and lesbians. *Journal of Homosexuality, 26*(4), 23-35. https://doi.org/10.1300/ J082v26n04_02

Konicki Di lorio, C. (2005). *Measurement in health behavior: Methods for research and evaluation*. Jossey-Bass.

Kosenko, K. A. (2010). Meanings and dilemmas of sexual safety and communication for transgender individuals. *Health Communication, 25*(2), 131-141. https://doi.org/10.1080/10410230903544928

Kosenko, K. A. (2011). The safer sex communication of transgender adults: Processes and Problems. *Journal of Communication, 61*(3), 467-495. https://doi.org/10.1111/j.1460-2466.2011.01556.x

Kuper, L. E., Nussbaum, R., & Mustanski, B. (2012). Exploring the diversity of gender and sexual orientation identities in an online sample of transgender individuals. *Journal of Sex Research, 49*(2-3), 244-254. https://doi.org/10.1080/00224499.2011.596954

Kuper, L. E., Wright, L., & Mustanski, B. (2018). Gender identity development among transgender and gender nonconforming emerging adults: An intersectional approach. *International Journal of Transgenderism, 19*(4), 436-455. https://doi.org/10.1080/15532739.2018.1443869

Lyons, S., Duxbury, L., & Higgins, C. (2005). Are gender differences in basic human values a generational phenomenon? *Sex Roles, 53*(9/10), 763-778. https://doi.org/10.1007/s11199-005-7740-4

MacNeil, S., & Byers, E. S. (2005). Dyadic assessment of sexual self-disclosure and sexual satisfaction in heterosexual dating couples. *Journal of Social and Personal Relationships, 22*(2), 169-181. https://doi.org/10.1177/0265407505050942

MacNeil, S., & Byers, E. S. (2009). Role of sexual self-disclosure in the sexual satisfaction of long-term heterosexual couples. *Journal of Sex Research, 46*(1), 3-14. https://doi.org/10.1080/00224490802398399

Mallory, A. B., Stanton, A. M., & Handy, A. B. (2019). Couples' sexual communication and dimensions of sexual function: A meta-analysis. *Journal of Sex Research, 56*(7), 882-898. https://doi.org/10.1080/00224499.2019.1568375

Masters, N. T., Casey, E., Wells, E. A., & Morrison, D. M. (2013). Sexual scripts among young heterosexually active men and women: Continuity and change. *Journal of Sex Research, 50*(5), 409-420. https://doi.org/10.1080/00224499.2012.661102

McCall, K. M., Rellini, A. H., Seal, B. N., & Meston, C. M. (2007). Sex differences in memory for sexually-relevant information. *Archives of Sexual Behavior, 36*(4), 508-517. https://doi.org/10.1007/s10508-006-9106-7

McNeish, D. (2018). Thanks coefficient alpha, we'll take it from here. *Psychological Methods, 23*(3), 412-433. https://doi.org/10.1037/met0000144

Mertens, D. M., & Hesse-Biber, S. (Eds.). (2012). Triangulation and mixed methods research: Provocative positions. [Special issue]. *Journal of Mixed Methods Research*, *6*(2). https://doi.org/10.1177/1558689812437100

Merwin, K. E., & Rosen, N. O. (2019). *Perceived partner responsiveness and sexual talk dataset* (Version 1) [Data set]. OSF. https://doi.org/10.17605/OSF.IO/TJ76W

Merwin, K. E., & Rosen, N. O. (2020). Perceived partner responsiveness moderates the associations between sexual talk and sexual and relationship well-being in individuals in long-term relationships. *Journal of Sex Research, 57*(3), 351-364. https://doi.org/10.1080/00224499.2019.1610151

Mikalson, P., Pardo, S., & Green, J. (2013). *First, do no harm: Reducing disparities for lesbian, gay, bisexual, transgender, queer and questioning populations in California*. https://lhc.ca.gov/sites/lhc.ca.gov/files/Reports/225/ReportsSubmitted/CRDPLGBTQReport.pdf

Mustanski, B., Starks, T., & Newcomb, M. E. (2014). Methods for the design and analysis of relationship and partner effects on sexual health. *Archives of Sexual Behavior, 43*(1), 21-33. https://doi.org/10.1007/s10508-013-0215-9

Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's guide* (Eighth ed.). Muthén & Muthén.

Passuth Lynott, P., & McCandless, N. J. (2000). The impact of age vs. life experience on the gender role attitudes of women in different cohorts. *Journal of Women & Aging, 12*(1-2), 5-21. https://doi.org/10.1300/J074v12n01_02

Pazmany, E., Bergeron, S., Verhaeghe, J., Van Oudenhove, L., & Enzlin, P. (2015). Dyadic sexual communication in pre-menopausal women with self-reported dyspareunia and their partners: Associations with sexual function, sexual distress and dyadic adjustment. *Journal of Sexual Medicine, 12*(2), 516-528. https://doi.org/10.1111/jsm.12787

Pett, M., Lackey, N. R., & Sullivan, J. J. (2003). *Making sense of factor analysis: The use of factor analysis for instrument development in health care research*. Sage Publishing.

RCoreTeam. (2019). *R: A language and environment for statistical computing.* R Foundation for Statistical Computing. http://www.R-project.org/

Revelle, W. (2020). *psych: Procedures for psychological, psychometric, and personality research.* Northwestern University, Evanston, Illinois. https://CRAN.R-project.org/package=psych

Richards, C., Bouman, W. P., Seal, L., Barker, M. J., Nieder, T. O., & T'Sjoen, G. (2016). Non-binary or genderqueer genders. *International Review of Psychiatry, 28*(1), 95-102. https://doi.org/10.3109/09540261.2015.1106446

Rubinsky, V., & Hosek, A. (2020). "We have to get over it": Navigating sex talk through the lens of sexual communication comfort and sexual self-disclosure in LGBTQ intimate partnerships. *Sexuality & Culture, 24*(3), 613-629. https://doi.org/10.1007/s12119-019-09652-0

Sakaluk, J. K., & Short, S. D. (2017). A methodological review of exploratory factor analysis in sexuality research: Used practices, best practices, and data analysis resources. *Journal of Sex Research, 54*(1), 1-9. https://doi.org/10.1080/00224499.2015.1137538

Shen Johfre, S., & Saperstein, A. (2019). *State of the Union 2019: Racial and gender identities*. Stanford Center on Poverty & Inequality. https://inequality.stanford.edu/sites/default/files/Pathways_SOTU_2019_RaceGender.pdf

Shibley Hyde, J., Bigler, R. S., Joel, D., Tate, C. C., & van Anders, S. M. (2019). The future of sex and gender in psychology: Five challenges to the gender binary. *American Psychologist, 74*(2), 171-193. https://doi.org/10.1037/amp0000307

Sijtsma, K. (2009). On the use, the misuse, and the very limited usefulness of Cronbach's alpha. *Psychometrika, 74*(1), 107-120. https://doi.org/10.1007/S11336-008-9101-0

Simon, W., & Gagnon, J. H. (1986). Sexual scripts: Permanence and change. *Archives of Sexual Behavior, 15*(2), 97-120. https://doi.org/10.1007/BF01542219

Simon, W., & Gagnon, J. H. (2003). Sexual scripts: Origins, influences and changes. *Qualitative Sociology, 26*(4), 491-497. https://doi.org/10.1023/B:QUAS.0000005053.99846.e5

Streiner, D. L. (2002). The case of the missing data: Methods of dealing with dropouts and other research vagaries. *Canadian Journal of Psychiatry, 47*(1), 70-77. https://doi.org/10.1177/070674370204700111

Tate, C. C., Youssef, C. P., & Bettergarcia, J. N. (2014). Integrating the study of transgender spectrum and cisgender experiences of self-categorization from a personality perspective. *Review of General Psychology, 18*(4), 302-312. https://doi.org/10.1037/gpr0000019

The GenIUSS Group. (2014). *Best practices for asking questions to identity transgender and other gender minority respondents on population-based surveys.*

Thomas, K. A., & Clifford, S. (2017). Validity and mechanical turk: An assessment of exclusion methods and interactive experiments. *Computers in Human Behavior, 77*, 184-197. https://doi.org/10.1016/j.chb.2017.08.038

Thurmond, V. A. (2001). The point of triangulation. *Journal of Nursing Scholarship, 33*(3), 253-258. https://doi.org/10.1111/j.1547-5069.2001.00253.x

van Anders, S. M. (2015). Beyond sexual orientation: Integrating gender/sex and diverse sexualities via sexual configurations theory. *Archives of Sexual Behavior, 44*(5), 1177-1213. https://doi.org/10.1007/s10508-015-0490-8

Vannier, S. A., & O'Sullivan, L. F. (2011). Communicating interest in sex: Verbal and nonverbal initiation of sexual activity in young adults' romantic dating relationships. *Archives of Sexual Behavior, 40*, 961-969. https://doi.org/10.1007/s10508-010-9663-7

West, T. V., Popp, D., & Kenny, D. A. (2008). A guide for the estimation of gender and sexual orientation effects in dyadic data: An actor-partner interdependence model approach.

Personality and Social Psychology Bulletin, 34(3), 321-336. https://doi.org/10.1177/0146167207311199

Wiederman, M. W. (2005). The gendered nature of sexual scripts. *Family Journal: Counseling and Therapy for Couples and Families, 13*(4), 496-502. https://doi.org/10.1177/1066480705278729

Williamson, K., Burstein, F., & McKemmish, S. (2002). The two major traditions of research. In K. Williamson (Ed.), *Research methods for students, academics, and professionals: Information management and systems* (2nd ed.). Chandos. https://doi.org/10.1016/B978-1-876938-42-0.50009-5

Willis, M., Hunt, M., Wodika, A., Rhodes, D. L., Goodman, J., & Jozkowski, K. N. (2019). Explicit verbal sexual consent communication: Effects of gender, relationship status, and type of sexual behavior. *International Journal of Sexual Health, 31*(1), 60-70. https://doi.org/10.1080/19317611.2019.1565793

Willis, M., & Jozkowski, K. N. (2018). Barriers to the success of affirmative consent initiatives: An application of the social ecological model. *American Journal of Sexuality Education: A Special Issue of Health Teen Network, 13*(3), 324-336. https://doi.org/10.1080/15546128.2018.1443300

Worthington, R. L., & Whittaker, T. A. (2006). Scale development research: A content analysis and recommendations for best practices. *Counseling Psychologist, 34*(6), 806-838. https://doi.org/10.1177/0011000006288127

3.10 Transition to Study 3

In Study 2, I conducted the first sexual talk study that utilized dyadic data, as well as both retrospective and daily diary data. This was also the first study to explicitly examine whether gender/sex and dyad type differences exist in the use of mutualistic and individualistic talk in a sexual and gender/sex diverse sample of long-term couples. The results of Study 2 demonstrated that retrospectively, but not daily, women reported using more mutualistic talk than men, especially when women were in same-gender/sex relationships. Additionally, there were no gender/sex or dyad type differences in the use of individualistic talk retrospectively or at a daily level. In Study 2, I also conducted exploratory analyses for a subsample of GSD couples. While no post-hoc comparisons were conducted, the visual depiction of the results suggested some gender/sex and dyad type differences in the use of individualistic talk (retrospective and daily) but not mutualistic talk. Specifically, people partnered with a GSD individual used more individualistic talk than people partnered with a woman (daily only) or a man (retrospective and daily). Additionally, GSD individuals used more individualistic talk when partnered with a woman or GSD individual than GSD individuals partnered with a man (retrospective only). Further, I highlighted the importance of considering when and how sexual talk is assessed, given that results for mutualistic talk were different when data were retrospective, compared to when it was collected on a daily diary basis. Although some gender/sex and dyad type differences were observed, overall, the findings of Study 2 suggested that people in long-term relationships generally use mutualistic and individualistic talk with similar frequency regardless of their sex/gender, their partner's sex/gender, and their dyad type.

The broader sexual communication literature provides evidence that sexual communication may be differentially associated with sexual well-being depending on a person's

gender/sex or dyad type (e.g., Frederick et al., 2021; Mallory et al., 2019; Rehman et al., 2011). Further, sexual script theory proposes that there are differences in the ways men and women think about and approach sexuality (Gagnon, 1990). Indeed, the prevailing cultural level script in North America (i.e., the traditional sexual script; TSS) positions women as pursuing sex for emotional intimacy reasons and men as pursuing sex for physical sexual pleasure (Masters et al., 2013). Additionally, according to the theory of erotic plasticity (Baumeister, 2000), women's sexual well-being is more strongly influenced by cultural and situation factors, relative to men's sexual well-being. Collectively, the empirical and theoretical research suggest that despite a general lack of differences in frequency of sexual talk use based on gender/sex or dyad type, as found in Study 2, *how* sexual talk is associated with sexual well-being may still differ based on a person's gender/sex, the gender/sex of their partner, or the dyad type (i.e., same- vs. mixed-gender/sex). The objective of Study 3 was therefore to examine whether gender/sex and dyad type moderated the associations between mutualistic and individualistic talk and sexual satisfaction and desire, using dyadic daily diary data. A secondary objective of Study 3 was to better understand how sexual and gender/sex diverse individuals and couples might experience sexual talk based on their gender/sex when it comes to sexual satisfaction and desire, thus providing enhanced knowledge about who may benefit from different types of sexual talk based on the composition of their relationship.

3.10.1 References

Baumeister, R. F. (2000). Gender differences in erotic plasticity: The female sex drive as socially flexible and responsive. *Psychological Bulletin, 126*, 347-374. https://doi.org/10.1037/0033-2909.126.3.347

Frederick, D., Gillespie, B. J., Lever, J., Berardi, V., & Garcia, J. R. (2021). Sexual practices and satisfaction among gay and heterosexual men in romantic relationships: A comparison using coarsened exact matching in a U.S. national sample. *Journal of Sex Research*, Advance online publication. https://doi.org/10.1080/00224499.2020.1861424

Gagnon, J. H. (1990). The explicit and implicit use of scripting perspective in sex research. *Annual Review of Sex Research, 1*(1), 1-43. https://doi.org/10.1080/10532528.1990.10559854

Mallory, A. B., Stanton, A. M., & Handy, A. B. (2019). Couples' sexual communication and dimensions of sexual function: A meta-analysis. *Journal of Sex Research, 56*(7), 882-898. https://doi.org/10.1080/00224499.2019.1568375

Masters, N. T., Casey, E., Wells, E. A., & Morrison, D. M. (2013). Sexual scripts among young heterosexually active men and women: Continuity and change. *Journal of Sex Research, 50*(5), 409-420. https://doi.org/10.1080/00224499.2012.661102

Rehman, U. S., Rellini, A. H., & Fallis, E. (2011). The importance of sexual self-disclosure to sexual satisfaction and functioning in committed relationships. *Journal of Sexual Medicine, 8*, 3108-3115. https://doi.org/10.1111/j.1743-6109.2011.02439.x

CHAPTER 4: IS SEXUAL TALK ASSOCIATED WITH DAILY SEXUAL SATISFACTION AND DESIRE? A 35-DAY DIARY STUDY WITH SAME- AND MIXED-GENDER/SEX COUPLES

The manuscript prepared for this study is presented below. Readers are advised that Kathleen Merwin, under the supervision of Dr. Natalie Rosen, was responsible for developing the research questions and hypotheses, recruiting study participants, collecting data (telephone calls to screen for eligibility, describe the study protocol, and obtain verbal consent; weekly reminder calls during the daily diary portion of the study), preparing the datasets for analyses, conducting data analyses, and interpreting the study findings. Kathleen wrote the initial draft of the manuscript and received and incorporated feedback from her co-authors. The manuscript was submitted for peer-review on July 20, 2021. The current full reference for this manuscript is:

Merwin, K. E., Bergeron, S., Jodouin, J-F., Mackinnon, S. P., & Rosen, N. O. (2021). *Is sexual talk associated with daily sexual satisfaction and desire? A 35-day diary study with same- and mixed-gender/sex couples.* [Manuscript submitted for publication]. Department of Psychology and Neuroscience, Dalhousie University.

4.1 Abstract

Many couples report declines in sexual satisfaction and desire over time, making it critical to identify potential protective factors, such as sexual communication. Prior research has identified two types of sexual talk, which refers to verbal sexual communication that occurs exclusively *during* sex: individualistic (i.e., self-focused) and mutualistic (i.e., sharing/partner-focused), which have generally been linked to greater sexual well-being. Given initial evidence that sexual talk contributes differently to sexual well-being depending on gender/sex, it is important to examine gender/sex and dyad type (i.e., same- vs. mixed-gender/sex) as potential moderators. Using a 35-day online daily diary study with couples (N = 217; 64 same-gender/sex) in long-term relationships, we examined how daily variations in sexual talk were associated with a person's own and their partner's sexual satisfaction and sexual desire, and whether gender/sex or dyad type moderated these associations. On days that women used more individualistic or mutualistic talk, they reported greater sexual satisfaction and both men's and women's partners reported greater sexual satisfaction. On days that a person used more individualistic talk relative to their average across days, they and their partner reported greater sexual desire, and on days a person used more mutualistic talk, they—but not their partner—reported greater sexual desire. Exploratory analyses for a subsample of gender/sex diverse (GSD) couples (n = 22) revealed some differences from the binary couples. Findings suggest that women, men, and GSD individuals in long-term relationships may experience sexual talk in different ways when it comes to their sexual satisfaction and desire.

Keywords: sexual talk; sexual communication; couples; gender/sex; gender/sex diverse; dyadic daily diary

4.2 Introduction

Prior research shows that both sexual satisfaction and sexual desire are associated with greater overall life satisfaction and relationship satisfaction (Dewitte & Mayer, 2018; Stephenson & Meston, 2015a). Sexual satisfaction refers to an individual's subjective, affective evaluation of the positive and negative aspects of their sexual relationship (Lawrance & Byers, 1992), and sexual desire refers to an individual's motivation or interest in engaging in sexual activity (Spector et al., 1996). Although sexual satisfaction and desire are vital components of romantic relationships (Impett et al., 2014), many couples in long-term relationships experience declines in both over time (Liu, 2003; Murray & Milhausen, 2012). It is critical to identify factors that might help these couples maintain or even enhance their sexual satisfaction and desire.

One factor that may be helpful is sexual communication. MacNeil and Byers (2005, 2009) proposed two theoretical pathways through which sexual communication leads to greater sexual satisfaction: by enhancing feelings of intimacy (expressive pathway) and allowing partners to better meet each other's sexual needs (instrumental pathway). This theoretical model is empirically supported and there is cross-sectional evidence that greater sexual communication is associated with greater sexual satisfaction and desire through these pathways (MacNeil & Byers, 2005, 2009; Rehman et al., 2011). One type of sexual communication that has been understudied to date is sexual talk—verbal sexual communication that occurs *during* sexual activity and that is specific to that sexual activity (Jonason et al., 2016; Merwin & Rosen, 2020). Prior research suggests that two types of sexual talk exist: mutualistic (includes statements of excitement/pleasure, positive feedback/compliments, emotional intimacy/bonding, and instructions) and individualistic (includes statements of sexual dominance, submission, sexual ownership, and sexual fantasies; Jonason et al., 2016). Jonason et al. (2016) found that the use of

both individualistic and mutualistic talk was cross-sectionally associated with greater sexual satisfaction. However, another cross-sectional study found that only individualistic talk was associated with greater sexual satisfaction, whereas using more mutualistic talk was associated with lower sexual distress, and for women (but not men), greater sexual functioning (Merwin & Rosen, 2020).

There are several important gaps in the sexual talk literature. First, no research to date has examined the associations between sexual talk and sexual satisfaction or desire using dyadic data, that is, among couples. Given that sexual talk happens in an inherently dyadic context, it is important to explore how a person's sexual talk might be associated with both their own and their partner's sexual satisfaction and desire, as well as their interdependence. Second, no research on this topic has utilized a daily diary methodology, which reduces recall biases (Graham et al., 2003) and also provides the opportunity to examine how daily, within-person fluctuations in sexual talk may be associated with sexual satisfaction and desire, thus offering a more nuanced understanding of sexual talk. Third, while prior research has examined associations between sexual talk and sexual satisfaction, we have limited knowledge of its implications for sexual desire. A focus on sexual desire is important since there is consistent evidence that couples experience declines in desire over time (Murray & Milhausen, 2012) and that sexual desire concerns are the top reason people seek sex or couples therapy (Ellison, 2002). Finally, limited knowledge exists about the role of gender/sex[0] or dyad type (i.e., same- vs. mixed-gender/sex) in the associations between sexual talk and sexual outcomes. Given initial evidence that the types of sexual talk may contribute differently to sexual outcomes depending on gender/sex (Merwin & Rosen, 2020), it is necessary to examine this factor as a potential

[0] We utilize the term gender/sex throughout this paper because sex and gender are neither dichotomous nor independent of each other, and their specific impacts on sexual behavior, attitudes, and emotions are rarely separable (van Anders, 2015).

moderator for the associations between sexual talk and sexual satisfaction or desire. The present study sought to fill these critical gaps to provide a more nuanced understanding of sexual talk in long-term relationships, inclusive of sexual and gender/sex diverse people. Such knowledge could inform the development of evidence-based interventions to help couples maintain or even enhance their sexual satisfaction and desire.

4.2.1 Gender/Sex as a Moderator

Not only is there empirical evidence that the associations between sexual talk and certain sexual outcomes may depend on gender/sex (e.g., Merwin & Rosen, 2020), there is also theoretical support for considering gender/sex as a moderator. Indeed, sexual script theory provides a helpful framework for understanding how and why mutualistic and individualistic sexual talk may be differentially associated with sexual satisfaction and sexual desire according to gender/sex. According to sexual script theory, there are differences in how men and women think about and approach sexuality, based on the societal and cultural messages they receive (Simon & Gagnon, 2003; Wiederman, 2005). According to the traditional sexual script (TSS), which is the prevailing cultural sexual script in North America (Klein et al., 2019; Masters et al., 2013) and empirically supported (Maxwell, 2007), women prioritize emotional intimacy whereas men are more concerned with sexual pleasure (Masters et al., 2013; Simon & Gagnon, 2003). Thus, individualistic talk—which is theorized to be focused on one's own sexual pleasure and experience—may be more in line with men's roles in the TSS and be used more frequently by men or be more important for men's sexual outcomes. In contrast, mutualistic talk—which focuses on sharing the sexual experience with one's partner—may be more in line with women's roles in the TSS and thus be used more frequently by women or be more important for women's

sexual outcomes. A recent study by Merwin et al. (2021)[0, 0] found that men, women, and gender/sex diverse (GSD) individuals generally use similar amounts of sexual talk, suggesting that the differences we might expect for the amount of sexual talk used are not present. However, it is still possible that—in line with sexual script theory—the relationship between sexual talk and sexual satisfaction and desire may differ based on a person's own gender/sex, their partner's gender/sex, and/or the dyad type.

The broader sexual communication literature supports this contention. One meta-analysis found that effect sizes for the associations between sexual communication and greater sexual desire were larger for women, compared to men (Mallory et al., 2019). Additionally, Rehman et al. (2011) found that although a person's own level of sexual self-disclosure was positively associated with their own sexual satisfaction, a *partner's* sexual self-disclosure was associated with men's—but not women's—sexual satisfaction. Prior research with same- and mixed-gender/sex relationships has provided conflicting evidence of dyad type differences (Frederick et al., 2021; Holmberg & Blair, 2009). One study found no dyad type differences in the level of sexual communication (Holmberg & Blair, 2009), whereas Frederick et al. (2021) examined relative effect sizes and found that the effect sizes for the association between sexual communication and sexual satisfaction were greater for gay men, relative to heterosexual men. However, no study to date has examined whether dyad type *moderates* associations between sexual communication (or sexual talk) and sexual satisfaction or desire. It is critical to know whether the association between sexual talk and sexual outcomes differs based on gender/sex or dyad type, as this may suggest that interventions targeting sexual talk in couples would need to be tailored to the gender/sex of one or both members or the dyad type.

[0] Utilized the same sample as the present study.
[0] This is Study 2 of my dissertation (see Chapter 3).

Due to the highly hetero- and cis-normative nature of the TSS, GSD individuals and those in same-gender/sex relationships may develop alternative sexual scripts that are more flexible and rely less on rigid gender/sex roles (Gabb, 2019; Lindley et al., 2020). As such, the relationships between sexual talk and sexual satisfaction and desire may be different for GSD individuals and those in same-gender/sex dyads, compared to individuals who identity within the gender/sex binary and those in mixed-gender/sex dyads. However, there is also evidence that in the absence of an alternative sexual script, same gender/sex couples may adhere more strongly to the TSS (Courtice & Shaughnessy, 2018), suggesting that findings may be similar regardless of dyad type. Given a lack of prior research, it remains unclear what role gender/sex plays in the links between sexual talk and sexual desire and satisfaction in GSD couples.

4.2.2 Current Study

Among a sexual and gender/sex diverse sample of community couples in long-term relationships, the objective of the current study was to examine how daily variations in sexual talk were associated with same-day sexual satisfaction and dyadic sexual desire (i.e., desire for their partner), after adjusting for previous-day levels of sexual satisfaction or desire. We simultaneously sought to examine whether these associations were moderated by a person's own gender/sex, their partner's gender/sex, and the interaction between these two (i.e., dyad type; same- vs. mixed-gender/sex couples). Based on prior research and sexual script theory, we hypothesized that: (1) On days that people used more mutualistic talk relative to their average across all days, they would report greater sexual satisfaction and dyadic sexual desire, and this association would be stronger for women than for men; (2) On days that people used more individualistic talk relative to their average, they would report greater sexual satisfaction and dyadic sexual desire, and this association would be stronger for men than for women. We

examined the associations between a person's sexual talk and their partner's sexual outcomes, possible moderations by partner's gender/sex and/or dyad type, as well as associations between sexual talk and sexual outcomes for GSD couples in an exploratory manner due to a lack of prior research and theory to inform hypotheses. However, we anticipated that these effects might exist given evidence from the broader sexual communication literature (Rehman et al., 2011).

4.3 Method

The present study was part of a larger, two-site, longitudinal and daily diary research project of factors associated with the sexual well-being of couples in long-term relationships; three previous papers have been published utilizing this dataset. Two studies examined pornography use and sexual and relationship outcomes (Vaillancourt-Morel et al., 2021; Vaillancourt-Morel et al., 2020), one examined sexual desire discrepancies and sexual distress (Jodouin et al., 2021). A fourth paper, which has been provisionally accepted for publication, examined gender/sex and dyad type differences in sexual talk use (Merwin et al., 2021). The present study utilizes data from the daily diary portion of this larger research project.

4.3.1 Participants

Couples were recruited from across Canada and the United States using multiple methods as described in Chapter 3 (sections 3.3.1.1 and 3.4.1.1). Eligibility criteria for participants are described in detail in Chapter 3 (sections 3.3.1.1 and 3.4.1.1). Details of the recruitment and eligibility of participants can also be found in Supplementary Figure C.7.

The final sample for the present study was 217 couples (n = 64; 29.5% same-gender/sex couples), including 230 (53.0%) women, 180 (41.5%) men, and 24 (5.5%) GSD individuals. Participants who were categorized as GSD included those who self-identified as agender (n = 8), genderqueer and/or gender-fluid (n = 6), non-binary (n = 5), androgyne (n = 1), butch (n =1),

non-binary with a transmasculine history (n = 1), transmasculine genderqueer (n =1), and transmasculine non-binary (n = 1).

There were 195 (89.9%) binary couples (i.e., couples in which both members identified within the gender/sex binary), consisting of 133 woman-man, 42 woman-woman, and 20 man-man dyads. The sample also included 22 (10.1%) GSD couples (i.e., couples in which one or both members identified as GSD), consisting of 13 GSD-woman, 7 GSD-man, and 2 GSD-GSD dyads. Approximately half of the sample identified as heterosexual (n = 243; 56.0%), while the other half (n = 191, 44.0%) identified with diverse sexual orientations: 18.0% (n = 78) identified as gay/lesbian, 11.1% (n = 48) as bisexual, 8.8% (n = 38) as queer, 3.9% (n = 17) as pansexual, 0.7% (n = 3) as uncertain or confused, 0.2% (n = 1) as asexual, and 1.4% (n = 6) as 'other' (see Supplementary Table D.1 for details). Participants ranged in age from 18 to 70 years (M = 30.39, SD = 8.47) and relationship length ranged from 1 to 38 years (M = 5.84, SD = 5.10). Additional demographic information for the sample can be found in Supplementary Table D.1.

4.3.2 Procedure

Couples participated in a structured telephone interview with a research assistant to determine eligibility and eligible couples were emailed a link to an online baseline survey (see Vaillancourt-Morel et al., 2020 for details). Following completion of this baseline survey, participants completed a 35-day daily diary. Daily questionnaires were hosted through Qualtrics Research Suite, a secure online program, and took an average of 8.71 (SD = 31.50) minutes to complete. Participants were sent an email containing a link to their daily diary for 35 consecutive days and were instructed to complete the survey independently from their partner at the end of each day and to respond based on their experiences in the past 24 hours. Participants responded to questions about whether they engaged in sexual activity and on days that they reported

engaging in sexual activity with their partner, they completed a measure of their sexual talk use. Participants also completed measures of sexual satisfaction and dyadic sexual desire on all days. Daily diaries were available for a 12-hour period (i.e., 6pm one day to 6am the next day). All participants were contacted by a research assistant once per week to address any questions or concerns and to encourage high completion rates. Participants were compensated with an Amazon gift card based on the proportion of diaries they completed, with a maximum of $50 CAN per person for completing at least 85% of their diaries (i.e., 30 out of 35 entries). The study was approved by both institutional research ethics boards.

4.3.3 Measures

Background Survey

Sociodemographic Characteristics. Participants completed questions about their age, sexual orientation, education, income, number of children, cultural identity, relationship status, and relationship length in the baseline survey.

Gender/Sex. Gender/sex was assessed using responses to one question about current gender identity (*What is the gender identity with which you most identify?*) and one question about biological sex, which is in-line with the two-step method outlined in Bauer et al. (2017). Participants answered these two questions at two timepoints in the larger research project (baseline and 6-months); however, for the purposes of the current study, responses from baseline were used for most participants. The gender identity question was added after data had been collected for 64 participants, so responses to the same gender identity question completed at 6-months for the larger study were utilized for these individuals. Participants were then assigned to one of three gender/sex categories (i.e., woman, man, GSD) based on their self-reported gender/sex responses. Cis and trans women were grouped together, cis and trans men were

grouped together, and individuals who reported additional gender/sex identities (e.g., genderqueer, non-binary, agender) were grouped together (i.e., GSD).

Daily Measures

Sexual Activity Days. A "sexual activity day" refers to a day on which participants reported engaging in sexual activity with their partner who was also participating in the study. Participants were provided with the following definition of sexual activity: "…*can include (but is not limited to): kissing, fondling, caressing, foreplay, vaginal penetration (with penis, fingers, sex-toys, etc.), anal penetration (with penis, fingers, sex-toys, etc.), manual stimulation, oral sex, using sex-toys, etc.*" Two items from the Monash Women's Health Program Female Sexuality Satisfaction Questionnaire (Davison et al., 2008) were used to identify sexual activity days. The first item asked participants whether they had engaged in any sexual activity in the past 24 hours, and the second item determined who that sexual activity was with ("*myself, alone*," "*my partner*," "*another sexual partner*"). Participants were instructed to answer questions about their most recent sexual activity with their partner if they had engaged in sexual activity more than once in the past 24 hours. Only data from days in which both members of a couple reported engaging in sexual activity with each other were included in analyses for the current study. When there was a discrepancy between partners' reports of sexual activity with each other (n = 330 out of 6088 days; 5.4%), these days were excluded from analyses.

Sexual Talk. Participants completed the SexTalk measure (Jonason et al., 2016; Merwin & Rosen, 2020) to assess their frequency of mutualistic and individualistic sexual talk. This validated measure was adapted so that participants reported on the frequency with which they engaged in each type of sexual talk with their current romantic partner during sexual activity in the previous 24 hours. The SexTalk measure consists of eight items that participants responded

to on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*a lot*). Both the mutualistic and individualistic subscales consist of four items. Each item listed a type of mutualistic or individualistic sexual talk and provided three examples. For example, one mutualistic talk item was: "*Positive feedback or compliments. E.g., You're so great at that, I love it when you slow down, You taste so good*," and one individualistic item was: "*Statements which are sexually dominant. E.g., Show me your pussy/cock, Who's my sextoy?, Come for me baby*." Each subscale was summed to provide a daily total subscale score ranging from 4 to 20, with higher scores indicating more frequent daily use of mutualistic or individualistic sexual talk.

This measure has previously been validated for use with both English- and French-speaking individuals using the same sample as the present study (Merwin et al., 2021). A full description of the validation of this adapted measure with this sample, including the results of a multilevel Confirmatory Factor Analysis (CFA), can be found in Merwin et al. (2021). In the current study, mutualistic and individualistic sexual talk were positively correlated ($r = 0.48$, $p < .01$) and there was adequate reliability for both of the subscales of the SexTalk measure for men (mutualistic: $\omega_{within} = 0.67$, $\omega_{between} = 0.87$; individualistic: $\omega_{within} = 0.65$, $\omega_{between} = 0.88$), women (mutualistic: $\omega_{within} = 0.74$, $\omega_{between} = 0.84$; individualistic: $\omega_{within} = 0.68$, $\omega_{between} = 0.78$). The sample size for GSD individuals was too small for accurate estimates of ω and are thus not reported.

Dyadic Sexual Desire. One item from the dyadic sexual desire subscale of the Sexual Desire Inventory-2 (SDI-2; Spector et al., 1996) was used to assess participants' level of sexual desire for their current partner in the previous 24 hours: "*How often did you feel sexual desire for your partner today?*" Participants responded to this item on a 7-point Likert scale ranging from 1 (*not at all*) to 7 (*a lot*), with higher scores indicating greater dyadic sexual desire. Previous daily

diary studies have utilized similar single-item measures to assess dyadic sexual desire (Dewitte & Mayer, 2018).

Sexual Satisfaction. The Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1998) was used to assess daily sexual satisfaction. The instructions for this measure were adapted for use in a daily diary study. Participants were asked to select on a 7-point bipolar scale what best described their sexual relationship with their current partner in the past 24 hours using five word-pairs (e.g., *very negative* to *very positive*). Summed scores ranged from 5 to 35, with higher scores indicating higher levels of daily sexual satisfaction. The GMSEX has excellent reliability and validity (Lawrance & Byers, 1998) and in the current study there was strong reliability for men ($\omega_{within} = 0.94$, $\omega_{between} = 0.99$) and women ($\omega_{within} = 0.95$, $\omega_{between} = 0.99$). The sample size for GSD individuals was too small for accurate estimates of ω and are not reported.

4.3.4 Data Analyses

Due to the multi-level nature of the data, internal consistency was assessed using a multi-level adaptation of Omega (Geldhof et al., 2014) in MPlus (8.0; Muthén & Muthén, 2017). All other analyses were conducted using SPSS (version 26.0). No meaningful variable distinguished members of a couple across all dyads, so dyads were treated as indistinguishable and random role assignment was used within each dyad (Kenny et al., 2006). Analyses were guided by the Actor-Partner Interdependence Model (APIM; Kenny et al., 2006) to account for the nonindependence of the data. Both actor effects and partner effects were examined: the association between a person's daily sexual talk and *their own* same-day sexual satisfaction and desire (actor effect), and the association between a person's daily sexual talk and *their partner's* same-day sexual satisfaction and desire (partner effect). Additionally, we controlled for the sexual outcomes on the preceding day in their respective models, meaning all significant effects

were maintained above-and-beyond the level of sexual satisfaction or dyadic sexual desire on the day prior. We examined same-day associations because we did not anticipate that sexual talk would have a significant influence on sexual outcomes the next day, above and beyond the link with sexual outcomes on the same day.

Following recommendations for daily and longitudinal dyadic data with indistinguishable dyads (Kashy et al., 2008) and for moderation in the APIM (Garcia et al., 2014), we analysed the data with moderated multilevel mixed regression models. We utilized two-level cross models with fixed slopes and random intercepts where persons were nested within dyads, and persons and days were crossed given that both partners completed the daily surveys on the same days (Kenny et al., 2006). Missing data were handled using the full information maximum likelihood method. Models included both mutualistic and individualistic talk, with separate models for each outcome. Mutualistic and individualistic sexual talk were person-mean centered as we were interested in within-person variations in sexual talk (i.e., on days a person used more or less sexual talk than their average across days, was this associated with same-day sexual satisfaction and desire?).

The primary analyses were conducted using only couples in which both members identified on the gender binary (i.e., as men or women; n = 195 couples). Actor's gender/sex, partner's gender/sex, and dyad type (i.e., the interaction between actor's gender/sex and partner's gender/sex) were included as moderators. Gender/sex was effect coded as -1 = woman, +1 = man for the primary analyses. We used hierarchical model reduction in combination with p-value criterion model reduction to reduce model complexity and improve interpretation (Heck & Thomas, 2009; Heck et al., 2014): when all of the highest-order interaction terms were non-significant, these terms were removed and the model was re-run.

A set of exploratory analyses were then conducted using only couples in which one or both members identified as GSD because the subsample of GSD couples (n = 22 couples) was not sufficient for gender/sex comparisons in the same model as the binary couples. While these exploratory analyses are largely underpowered, including GSD couples in analyses was important from both diversity/equity and advancement of scientific knowledge perspectives (Fraser, 2018; Fraser et al., 2020). Further, by modifying traditional dyadic models to account for different genders and combinations in a statistically non-traditional way, we show how the APIM can also be expanded to examine gender/sex effects beyond the binary of man/woman. These exploratory analyses were the same as the primary analyses, except that (a) dyad type was not included as a moderator and (b) gender/sex was dummy coded as there were three gender/sex categories to consider: man, woman, and GSD. Four dummy coded variables were created (two for actor's gender/sex and two for partner's gender/sex) using women as the reference group. This coding resulted in one dummy coded variable representing GSD individuals compared to women (women and men = 0, GSD = 1) and another representing men compared to women (women and GSD = 0, men = 1).[0]

All significant interactions were followed up using simple slopes analyses. Online supplemental materials (i.e., data, syntax, appendices) can be found on the OSF page: https://osf.io/23xfw/?view_only=1986f6ae2e9a443c813b8a80cdc5487f.[0]

[0] We also re-ran all exploratory analyses using men as the reference group; the pattern of statistical significance remained the same (see Supplementary Tables D.2, D.5, and D.6).
[0] Data file is password protected and to be used for research purposes only. Please contact the corresponding author for access.

4.4 Results

4.4.1 Descriptive Statistics

Data were collected for 13,134 (86.5%) of the total possible daily diaries (15,554 possible daily diaries). The majority of couples reported at least one sexual activity day during the 35-day period (95.9%, $n = 208$), resulting in 2762 entries for sexual activity days. The average number of sexual activity days was 6.61 ($SD = 4.56$) per couple, ranging from 1 to 26 days. Means and standard deviations for sexual talk, sexual satisfaction, and sexual desire are provided in Table 4.7.1.

4.4.2 Mutualistic Sexual Talk

Binary Couples. In the sexual satisfaction model, there were significant actor ($B = 0.24$, $SE = 0.05$, $p < .001$) and partner ($B = 0.11$, $SE = 0.05$, $p < .05$) main effects for mutualistic talk and a significant two-way interaction between actor's mutualistic talk and actor's gender/sex [$B = -0.16$, $SE = 0.05$, $p < .01$ (see Supplementary Table 4.10.3 for full results)]. On days that a person used more mutualistic talk, their partner reported greater sexual satisfaction. A simple slopes analysis for the significant interaction showed that women reported significantly greater sexual satisfaction on days that they used more mutualistic talk compared to days they used less [women in same-gender/sex dyads: $B = 0.42$, $t(436) = 4.84$, $p < .001$; women in mixed-gender/sex dyads: $B = 0.38$, $t(433.80) = 5.34$, $p < .001$]; whereas for men, there was no significant difference in sexual satisfaction based on their daily use of mutualistic talk [men in same-gender/sex dyads: $B = 0.06$, $t(456.03) = 0.57$, $p = .572$; men in mixed-gender/sex dyads: $B = 0.10$, $t(440.38) = 1.25$, $p = .211$; Figure 4.8.2]. In the dyadic sexual desire model, there was a significant actor main effect for mutualistic talk [$B = 0.12$, $SE = 0.11$, $p < .001$ (see Supplementary Table 4.10.3 for full results)]. On days that a person reported using more

mutualistic talk, they—but not their partner—reported greater dyadic sexual desire, regardless of gender/sex. There were no other significant main effects or interactions in the dyadic sexual desire model.

GSD Couples. In the sexual satisfaction model, there was a significant actor main effect for mutualistic talk [$B = 0.69$, $SE = 0.20$, $p < .01$ (see Supplementary Table 4.10.3 for full results)]. On days that a person reported using more mutualistic talk, they reported greater sexual satisfaction. In the dyadic sexual desire model, there were two significant two-way interactions (see Supplementary Table 4.10.3 for full results): one between actor's mutualistic talk and actor's gender/sex dummyC1 (which contrasted men with women; $B = 0.22$, $SE = 0.09$, $p < .05$) and one between actor's mutualistic talk and actor's gender/sex dummyC2 (which contrasted GSD individuals with men; $B = 0.42$, $SE = 0.20$, $p < .05$). There was one significant simple slope, indicating that on days women with a GSD partner used more mutualistic talk, they reported significantly lower sexual desire, compared to days they used less mutualistic talk [$B = -0.12$, $t(150.59) = -2.02$, $p = .045$; Figure 4.8.2]. All other simple slopes were non-significant: men [$B = 0.10$, $t(148.55) = 1.44$, $p = .153$], GSD partnered with men [$B = -0.04$, $t(159.94) = -0.47$, $p = .641$], GSD partnered with women [$B = 0.11$, $t(152.39) = 1.61$, $p = .109$], or GSD partnered with GSD [$B = 0.30$, $t(102.14) = 1.52$, $p = .132$]. Overall, the simple slopes tests were underpowered, as they require examining each subgroup separately and each subgroup was very small (i.e., n's = 4 to 13). However, the significant interactions and plot suggest that the associations between daily mutualistic talk and same-day dyadic sexual desire may differ based on the actor's gender/sex within GSD couples (Figure 4.8.2). Importantly, as these analyses were exploratory and underpowered, they should be interpreted with caution.

4.4.3 Individualistic Sexual Talk

Binary Couples. In the sexual satisfaction model, there were significant actor ($B = 0.32$, $SE = 0.08$, $p < .001$) and partner ($B = 0.16$, $SE = 0.08$, $p < .05$) main effects for individualistic talk and a significant two-way interaction between actor's individualistic talk and actor's gender/sex [$B = -0.23$, $SE = 0.08$, $p < .01$ (see Supplementary Table 4.10.4 for full results)]. On days that a person used more individualistic talk relative to their average across days, their partner reported greater sexual satisfaction. A simple slopes test for the significant interaction showed that women reported significantly greater sexual satisfaction on days that they used more individualistic talk, compared to days that they used less [women in same-gender/sex dyads: $B = 0.51$, $t(460.26) = 3.65$, $p < .001$; women in mixed-gender/sex dyads: $B = 0.58$, $t(480.59) = 4.52$, $p < .001$]; whereas for men, there was no significant difference in sexual satisfaction based on their daily individualistic talk [men in same-gender/sex dyads: $B = 0.13$, $t(489.03) = 0.87$, $p = .387$; men in mixed-gender/sex dyads: $B = 0.05$, $t(465.99) = 0.43$, $p = .665$; Figure 4.8.3]. There were no other significant main effects or interactions for the sexual satisfaction model. In the dyadic sexual desire model, there were significant actor ($B = 0.10$, $SE = 0.02$, $p < .001$) and partner ($B = 0.06$, $SE = 0.02$, $p < .01$) main effects for individualistic talk; all other main effects and interactions were not significant (see Supplementary Table 4.10.4 for full results). On days that a person used more individualistic talk, both they and their partner reported greater dyadic sexual desire.

GSD Couples. In both the sexual satisfaction and dyadic sexual desire models, there were no significant main effects or interactions (see Supplementary Table 4.10.4 for full results). For those in GSD couples, daily use of individualistic talk was not associated with same-day sexual satisfaction or dyadic sexual desire.

4.5 Discussion

Using a sexual and gender/sex diverse sample of community couples, the present study examined how daily variations in sexual talk were associated with a person's own and their partner's same-day sexual satisfaction and dyadic sexual desire, above-and-beyond levels of sexual satisfaction and desire the previous day. Simultaneously, we examined whether these associations were moderated by gender/sex or dyad type. Our findings make novel contributions that are in line with the sexual communication literature, as well as sexual script theory (MacNeil & Byers, 2005; Simon & Gagnon, 2003). Overall, our findings indicate that individuals may experience sexual talk in diverse ways with respect to their sexual satisfaction and dyadic sexual desire, based on their own and their partner's gender/sex.

4.5.1 Binary Couples

In support of our hypothesis, in binary couples, on days women—but not men—used more mutualistic talk they reported greater sexual satisfaction. Contrary to our hypothesis, we also found that women—but not men—reported greater sexual satisfaction on days they used more individualistic talk. One possible explanation is that women's sexual talk—through the instrumental pathway—fosters sexual growth (e.g., broadening of sexual scripts), resulting in enhanced sexual satisfaction, whereas men's sexual talk may not enhance their own sexual experience above-and-beyond the aspects of sex which occur regardless of sexual talk use (Mahar et al., 2020). There is also evidence that women's sexual attitudes, behaviour, and desire may be more strongly influenced by cultural, social, and situational factors compared to men (Baumeister, 2000). Thus, it is also possible that both types of daily sexual talk were associated with greater sexual satisfaction for women relative to men because sexual talk is a situational/contextual factor. This explanation is consistent with Merwin and Rosen's (2020)

finding that sexual talk was associated with women's—but not men's—sexual functioning. Further, it is consistent with prior research findings that context may be more important for other aspects of women's sexuality, such as sexual arousal and desire, than for men's (Dawson & Chivers, 2014).

However, if situational factors do have a stronger influence on women's sexual satisfaction (Baumeister, 2000), we might also expect gender/sex to moderate the effects of sexual talk on a partner's sexual satisfaction. Contrary to this expectation, we found that on days a person used more mutualistic or individualistic talk, their partner reported greater sexual satisfaction, regardless of gender/sex. When a person uses more sexual talk than is typical, their partner may experience enhanced feelings of intimacy and/or sexual arousal, thereby leading to a partner's greater sexual satisfaction through the expressive and instrumental pathways (MacNeil & Byers, 2005, 2009). Alternatively, it is possible that individualistic talk might be more consistent with women's roles in the TSS (i.e., focused on emotional intimacy) than previously thought. Indeed, a qualitative study with BDSM (i.e., bondage-discipline, dominance-submission, sadism-masochism) practitioners found that most people viewed BDSM as centered on emotional experiences and perceived it to facilitate deeper interpersonal connections (Simula, 2019a). Given that individualistic talk consists of statements of sexual dominance, submission, sexual ownership, and sexual fantasies, it is possible that this type of sexual talk enhances feelings of intimacy and thus may be more important for women's sexual satisfaction.

We also found that on days a person used more individualistic talk, both they and their partner reported greater sexual desire and on days a person used more mutualistic talk, they reported greater sexual desire. Past research suggests that sexual novelty promotes sexual desire in long-term relationships (de Oliveira et al., 2021). Using either type of sexual talk more than is

typical may increase sexual novelty and thus enhance a person's own sexual desire. It is interesting that we found a person's own individualistic talk—but not their mutualistic talk—was associated with their *partner's* sexual desire. Individualistic talk is more sexually 'explicit' (e.g., involves sexual fantasies) and is less commonly used compared to mutualistic talk (Jonason et al., 2016; Merwin & Rosen, 2020). Accordingly, when a person uses more individualistic talk than usual, this might create an even more novel sexual experience, conceivably enhancing their partner's sexual desire towards them (Ziegler & Conley, 2016).

We did not find any gender/sex moderations for the associations between sexual talk and dyadic sexual desire. While there is evidence of gender/sex differences in sexual desire (Peplau, 2003), both researchers and clinicians have suggested that these differences typically occur when we examine overall trait desire and may be less apparent in responsive sexual desire, especially when examined at the state-level (i.e., desire triggered by a stimulus or context, as opposed to automatic/apontaneous desire; Basson, 2001; Goldey & van Anders, 2012; for a contrasting perspective see: Meana, 2010). When men and women experience similar levels of dyadic sexual desire, as was the case in the current study, it is plausible that their dyadic desire will be similarly affected by contextual factors such as sexual talk.

4.5.2 GSD Couples

The results for the GSD couples suggest that, unlike the binary couples, individualistic talk was not associated with sexual satisfaction or dyadic sexual desire. The results also suggest that gender/sex may moderate the associations between mutualistic talk and sexual desire, but not satisfaction, and that a person's mutualistic talk is not associated with their partner's sexual satisfaction or desire. Further, unlike the binary couples, for women in GSD couples, daily mutualistic talk was *negatively* associated with sexual desire, whereas for men and GSD

individuals in GSD couples, daily mutualistic talk tended to be *positively* associated with sexual desire. However, the findings for the GSD couples—especially the follow-up simple slope analyses and as comparisons to the binary couples—should be interpreted with caution due to power concerns; we therefore refrain from interpreting these results in detail until they have been replicated with sufficient sample sizes.

4.5.3 Strengths, Limitations, and Future Directions

The present study was, to the best of our knowledge, the first to examine how daily variations in sexual talk were associated with sexual satisfaction and dyadic sexual desire, using a dyadic daily diary methodology, and the first to examine gender/sex and dyad type as moderators. Our study used a large sample of sexual and gender/sex diverse community couples in long-term relationships, thus providing initial insights into whether the relationship between sexual talk and sexual outcomes may differ based on gender/sex. Utilizing a dyadic framework accounted for the fact that within a relationship, one person's emotion, cognition, or behaviour can affect the emotion, cognition, or behaviour of their partner (i.e., the data is interdependent; Cook & Kenny, 2005). In addition to reducing recall biases and increasing ecological validity (Graham et al., 2003), using daily diary methodology allowed us to examine how daily, within-person fluctuations in sexual talk (and not simply a person's general use of sexual talk) were associated with same-day sexual satisfaction and desire—providing us with a more nuanced understanding of the role of sexual talk in long-term relationships.

There are also several important limitations of the present study. First, while including GSD couples helps with the advancement of scientific knowledge (Fraser, 2018; Fraser et al., 2020), the small subsample meant that these analyses were exploratory and underpowered. Second, the demographics of the sample—largely young, White, well-educated, childless,

unmarried, French- and/or English-speaking, living in North America, and with access to technology—may limit the generalizability of our findings. Additionally, like most sexuality research, the generalizability of our findings may be limited by a volunteer bias (e.g., more positive sexual attitudes; Bouchard et al., 2019). Third, the current study design did not allow us to determine directionality or causality and as such the results could also be interpreted in the opposite directions. For example, it may be that on days people are experiencing more dyadic sexual desire, they are more likely to use sexual talk. Future experimental research should aim to determine whether sexual talk increases sexual satisfaction and desire, or alternatively, whether people use more sexual talk when they are experiencing greater sexual satisfaction or desire.

Finally, future research should explore other potentially important moderators or covariates. For example, belief in stereotypical gender/sex norms or adherence to the TSS may affect how sexual talk is associated with sexual outcomes. Some authors (Merwin & Rosen, 2020) have speculated that how a partner is perceived to *respond* to sexual talk (i.e., how much are a partner's responses to sexual talk viewed as accepting, understanding, validating, and caring) may matter for sexual outcomes above-and-beyond the type of sexual talk used.

4.5.4 Conclusions

Overall, findings of the present study suggest that for individuals in long-term relationships, the associations between mutualistic and individualistic sexual talk and sexual satisfaction and dyadic sexual desire differed depending on gender/sex but not dyad type. In other words, men, women, and GSD individuals may experience sexual talk in diverse ways with respect to associations with their sexual satisfaction and desire. Pragmatically, the results of the current study suggest that interventions developed to help couples in long-term relationships with their sexual satisfaction and desire may benefit from targeting different types of sexual talk

depending on a person's gender/sex. For instance, women in binary couples might benefit from psychoeducational interventions informing them that their *own* daily sexual talk is linked to their sexual satisfaction. Further, those in GSD couples might benefit from interventions that focus more on mutualistic sexual talk, although future research with GSD couples is still needed. Beyond these practical implications, our findings indicate that sexual talk may hold different importance for a person's sexual satisfaction and desire based on their gender/sex.

4.6 Acknowledgements

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4.7 Tables

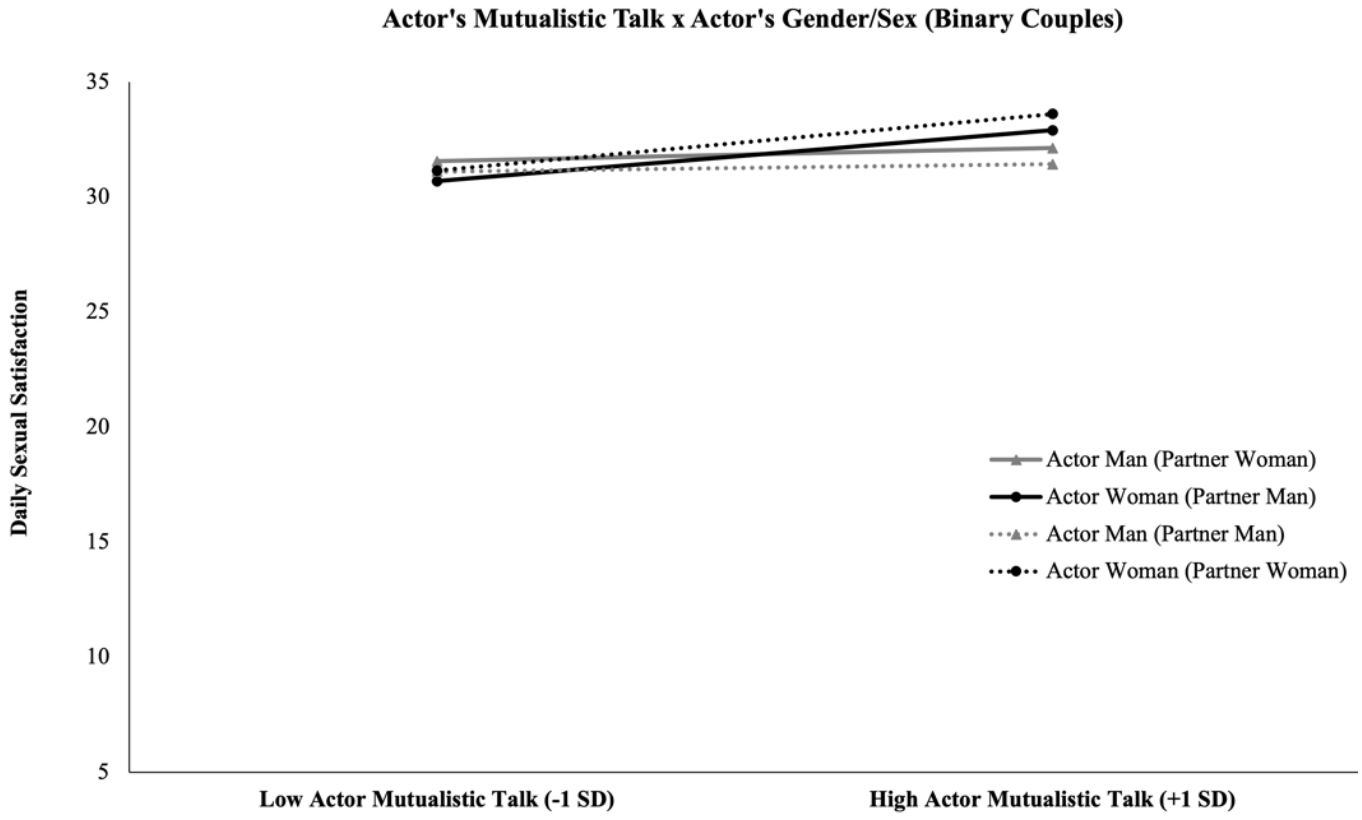
Table 4.7.1 *Means and standard deviations for Daily Sexual Talk, Sexual Satisfaction, and Dyadic Sexual Desire*

Group		*M*(*SD*)			
	n[a]	Mutualistic Talk	Individualistic Talk	Sexual Satisfaction	Dyadic Sexual Desire
Binary Couples					
Women partnered with women	84	10.18 (3.07)	5.08 (1.43)	31.83 (4.89)	2.76 (1.75)
Men partnered with men	40	9.11 (3.08)	5.26 (1.41)	30.13 (5.01)	2.82 (1.69)
Women partnered with men	133	9.24 (3.34)	4.95 (1.62)	31.00 (4.94)	2.66 (1.69)
Men partnered with women	133	9.16 (3.45)	5.30 (2.30)	31.03 (5.40)	3.13 (1.71)
GSD Couples					
GSD partnered with men	7	8.84 (2.11)	4.84 (0.72)	33.20 (3.26)	2.71 (1.63)
GSD partnered with women	13	9.67 (1.65)	5.47 (1.89)	30.89 (4.79)	3.17 (1.92)
GSD partnered with GSD	4	8.62 (4.35)	7.83 (3.90)	30.26 (3.54)	3.37 (1.39)
Women partnered with GSD	13	10.49 (3.24)	5.69 (1.99)	30.83 (5.86)	2.53 (1.76)
Men partnered with GSD	7	11.48 (3.98)	8.05 (3.98)	33.12 (4.17)	3.44 (1.87)

[a]Number of individuals

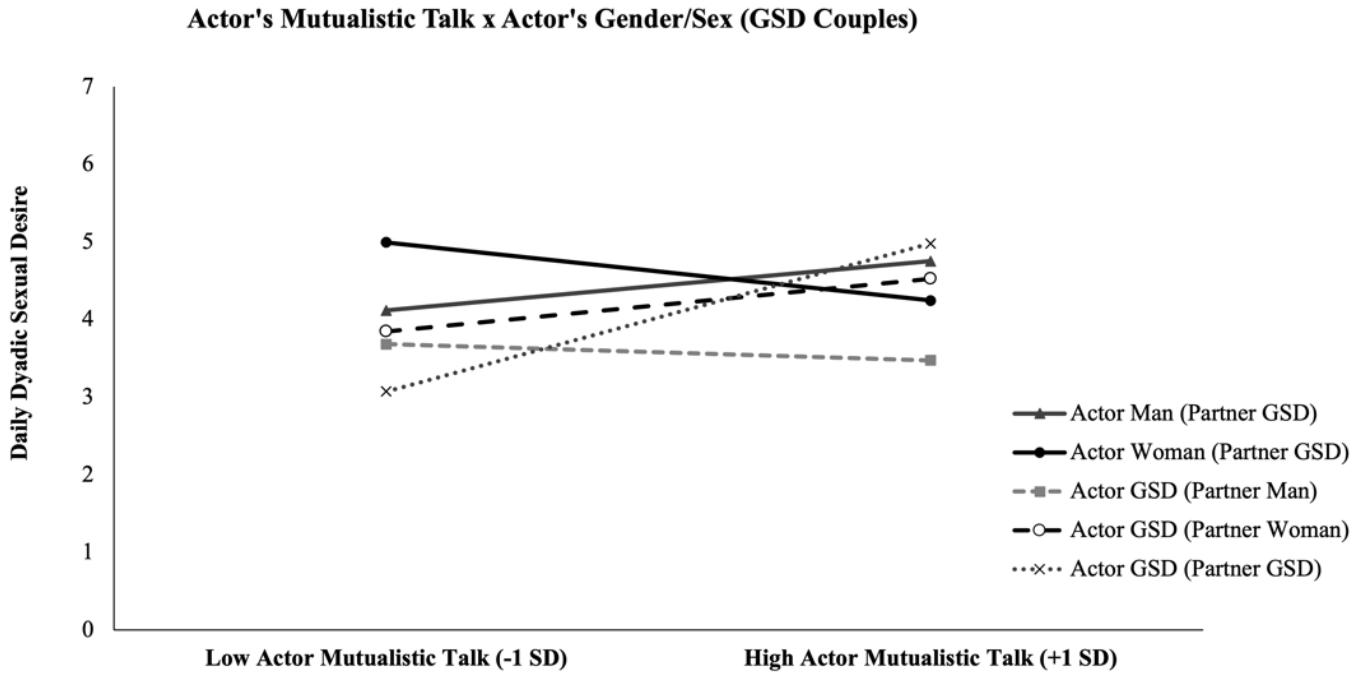
4.8 Figures

Figure 4.8.1 *Simple Slopes for Interaction between Actor's Mutualistic Talk and Actor's Gender/Sex (Binary Couples)*



Note. Regression slopes for the interaction (actor's mutualistic talk x actor's gender/sex) in the sexual satisfaction model. The simple slopes analysis indicated that women reported significantly greater sexual satisfaction on days that they used more mutualistic talk, compared to days they used less [women in same-gender/sex dyads: $B = 0.42$, $t(436) = 4.84$, $p < .001$; women in mixed-gender/sex dyads: $B = 0.38$, $t(433.80) = 5.34$, $p < .001$]. In contrast, for men, there was no significant difference in sexual satisfaction based on their daily use of mutualistic talk [men in same-gender/sex dyads: $B = 0.06$, $t(456.03) = 0.57$, $p = .572$; men in mixed-gender/sex dyads: $B = 0.10$, $t(440.38) = 1.25$, $p = .211$].

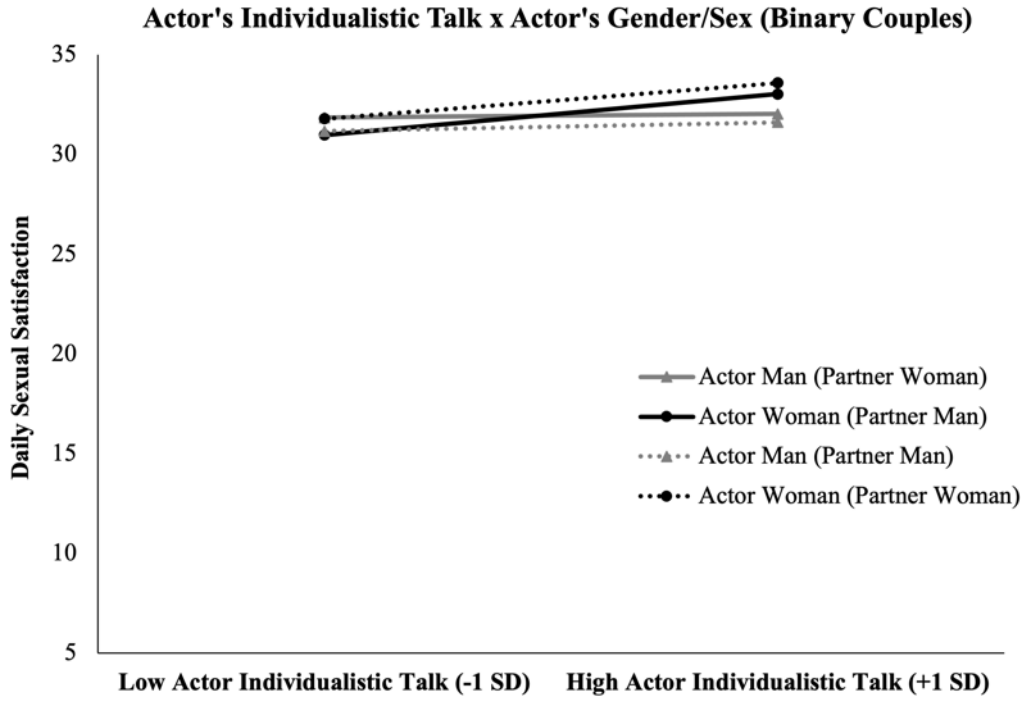
Figure 4.8.2 *Simple Slopes for Interaction between Actor's Mutualistic Talk and Actor's Gender/Sex (GSD Couples)*



Note. Regression slopes for the interaction (actor's mutualistic talk x actor's gender/sex dummyC1) and the interaction (actor's mutualistic talk x actor's gender/sex dummyC2) in the dyadic sexual desire model for GSD couples. The simple slope for women was significant, indicating that women in GSD couples reported significantly lower dyadic sexual desire on days that they used more mutualistic talk, compared to days they used less [B = -0.12, t(150.59) = -2.02, p = .045]. All other simple slopes were non-significant: men [B = 0.10, t(148.55) = 1.44, p = .153], GSD partnered with men [B = -0.04, t(159.94) = -0.47, p = .641], GSD partnered with women [B = 0.11, t(152.39) = 1.61, p = .109], or GSD partnered with GSD [B = 0.30, t(102.14) = 1.52, p = .132]. The non-significance of four of the slopes, despite the significant interaction, is likely because there was not enough power to detect whether a non-zero slope existed. However, the

significant interactions and plot suggest there might be differences in how daily mutualistic talk is associated with sexual desire based on gender/sex in GSD couples.

Figure 4.8.3 *Simple Slopes for Interaction between Actor's Individualistic Talk and Actor's Gender/Sex (Binary Couples)*



Note. Regression slopes for the interaction (actor's individualistic talk x actor's gender/sex) in the sexual satisfaction model for binary couples. The simple slopes analysis indicated that women reported significantly greater sexual satisfaction on days that they used more individualistic talk, compared to days they used less [women in same-gender/sex dyads: $B = 0.51$, $t(460.26) = 3.65$, $p < .001$; women in mixed-gender/sex dyads: $B = 0.58$, $t(480.59) = 4.52$, $p < .001$]. In contrast, for men there was no significant difference in sexual satisfaction based on their daily use of individualistic talk [men in same-gender/sex dyads: $B = 0.13$, $t(489.03) = 0.87$, $p = .387$; men in mixed-gender/sex dyads: $B = 0.05$, $t(465.99) = 0.43$, $p = .665$].

4.9 References

Basson, R. (2001). Human sex-response cycles. *Journal of Sex & Marital Therapy, 27*, 33-43.

Bauer, G. R., Braimoh, J., Scheim, A. I., & Dharma, C. (2017). Transgender-inclusive measures of sex/gender for population surveys: Mixed-methods evaluation and recommendations. *PLoS One, 12*(5), 1-28. https://doi.org/10.1371/journal.pone.0178043

Baumeister, R. F. (2000). Gender differences in erotic plasticity: The female sex drive as socially flexible and responsive. *Psychological Bulletin, 126*, 347-374. https://doi.org/10.1037/0033-2909.126.3.347

Bouchard, K. N., Stewart, J. G., Boyer, S. C., Holden, R. R., & Pukall, C. F. (2019). Sexuality and personality correlates of willingness to participate in sex research. *Canadian Journal of Human Sexuality, 28*(1), 26-37. https://doi.org/10.3138/cjhs.2018-0028

Cook, W., & Kenny, D. A. (2005). The actor-partner interdependence model: A model of bidirectional effects in developmental studies. *International Journal of Behavioral Development, 29*(2), 101-109. https://doi.org/10.1080/01650250444000405

Courtice, E. L., & Shaughnessy, K. (2018). The partner context of sexual minority women's and men's cybersex experiences: Implications for the traditional sexual script. *Sex Roles, 78*, 272-285. https://doi.org/10.1007/s11199-017-0792-5

Davison, S. L., Bell, R. J., La China, M., Holden, S. L., & Davis, S. R. (2008). Assessing sexual function in well women: Validity and reliability of the monash women's health program female sexual satisfaction questionnaire. *Journal of Sexual Medicine, 5*(11), 2575-2586. https://doi.org/10.1111/j.1743-6109.2008.00967.x

Dawson, S. J., & Chivers, M. L. (2014). Gender differences and similarities in sexual desire. *Current Sexual Health Reports, 6*(4), 211-219. https://doi.org/10.1007/s11930-014-0027-5

de Oliveira, L., Carvalho, J., & Nobre, P. (2021). A systematic review on sexual boredom. *Journal of Sexual Medicine*, Advance online publication. https://doi.org/10.1016/j.jsxm.2020.12.019

Dewitte, M., & Mayer, A. (2018). Exploring the link between daily relationship quality, sexual desire, and sexual activity in couples. *Archives of Sexual Behavior, 47*, 1675-1686. https://doi.org/10.1007/s10508-018-1175-x

Ellison, C. R. (2002). A research inquiry into some American women's sexual concerns and problems. *Women and Therapy, 24*, 147-159. https://doi.org/10.1300/J015v24n01_17

Fraser, G. (2018). Evaluating inclusive gender identity measures for use in quantitative psychological research. *Psychology and Sexuality, 9*(4), 343-357. https://doi.org/10.1080/19419899.2018.1497693

Fraser, G., Bulbulia, J., Greaves, L. M., Wilson, M. S., & Sibley, C. G. (2020). Coding responses to an open-ended gender measure in a New Zealand national sample. *Journal of Sex Research, 57*(8), 979-986. https://doi.org/10.1080/00224499.2019.1687640

Frederick, D., Gillespie, B. J., Lever, J., Berardi, V., & Garcia, J. R. (2021). Sexual practices and satisfaction among gay and heterosexual men in romantic relationships: A comparison using coarsened exact matching in a U.S. national sample. *Journal of Sex Research*, Advance online publication. https://doi.org/10.1080/00224499.2020.1861424

Gabb, J. (2019). The relationship work of sexual intimacy in long-term heterosexual and LGBTQ partnerships. Advance online publication. *Current Sociology*, 1-8. https://doi.org/10.1177/0011392119826619

Garcia, R. L., Kenny, D. A., & Ledermann, T. (2014). Moderation in the actor-partner interdependence model. *Personal Relationships, 22*(1), 8-29. https://doi.org/10.1111/pere.12060

Geldhof, G. J., Preacher, K. J., & Zyphur, M. J. (2014). Reliability estimation in a multilevel confirmatory factor analysis framework. *Psychological Methods, 19*(1), 72-91. https://doi.org/10.1037/a0032138

Goldey, K. L., & van Anders, S. M. (2012). Sexual arousal and desire: Interrelations and responses to three modalities of sexual stimuli. *Journal of Sexual Medicine, 9*, 2315-2329. https://doi.org/10.1111/j.1743-6109.2012.02845.x

Graham, C. A., Catania, J. A., Brand, R., Duong, T., & Canchola, J. A. (2003). Recalling sexual behavior: A methodological analysis of memory recall bias via interview using the diary as the gold standard. *Journal of Sex Research, 40*(4), 325-332. https://doi.org/10.1080/00224490209552198

Heck, R. H., & Thomas, S. L. (2009). *An introduction to multilevel modeling techniques* (2nd ed.). Psychology Press.

Heck, R. H., Thomas, S. L., & Tabata, L. N. (2014). *Multilevel and longitudinal modeling with IBM SPSS* (2nd ed.). Routledge.

Holmberg, D., & Blair, K. L. (2009). Sexual desire, communication, satisfaction, and preferences of men and women in same-sex versus mixed-sex relationships. *Journal of Sex Research, 46*(1), 57-66. https://doi.org/10.1080/00224490802645294

Impett, E. A., Muise, A., & Peragine, D. (2014). Sexuality in the context of relationships. In D. L. Tolman, L. M. Diamond, J. A. Bauermeister, W. H. George, J. G. Pfaus, & L. M. Ward (Eds.), *APA handbook of sexuality and psychology* (Vol. 1, pp. 269-315). American Psychological Association.

Jodouin, J.-F., Rosen, N. O., Merwin, K. E., & Bergeron, S. (in press). Discrepancy in dyadic sexual desire predicts sexual distress over time in a community sample of committed couples: A daily diary and longitudinal study. *Archives of Sexual Behavior*.

Jonason, P. K., Betteridge, G. L., & Kneebone, I. I. (2016). An examination of the nature of erotic talk. *Archives of Sexual Behavior, 45*(1), 21-31. https://doi.org/10.1007/s10508-015-0585-2

Kashy, D. A., Donnellan, M. B., Burt, S. A., & McGue, M. (2008). Growth curve models for inddistinguishable dyads using multilevel modeling and structural equation modeling: The case of adolescent twins' conflict with their mothers. *Developmental Psychology, 44*(2), 316-329. https://doi.org/10.1037/0012-1649.44.2.316

Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. Guilford.

Klein, V., Imhoff, R., Reininger, K. M., & Briken, P. (2019). Perceptions of sexual script deviation in women and men. *Archives of Sexual Behavior, 48*(2), 631-644. https://doi.org/10.1007/s10508-018-1280-x

Lawrance, K.-a., & Byers, E. S. (1992). Development of the interpersonal exchange model of sexual satisfaction in long-term relationships. *Canadian Journal of Human Sexuality, 1*(3), 123-128.

Lawrance, K.-a., & Byers, E. S. (1998). Interpersonal exchange model of sexual satisfaction questionnaire. In C. M. Davis, W. L. Yarber, R. Bauserman, G. Schreer, & S. L. Davis (Eds.), *Sexuality-related measures: A compendium* (2nd ed.). Sage.

Lindley, L. M., Anzani, A., Prunas, A., & Galupo, M. P. (2020). Sexual fantasy across gender identity: A qualitative investigation of differences between cisgender and non-binary people's imagery. *Sexual and Relationship Therapy*, Advance online publication. https://doi.org/10.1080/14681994.2020.1716966

Liu, C. (2003). Does quality of marital sex decline with duration? *Archives of Sexual Behavior, 32*(1), 55-60. https://doi.org/10.1023/A:1021893329377

MacNeil, S., & Byers, E. S. (2005). Dyadic assessment of sexual self-disclosure and sexual satisfaction in heterosexual dating couples. *Journal of Social and Personal Relationships, 22*(2), 169-181. https://doi.org/10.1177/0265407505050942

MacNeil, S., & Byers, E. S. (2009). Role of sexual self-disclosure in the sexual satisfaction of long-term heterosexual couples. *Journal of Sex Research, 46*(1), 3-14. https://doi.org/10.1080/00224490802398399

Mahar, E. A., Mintz, L. B., & Akers, B. M. (2020). Orgasm equality: Scientific findings and societal implications. *Current Sexual Health Reports, 12*, 24-32. https://doi.org/https://doi.org/10.1007/s11930-020-00237-9

Mallory, A. B., Stanton, A. M., & Handy, A. B. (2019). Couples' sexual communication and dimensions of sexual function: A meta-analysis. *Journal of Sex Research, 56*(7), 882-898. https://doi.org/10.1080/00224499.2019.1568375

Masters, N. T., Casey, E., Wells, E. A., & Morrison, D. M. (2013). Sexual scripts among young heterosexually active men and women: Continuity and change. *Journal of Sex Research, 50*(5), 409-420. https://doi.org/10.1080/00224499.2012.661102

Maxwell, C. (2007). 'Alternative' narratives of young people's heterosexual experiences in the UK. *Sexualities, 10*(5), 539-558. https://doi.org/10.1177/1363460707083168

Meana, M. (2010). Elucidating women's (hetero)sexual desire: Definitional challenges and content expansion. *Journal of Sex Research, 47*(2-3), 104-122. https://doi.org/10.1080/00224490903402546

Merwin, K. E., Bergeron, S., Jodouin, J.-F., Mackinnon, S. P., & Rosen, N. O. (2021). *Few differences in sexual talk by gender/sex and dyad type: A retrospective and daily diary study with couples*. [Manuscript submitted for publication].

Merwin, K. E., & Rosen, N. O. (2020). Perceived partner responsiveness moderates the associations between sexual talk and sexual and relationship well-being in individuals in long-term relationships. *Journal of Sex Research, 57*(3), 351-364. https://doi.org/10.1080/00224499.2019.1610151

Murray, S. H., & Milhausen, R. (2012). Sexual desire and relationship duration in young men and women. *Journal of Sex & Marital Therapy, 38*(1), 28-40. https://doi.org/10.1080/0092623X.2011.569637

Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's guide* (Eighth ed.). Muthén & Muthén.

Peplau, L. A. (2003). Human sexuality: How do men and women differ? *Current Directions in Psychological Science, 12*(2), 37-40. https://doi.org/10.1111/1467-8721.01221

Rehman, U. S., Rellini, A. H., & Fallis, E. (2011). The importance of sexual self-disclosure to sexual satisfaction and functioning in committed relationships. *Journal of Sexual Medicine, 8*, 3108-3115. https://doi.org/10.1111/j.1743-6109.2011.02439.x

Simon, W., & Gagnon, J. H. (2003). Sexual scripts: Origins, influences and changes. *Qualitative Sociology, 26*(4), 491-497. https://doi.org/10.1023/B:QUAS.0000005053.99846.e5

Simula, B. L. (2019). A "different economy of bodies and pleasures"?: Differentiating and evaluating sex and sexual BDSM experiences. *Journal of Homosexuality, 66*(2), 209-237. https://doi.org/10.1080/00918369.2017.1398017

Spector, I. P., Carey, M. P., & Steinberg, L. (1996). The sexual desire inventory: Development, factor structure, and evidence of reliability. *Journal of Sex & Marital Therapy, 22*(3), 175-190. https://doi.org/10.1080/00926239608414655

Stephenson, K. R., & Meston, C. M. (2015). The conditional importance of sex: Exploring the association between sexual well-being and life satisfaction. *Journal of Sex & Marital Therapy, 41*(1), 25-38. https://doi.org/10.1080/0092623X.2013.811450

Vaillancourt-Morel, M.-P., Rosen, N. O., Štulhofer, A., Bosisio, M., & Bergeron, S. (2021). Pornography use and sexual health among same-sex and mixed-sex couples: An event-level dyadic analysis. *Archives of Sexual Behavior*, Advance online publication. https://doi.org/10.1007/s10508-020-01839-z

Vaillancourt-Morel, M.-P., Rosen, N. O., Willoughby, B. J., Leonhardt, N. D., & Bergeron, S. (2020). Pornography use and romantic relationships: A dyadic daily diary study. *Journal of Social and Personal Relationships, 37*(10-11), 2802-2821. https://doi.org/10.1177/0265407520940048

van Anders, S. M. (2015). Beyond sexual orientation: Integrating gender/sex and diverse sexualities via sexual configurations theory. *Archives of Sexual Behavior, 44*(5), 1177-1213. https://doi.org/10.1007/s10508-015-0490-8

Wiederman, M. W. (2005). The gendered nature of sexual scripts. *Family Journal: Counseling and Therapy for Couples and Families, 13*(4), 496-502. https://doi.org/10.1177/1066480705278729

Ziegler, A., & Conley, T. D. (2016). The importance and meaning of sexual fantasies in intimate relationships. In K. Aumer (Ed.), *The psychology of love and hate in intimate relationships* (pp. 29-45). Springer.

CHAPTER 5: GENERAL DISCUSSION

The overarching goals of this dissertation were to examine, in long-term couples, (1) the use of sexual talk; (2) associations between sexual talk and sexual and relationship well-being; and (3) to examine perceived partner responsiveness (PPR) to sexual talk, gender/sex, and dyad type as potential moderators of these associations.

Study 1 (described in Chapter 2) examined the cross-sectional associations between a person's own mutualistic and individualistic sexual talk and their own sexual and relationship well-being, as well as the moderating role of PPR to sexual talk. First, I validated the measure of sexual talk created by Jonason et al. (2016) and the adapted measure of PPR to sexual talk in a sample of people in long-term relationships. Next, I used the measure of sexual talk to examine how a person's own mutualistic and individualistic sexual talk were associated with their own sexual satisfaction, sexual functioning, sexual distress, and relationship satisfaction; simultaneously, I examined whether PPR to sexual talk moderated these associations. Overall, the pattern of results suggested that both types of sexual talk were important for a person's sexual well-being but only individualistic talk was associated with relationship satisfaction, although this negative association was small in magnitude (B = -0.03). Further, the direction of the associations (i.e., whether sexual talk was positively or negatively associated with outcomes) depended on PPR to sexual talk. Specifically, when PPR to sexual talk was lower, using more individualistic talk was associated with lower sexual satisfaction (B = -0.46) and using more mutualistic talk was associated with higher sexual distress (B = .82); whereas when PPR to sexual talk was higher, using more individualistic talk was associated with greater sexual satisfaction (B = 0.30) and using more mutualistic talk was associated with lower sexual distress (B = -0.57). However, it is worth noting that 44.9% of the sample reported PPR high enough to

experience a positive association between individualistic talk and sexual satisfaction, whereas only 28.4% of the sample reported PPR low enough to experience a negative association. Similarly, the majority or participants (71.6%) reported PPR high enough that using more mutualistic talk was either not significantly associated (33.3%) with sexual distress or was associated with *lower* sexual distress (38.3%). Finally, the amount of sexual talk used (for individualistic but not mutualistic), as well as the associations with sexual functioning, differed depending on a person's gender/sex (i.e., sexual talk was not associated with men's sexual functioning and mutualistic talk was positively associated with women's sexual functioning; B = 0.24), indicating that future studies should consider gender/sex as an important contextual variable for understanding the role of sexual talk in long-term relationships.

Study 2 (described in Chapter 3) examined whether there were gender/sex or dyad type differences in the use of sexual talk among a sample of sexual and gender/sex diverse (GSD) community couples in long-term relationships using both retrospective and averaged over time daily diary data. For the binary couples, the results showed that retrospectively, but not daily, women reported using more mutualistic talk than men—especially when they were in a relationship with another woman ($M_{\text{difference}}$ = 2.3 for women in same-gender/sex relationships vs $M_{\text{difference}}$ = 0.3 for women in mixed-gender/sex relationships). There were no gender/sex or dyad type differences in the use of individualistic talk retrospectively or at a daily level for the binary couples. Further, exploratory analyses—which included a subsample of couples in which at least one person identified as GSD and the sample of binary couples—showed that there may be gender/sex and dyad type differences in the use of individualistic talk (retrospectively and daily) and mutualistic talk (retrospectively only). Specifically, I found that: (a) retrospectively (but not daily), GSD individuals partnered with women used more mutualistic talk than men partnered

with women; (b) both retrospectively and daily, people with a GSD partner reported using more individualistic talk compared to those with a man partner; (c) retrospectively, GSD individuals reported using more individualistic talk when partnered with a woman or GSD individual, compared to when partnered with a man; (d) daily, GSD individuals reported using more individualistic talk when partnered with a GSD individual, compared to when partnered with a woman or man; and (e) daily, when they have a GSD partner, women use less individualistic talk compared to men and GSD individuals. However, the results of the exploratory analyses with the GSD couples need to be interpreted with caution due to low power.

Following from Studies 1 and 2, I was curious about *who* might experience positive associations between the types of sexual talk and various aspects of their sexual well-being. Based on sexual script theory and the theory of erotic plasticity (Baumeister, 2000; Simon & Gagnon, 1986), I hypothesized that the associations between sexual talk and sexual well-being may be moderated by gender/sex or dyad type. Additionally, I was curious whether a person's sexual talk would also be associated with *their partner's* sexual well-being.

Study 3 (described in Chapter 4) examined how within-person daily variations in sexual talk were associated with a person's own and partner's same-day sexual satisfaction and dyadic sexual desire, above-and-beyond previous-day levels of sexual satisfaction and desire. Further, I examined whether these associations were moderated by a person's own gender/sex, their partner's gender/sex, and dyad type. Study 3 utilized the same sexual and gender/sex diverse sample as Study 2. For binary couples, results indicated that on days a person used more individualistic talk relative to their average across days, they and their partner reported greater dyadic sexual desire (B = 0.10 and 0.06, respectively), and on days a person used more mutualistic talk, they—but not their partner—reported greater sexual desire (B = 0.12). On days

women used more individualistic (women in mixed-gender/sex relationships: $B = 0.58$; women in same-gender/sex relationships: $B = 0.51$) or mutualistic talk (women in mixed-gender/sex relationships: $B = 0.38$; women in same-gender/sex relationships: $B = 0.42$), they reported greater sexual satisfaction, and on days a person (regardless of gender/sex) used more individualistic talk, their partner reported greater sexual satisfaction ($B = 0.16$).

Exploratory analyses including the subsample of GSD couples revealed that on days that a person used more mutualistic talk, men and GSD individuals reported greater dyadic sexual desire compared to women, although these results did not reach statistical significance. In contrast, on days women used *less* mutualistic talk, they significantly reported greater sexual desire ($B = -0.12$) compared to men or GSD individuals. It is possible that this seemingly counter-intuitive result—of women in GSD couples experiencing a negative association between daily mutualistic talk and daily dyadic sexual desire is a false positive due to the small subsample of GSD couples. Alternatively, it is possible that women with GSD partners experience less sexual desire for their partner on days they use more mutualistic talk (or vice versa); however, I refrain from interpreting this result in more detail until it has been replicated with sufficient sample sizes. Additionally, on days a person used more mutualistic talk, they reported greater sexual satisfaction ($B = 0.69$); daily use of individualistic talk was not associated with same-day sexual satisfaction or desire for the GSD couples. Overall, the findings of Study 3 showed that men, women, and GSD individuals may experience sexual talk in different ways when it comes to their sexual satisfaction and dyadic sexual desire.

5.1 Strengths and Limitations

I have discussed the strengths and limitations of each study in the corresponding manuscripts (Chapters 2, 3, and 4). There are, however, some broader strengths and limitations of my dissertation which I will review below.

5.1.1 Sample

Notably, there were several strengths to the samples used in my dissertation. First, the large sample of couples utilized in Studies 2 and 3 allowed me to conduct complex multilevel moderated models, with sufficient power to trust the results (with the exception of the exploratory analyses with GSD couples). Second, I was able to collect a subsample of same-gender/sex couples (n = 59 couples)[0], which provided sufficient power to include same-gender/sex couples in analyses with mixed-gender/sex couples, as well as to examine dyad type as a moderator. My dissertation was the first sexual talk study to include a large sample of same-gender/sex couples and the first to include GSD individuals and couples. Many prior research studies have focused their recruitment on mixed-gender/sex couples or collected data from a small number of same-gender/sex couples and excluded them from analyses due to power concerns or the inaccessibility of statistical analyses needed to include these couples (see section 5.1.4.1 below for more detail). By using a more inclusive sample and the corresponding statistical analyses necessary to consider the configurations of these diverse couples within a dyadic framework, my dissertation helps to advance the scientific knowledge in the area of sexual talk (Andersen & Zou, 2015). Further, my dissertation adds important preliminary information about conceptualizing sexual and gender diverse couples within the theoretical

[0] While this subsample of same-gender/sex couples is not large by statistical standards, it is large relative to population base rates (e.g., 27.2% of our sample were in same-gender/sex relationships, while population estimates for Canada and the US show approximately 0.9 – 1.4% of couples living together are in same-gender/sex relationships; Statistics Canada, 2017).

frameworks utilized in this dissertation, which were largely developed using heteronormative and cis normative lenses (see section 5.1.4.2 below for more detail).

However, there are also several important limitations to the samples used in my dissertation. First, the small subsample of GSD couples limited my analyses and interpretation due to low power for the exploratory analyses (see section 5.1.5.2 below for more detail on this limitation). Second, the samples from Study 1 and Studies 2 and 3 lack diversity in terms of race and ethnicity, education, income levels, mean age, and other important demographics (see section 5.2.1 below for further discussion). Participants in both samples were largely young, white, well-educated, childless, living in North America, had access to technology, and had relatively low cultural diversity. Thus, the demographics of the samples utilized in my dissertation limit the generalizability of the findings and unfortunately helps to perpetuate the underrepresentation of diverse groups—especially in terms of race, ethnicity, and culture—in sex research (Klein et al., 2021; Wiederman et al., 1996). Given existing evidence that sexual and gendered/sexed behaviours and roles vary greatly within any given society (Altman, 2004; Dworkin et al., 2016; Hall, 2019; see also Klein et al., 2021 for a review) and that several of the theoretical frameworks in sex research rely on culture-based expectations (e.g., Baumeister, 2000; Simon & Gagnon, 1986), it is crucial for future sex research to include samples that are representative of non-WEIRD (i.e., Western, Educated, Industrialized, Rich, and Democratic) people and populations.

A third limitation is that Studies 2 and 3 utilized the same sample of participants. Ideally a separate sample would have been utilized in Study 3, however, recruiting couples in long-term relationships—especially those that identify as sexual and gender/sex diverse—to participate in intensive longitudinal studies such as daily diary methodology is time-consuming and resource

intensive. Using the same sample for multiple analyses could lead to inflated Type 1 errors (e.g., Thompson et al., 2020). However, with the recent surge in opensource science and data sharing, data reuse is becoming more common (Imker et al., 2021; Pronk, 2019; Pucker et al., 2020). Using one dataset for multiple publications is acceptable as long as there is transparency, and each publication makes a sufficient independent contribution to the research area (van Raaij, 2018).

5.1.2 Research Design

The research designs of all three studies in my dissertation had some important strengths. Study 1 validated a novel measure of sexual talk and Study 2 adapted it for use in a daily context and I created a French-language version of the measure which I will discuss further below (section 5.1.3). Utilizing daily diary methodology allowed for the examination of daily variability in couples sexual well-being and sexual talk closer in time to their actual experience. Indices of sexual well-being, such as sexual satisfaction and sexual desire have been found to vary day-to-day in community couples (Gravel et al., 2020; Mark et al., 2019; Vowels et al., 2018), making it important to examine what factors (e.g., sexual talk) could be associated with these variations. Additionally, the use of methodological triangulation, such as using both retrospective and daily diary methodology in Study 2, provided increased confidence in the robustness of the results when the results were replicated across methods (Mertens & Hesse-Biber, 2012; Thurmond, 2001). Additionally, when results did not replicate across methods, this allowed for the generation of hypotheses to be tested in future research (e.g., that memory biases may influence reporting of sexual talk use when assessed retrospectively). The use of dyadic data provided the first insights into how a person's sexual talk might influence their partner's sexual

outcomes, which is important to the development of interventions aimed at helping long-term couples maintain or even enhance their sexual well-being over time.

However, the design of this dissertation was also limited in important ways. Namely, all three studies were based on correlational data; thus, I could not determine causality or directionality. My interpretations of the findings were based on theory, as well as prior research findings (e.g., Jonason et al., 2016; MacNeil & Byers, 2005, 2009; Simon & Gagnon, 1986). Nonetheless, I cannot definitively say that greater sexual talk led to greater sexual well-being and lack of temporal separation between predictor and outcome variables in Study 3 precluded determination of directionality. Another shortcoming of my research design is that all three studies relied on self-report. Limitations to using self-report measures include the risk of response bias (including participant reactivity, such as changing their use of sexual talk when it is being indirectly observed), the need for participants to have the introspective ability to report their experience accurately, and the reliance on participants to answer honestly (Chan, 2009; Schroder et al., 2003; for a review on self-reporting sexual behaviours see: McCallum & Peterson, 2012). I attempted to mitigate some of these issues by assessing sexual talk use in general, as well as at a daily level, and emphasizing the level of deidentification and confidentiality to participants (Mitchell et al., 2007). Collecting sexual talk data through means other than self-reports would introduce additional complications such as selection bias (e.g., participants willing to provide audio recordings may have different sexual talk compared to those uncomfortable with such a research design), the act of recording could influence what was said (or not said) during sex, as well as potential ethical issues to navigate (e.g., maintaining anonymity and confidentiality; for a review see Cychosz et al., 2020; see also; Kaiser, 2009;

Saunders et al., 2015). Overall, for a behaviour as personal and sensitive as sexual talk, using self-report measures appears to be the preferable option (Langhaug et al., 2010).

5.1.3 Validation of the Sexual Talk Measure

There were some strengths and limitations specific to the use and validation of the SexTalk measure (Jonason et al., 2016). While the validation of the measure adhered to guidelines for best practice EFAs and CFAs (Jackson et al., 2009; Sakaluk & Short, 2017; Worthington & Whittaker, 2006), only a two-level (i.e., days within person) and not a three-level (i.e., days within person within dyad), CFA was used for the daily SexTalk measure, meaning that the analysis did not control for all sources of data interdependence. Additionally, the original SexTalk measure assessed the frequency of use, excitement when hearing sexual talk, and excitement when using sexual talk. Jonason et al. (2016) found that these three aspects had excellent internal consistency, and thus averaged across all three to eliminate redundancy and reduce Type I error inflation. As described in Study 1 (Chapter 2), I followed the same procedure for this study. However, I only assessed frequency of sexual talk use in Studies 2 and 3 (Chapters 3 and 4) to shorten the surveys and limit participant fatigue. While there were no gender/sex differences in the amount of sexual talk used in Study 2, it is possible that gender/sex differences existed for the levels of excitement when hearing/using sexual talk, which was not assessed.

The SexTalk measure was originally created with an English-speaking, largely cis gender and heterosexual sample (Jonason et al., 2016). Thus, while I verified the factor structure and reliability of both the French and English version of the sexual talk measure in Studies 1 and 2, it is possible that different types of sexual talk exist across cultures and/or languages and that the results of my dissertation may not generalize to non-WEIRD populations (e.g., Klein et al., 2021). Further, I was not able to adequately assess the internal reliability of the SexTalk measure

(general or daily diary version) for individuals who identified as GSD, due to the small subsample size. It may be that—consistent with sexual script literature (e.g., Gabb, 2019; Gauvin & Pukall, 2018; Kosenko, 2010, 2011; Lamont, 2017; Lindley et al., 2020)—GSD couples and those in same-gender/sex relationships use different types of sexual talk that were not captured by or reflected in the SexTalk measure. For instance, there is some evidence that BSDM participation is higher amongst sexual and gender/sex diverse individuals, relative to their cis and heterosexual peers (Richters et al., 2008; Strizzi et al., 2021). Given the possible overlap of individualistic sexual talk and BSDM practices, it is possible that the underrepresentation of sexual and gender/sex diverse populations in Jonason et al.'s (2016) sample resulted in some types of sexual talk not being captured. Indeed, in Study 2 I found that (1) GSD individuals reported using more individualistic talk when their partner was a woman or GSD individual, compared to when their partner was a man, and (2) people with a GSD partner reported using more individualistic talk than people partnered with a woman (daily only) or a man (retrospective and daily). While the interpretation of these findings is limited by low power, in combination with prior literature (Richters et al., 2008; Strizzi et al., 2021) the findings of Study 2 do suggest that the intersection of multiple social identities (e.g., gender/sex, sexual orientation, dyad type) may influence the use of sexual talk (for a discussion of the intersectionality of BDSM with gender/sex and sexuality see: Simula, 2019b). Further, given that some factor analyses revealed that the 'submissive' item on the individualistic talk subscale did not load as well with the other items, it is possible that individualistic talk might be further divisible into sub-categories of 'dominant' (including the dominant, sexual ownership, and sexual fantasy items) and 'submissive' (including the submissive item and other types of submissive-like sexual talk which are not yet known). Thus, while the existence of other

submissive-like subtypes of individualistic talk is not currently verifiable with my data, it is conceivable that the lack of a diverse sample in the development of the SexTalk measure led to different types or subtypes of sexual talk not being captured.

5.1.4 Gender/Sex

5.1.4.1 Measurement and Categorization

One important factor for Studies 2 and 3 was how gender/sex was assessed and used in the analyses. Participants in Studies 2 and 3 were assigned to one of three gender/sex categories (i.e., woman, man, GSD) based on their self-reported responses to one question about biological sex and one question about current gender identity. Studies 2 and 3 were part of a larger longitudinal project and participants provided responses to these gender and sex questions at three separate timepoints: baseline (retrospective data in Study 2), 6 months later (data not included in this dissertation), and 12 months later (data not included in this dissertation). The first limitation is that the gender/sex questions were not added to the baseline survey until after data collection had started, resulting in 64 participants who did not receive these demographic questions. Second, while I avoided excluding these participants by using their responses from the same demographic questions at the 6-month timepoint of the larger longitudinal study, there are also potential risks associated with this approach. For instance, gender/sex identity can change over time (e.g., Bauer et al., 2017; Kuper et al., 2012; Kuper et al., 2018; Richards et al., 2016; van Anders, 2015), which means the gender/sex categorization used to analyse the daily diary data might not reflect the gender/sex of those 64 participants at the time that they completed the

daily measures.[0] However, consistent with current recommendations, I believe that this imperfect solution was a better option than excluding these 64 participants all together (Streiner, 2002).

Third, while I used a recommended two-step approach to assess gender/sex (e.g., Bauer et al., 2017) in which participants self-reported their biological sex (response options: *male, female, intersex*) and gender identity (response options: *man, woman, trans identify as a man, trans identify as a woman, agender*, and *other*), the process of fitting a complex construct such as gender/sex into only three categories (i.e., women, men, GSD) is potentially limiting. As Bauer et al. (2017) notes:

> [It] creates an ethical problem in that such questions appear to allow participants to avoid simple categorizations, but then participants' identities are categorized by researchers after the fact; the final categorization may be inconsistent with a participant's self-categorization when given those categorical options (p. 22).

A possible alternative approach in future research would be using a continuous multidimensional measure of gender/sex (Shibley Hyde et al., 2019; see also Bauer et al., 2017; Hart et al., 2019; Puckett et al., 2020; Ruberg & Ruelos, 2020; Saperstein & Westbrook, 2021) to avoid post-hoc categorizations.

Further, while I grouped cis and trans men together and cis and trans women together, it is also possible that the trans men and women should have been grouped with the GSD individuals given that binary and non-binary trans individuals and gender-nonconforming individuals are often treated as one homogeneous group in research (see Fiani & Han, 2019 for a

[0] However, only 31 (6.7%) participants in the larger longitudinal study provided different responses to questions about gender/sex across timepoints, indicating that there is a low (although not insignificant) likelihood that the 64 participants who did not receive a question about gender identity at baseline would have also provided different gender/sex responses across time had they received the gender identity question are baseline.

discussion). There is some evidence to suggest that trans men's sexual scripts become more flexible as their transition progresses and that they do not adhere as strongly to traditional, rigid gender/sex role such as those in the TSS (e.g., Brown, 2010; Dulko, 1988; Fleming et al., 1984). It is possible that by grouping trans men and women together with cis men and women that we obscured gender/sex differences between cis men and women. For instance, the theory of erotic plasticity proposes that men's sexual well-being is more strongly influenced by biological dimensions (Baumeister, 2000) and thus grouping trans women and GSD individual who were assigned male at birth with cis men for analytical purposes might also be justified. However, there is also empirical and theoretical support for grouping cis and trans participants together (e.g., see Shibley Hyde et al., 2019 for a review; see also Jacobson & Joel, 2019). Many GSD individuals do not identify as trans and many trans men and women do not identify as GSD, and report unique identity-related characteristics (Breslow et al., 2021). Research has also shown that there are more differences between, for example, trans women and cis men (who share a birth-assigned sex) and more similarities between, for example, cis and trans women (who share a current gender identity; e.g., Olson et al., 2015). Additionally, Tate et al.'s (2014) theoretical model of gender suggests that self-assigned gender/sex identity more strongly impacts a person's gender/sex roles and expectations, as well as their social presentation, relative to their gender/sex assigned at birth (see also Shibley Hyde et al., 2019). Collectively, I felt there was sufficient evidence to support grouping trans men and women with cis men and women (respectively) instead of with the GSD individuals, as they would be more likely to follow the gender/sex roles of men and women in the TSS, compared to GSD individuals. Overall, gender/sex is complex, and researchers are engaged in an ongoing dynamic process of determining the best practices for assessing and analyzing gender/sex data.

5.1.4.2 Theory and Analyses with Sexual and Gender/Sex Diverse Samples

As previously mentioned, the inclusion of GSD individuals and couples in my dissertation was a strength; however, the analyses including these couples were exploratory and post-hoc comparisons were not conducted as they would be unreliable due to power concerns. It is also important to recognize that the existing theoretical frameworks and quantitative statistical analyses used in this dissertation were historically developed for use with heterosexual cis gender populations in monogamous mixed-gender/sex relationships, who were largely white and lived in Western cultures (e.g., Fish & Russell, 2018; Jackson, 2006; Kerpen & Marston, 2019; Oswald et al., 2005; Rothblum, 2009). For example, both sexual script theory and the theory of erotic plasticity rely on gender and sex being binary constructs and originally held the assumptions that relationships were monogamous and between heterosexual cis men and women (which makes sense given the cultural context during which these theories were developed; Pham, 2016; Vanwesenbeeck, 2009; see also Baumeister, 2000; Simon & Gagnon, 1986; Thompson & Byers, 2021).

Additionally, in most dyadic analyses with romantic and/or sexual partners, dyad members are treated as distinguishable, largely using binary gender/sex as the distinguishing variable (for a review, see Wood, 2018; see also Cook & Kenny, 2005; Kenny, 1996; Thomeer et al., 2020; Umberson et al., 2015). The cis and heteronormative history of these theories and statistical analyses means that they largely require conceptual binary categories (e.g., man *or* women, masculine *or* feminine, gay *or* straight) which is inconsistent with the multidimensional and continuous nature of the real world and leaves very little room for a nuanced view of gender/sex and sexuality (see van Anders, 2015 for a review).[0] A strength of my dissertation,

[0] While a full discussion of the problematic origins and history of statistical methods in the social sciences (e.g., eugenics, racism) is beyond the scope of my dissertation, it is relevant to note that modern ideas of intersectionality and diversity are often at odds with what statistical

especially Studies 2 and 3, is that it extends several important theoretical frameworks for use with sexually and gender/sex diverse populations (e.g., people in same-gender/sex couples, GSD individuals, people in non-monogamous relationships), while also acknowledging the limitations of doing so.

In the past two decades there have been many advances in statistical analyses to allow for the examination of same-gender/sex couples, although these still typically rely on the assumptions of monogamy and binary gender/sex identities (Thomeer et al., 2020; West et al., 2008). For example, West et al. (2008) developed the factorial method to allow the estimation of gender/sex effects and what they refer to as "sexual orientation" effects (p. 322; which, in actuality, assess dyad type effects, rather than sexual orientation) in multilevel models that include both same- and mixed-gender/sex couples (see also Kroeger & Powers, 2019). Yet many of these more inclusive analytical techniques are complex and not as well known, and still rely on binary assumptions of gender/sex and sexuality (Ledermann & Kenny, 2017; Olsen & Kenny, 2006; Smith et al., 2020; West et al., 2008). The inaccessibility of these methods sometimes leads researchers to exclude sexual and gender/sex diverse individuals and couples from their analyses (Umberson et al., 2015). Further, it is still analytically challenging to include people who have multiple partnerships and/or a relationship with multiple committed partnerships (e.g., a polyamorous 'quad') which cannot necessarily be categorized as 'dyads,' as well as those who are GSD (e.g., Wood et al., 2021). Not only is my dissertation inclusive of same-gender/sex couples and GSD individuals and couples, but I also used advanced statistical methods, such as the factorial method (West et al., 2008) and adapted them to allow for the examination of gender/sex effects beyond the traditional binary distinctions (e.g., man or woman).

methodologies were designed to accomplish (for a more detailed discussion of this see Witmer, 2021).

5.2 Future Research Directions

Given that sexual talk is a novel research area, there are many potential directions for future research. As such, I will discuss several of what I feel are the most integral areas for future research, however this is not an exhaustive list.

5.2.1 Validity, Reliability, and Generalizability of Sexual Talk

A focus on replicability and generalizability of measures used in close relationships and sex research is becoming more commonplace (e.g., Flake & Fried, 2020; Gauvin et al., 2019; Sakaluk & Fisher, 2019). As such, it would be beneficial to validate the SexTalk measure with a broader group of individuals and couples, allowing for the generalizability of findings to more diverse populations. For example, I was unable to examine the reliability of the SexTalk measure with the GSD subsample (Studies 2 and 3) due to power concerns. It is quite possible that the measurement model is reasonable for those populations with which it has already been examined, but that important aspects of the model (e.g., which items load onto which factors, factor loading values) may be different for other groups, which would indicate the measure is not well-suited for particular statistical comparisons. Accordingly, it would be beneficial for future research to examine the variability and measurement invariance of the SexTalk measure across a wide range of individual differences (e.g., those diverse in terms of age, gender/sex, culture, race, ethnicity, language, relationship length, relationship structure, number of sexual partners, presence of sexual dysfunction, etc.). Additionally, given that the sexual talk measure was created using qualitative data from a sample that was largely white, heterosexual, cis gender, and English-speaking, future qualitative research should be conducted to establish whether the same types of sexual talk are found in diverse samples, or if novel themes and types of sexual talk may exist in these samples. Such information would be valuable in the development of interventions

aimed at promoting sexual and relationship well-being for many different individuals and couples.

5.2.2 Examining Causality and Directionality

Future sexual talk research would benefit from using longitudinal or experimental study designs to confirm the directionality and causality of the associations. Longitudinal studies could determine how the general use of sexual talk impacts sexual and relational outcomes over the course of a romantic relationship. In addition, the field would benefit from testing the theoretical mechanisms by which interpersonal factors such as sexual talk are thought to lead to greater sexual and relationship well-being for couples (e.g., testing the two pathways model of sexual communication over time). Examining these longitudinal mechanisms would provide more conclusive evidence of the temporal pathways between sexual talk and couples outcomes, which may lead to more precise intervention targets for declines in sexual and relational well-being experienced by couples in long-term relationships.

Experimental study designs may be difficult to implement because of the sensitive and personal nature of sexual talk, which might make it difficult to obtain a truly random sample and limit volunteer bias (e.g., Bouchard et al., 2019). Further, experimental studies in sex research have, on occasion, had unintended adverse effects, such as decreased happiness and sexual enjoyment (e.g., Loewenstein et al., 2015). However, there have also been many successful experimental and quasi-experimental studies in sex research, suggesting that an experimental study for sexual talk may be feasible. For example, recent experimental studies have successfully manipulated (a) the salience of approach sexual goals (i.e., engaging in sex to pursue positive outcomes, such as enhanced intimacy) and avoidance sexual goals (i.e., engaging in sex to avert negative outcomes, such as a partner's disappointment; Muise et al., 2017) and (b) the focus on

sexual communal motivation (i.e., being motivated to meet a partner's sexual needs; Day et al., 2015) in community couples. Thus, one may be able to, at least temporarily, increase the salience of sexual talk or induce greater mutualistic or individualistic sexual talk by randomly assigning one member of each couple to one of three conditions: mutualistic sexual talk, individualistic sexual talk, or control. Those in the sexual talk conditions could receive a brief psychoeducational intervention about the benefits of either mutualistic or individualistic sexual talk and be asked to write three (mutualistic or individualistic) sexual talk statements that they say/would like to say during sex with their partner; participants would be encouraged to use these statements during sex with their partner over a two-week period. After verifying that sexual talk was successfully manipulated, one could examine the impact of increased sexual talk (relative to baseline use of sexual talk) on own and partner's sexual and relationship well-being at the end of the two-week period.

5.2.3 Other Types of Sexual and Relationship Communication

Another important direction for future research is to aim to understand the associations between sexual talk and nonverbal sexual communication during sex, as well as the unique roles they may each have for sexual and relational outcomes. Prior research has examined associations between verbal/nonverbal sexual communication during sex and sexual and relationship well-being (Babin, 2012; Blunt-Vinti et al., 2019; Brogan et al., 2009; Millman, 2018), yet no research to date has examined specific types of verbal sexual communication (i.e., mutualistic and individualistic sexual talk) alongside nonverbal communication during sex to see how they interact and examine their unique effects. Such research would help clarify whether all styles (i.e., verbal vs. nonverbal) of sexual communication behaviours during sex should be targeted in interventions seeking to help couples' sexual and relationship well-being. Additionally, given the

evidence from Study 3 of my dissertation that gender/sex and dyad type may moderate associations between sexual talk and sexual well-being, researchers should consider examining gender/sex and dyad type as potential moderators between nonverbal sexual communication and sexual outcomes. Such information could help researchers and clinician determine which individuals and couples might benefit from interventions targeting nonverbal sexual communication during sex.

5.2.4 Predictors of Sexual Talk Use

An understanding of who uses sexual talk may help inform interventions aimed at increasing the use of types of sexual talk that will be beneficial depending on the individual and couple. Thus, future research could use longitudinal study designs to identify predictors and sources of sexual talk. Sexual script theory states that cultural sexual scripts are constructed from various sources (e.g., education, religion, media) and then integrated into intrapersonal sexual scripts (Gagnon & Simon, 1973). It stands to reason then, that media sources may be quite relevant to shaping what type of sexual behaviours and communication people engage in. Indeed, Bridges et al. (2016) found that higher pornography use was associated with greater likelihood of engaging in specific sexual behaviours seen in pornography, and that men were more likely to engage in aggressive behaviours, while women were more likely to engage in submissive behaviours (Marshall et al., 2021). Consequently, the sexual talk observed in pornography may influence the sexual talk that people integrate into their interpersonal sexual scripts. Qualitative studies may also help determine how and when individuals learn about sexual talk and when they began to integrate it into their intrapersonal and interpersonal sexual scripts.

There may also be other predictive factors that could lead to using more of the different types of sexual talk such as personality traits (e.g., sexual autonomy/assertiveness), core beliefs

about sex, attachment styles, and belief in traditional gender/sex roles or the TSS (Bennett, 2019; Greene & Faulkner, 2005; Sanchez et al., 2012). For example, previous research has suggested that since sexual communication is highly sensitive and involves being vulnerable with a partner, it may be affected by one's attachment style; there is empirical evidence supporting these associations (Bennett, 2019; McNeil et al., 2018). Future research should consider examining whether a person's attachment style relates to the amount and/or type of sexual talk they use, as well as how sexual talk may be associated with sexual and relational outcomes in the context of different attachment types. This research may provide valuable information for how to incorporate sexual talk into attachment-based therapies such as Emotion Focused Couples Therapy (Johnson, 2008).

5.2.5 Examine Other Potential Mediators/Moderators Between Sexual Talk and Sexual and Relationship Well-Being

Given the integrated theoretical framework utilized in my dissertation, it will be essential for future research to examine other factors in the theoretical framework, as well as to test for potential mediators or moderators that may explain or change associations between greater sexual talk and greater sexual and relationship well-being for long-term couples. The theoretical framework of my dissertation assumes that sexual talk may lead to greater sexual and relationship outcomes by creating more mutually pleasurable sexual experiences and enhancing feelings of intimacy (Lawrance & Byers, 1995; MacNeil & Byers, 2005, 2009). Although I found associations between individualistic and mutualistic sexual talk and several aspects of sexual well-being (i.e., sexual satisfaction, dyadic sexual desire, sexual functioning, sexual distress), I did not explicitly test whether participants experienced a greater sexual reward-to-cost ratio or enhanced intimacy as a result of sexual talk use. Future research should include validated

measures of intimacy and sexual rewards/costs (e.g., Fletcher et al., 2000; Lawrance & Byers, 1998) following sexual encounters to test the mediation proposed by the two-pathways model of sexual communication (MacNeil & Byers, 2005, 2009).

Further, sexual script and erotic plasticity theories presumed that the type and amount of sexual talk used, and how the types of sexual talk were associated with sexual and relationship well-being would vary due to gender/sex differences in erotic plasticity and the traditional gender/sex roles in cultural sexual scripts. Accordingly, it will be important for future research to determine whether certain factors (e.g., gender/sex stereotype beliefs, adherence to the TSS) influence the use of mutualistic and individualistic sexual talk, as well as how these factors may moderate and/or mediate the associations between gender/sex and sexual talk or between sexual talk and sexual outcomes. For example, research could use measures that assess sexual/gender beliefs and sexual scripts, such as the Sexual Scripts Scale (Sakaluk et al., 2014), the Sexual Double Standard Scale (Muehlenhard & Quackenbush, 2019), or the Sexual Beliefs Scale (Muehlenhard & Felts, 2019). Additionally, future longitudinal research could examine the use of sexual talk over the course of relationships, starting close to the beginning of the relationship, to determine whether the use of sexual talk is initially different based on gender/sex, gender/sex stereotype beliefs, or adherence to the TSS, and if so, when these differences lessen.

Finally, a growing body of close relationships research suggests that sexual motivations or goals influence when and for whom sexual behaviours are linked with sexual and relationship well-being (see Gable & Impett, 2012 for a review; Impett et al., 2019; Muise & Impett, 2014; Muise et al., 2012). Future research should consider whether sexual motivations or goals for using sexual talk, which is a sexual behaviour, might moderate associations between sexual talk and sexual and relationship outcomes. Previous research has categorized motives for engaging in

sexual activities into approach goals (a desire to seek positive outcomes) and avoidance goals (a desire to escape negative outcomes; Gray, 1987). Another factor of interest is sexual communal motivation, which refers to the motivation to meet a partner's sexual needs without expecting anything in return (Muise et al., 2012). Cross-sectional, longitudinal, and daily experience studies have demonstrated that sexual communal strength and approach goals for sex are linked to greater sexual and relationship well-being for community and clinical couples (e.g., Impett et al., 2019; Impett et al., 2005; Muise et al., 2017; Muise & Impett, 2014; Rosen et al., 2015). While mutualistic and individualistic sexual talk have previously been conceptualized as sharing/partner-focused and self-focused, respectively, it is possible that it is the *motivations* behind sexual talk that truly imbue its focus. Conceivably, people who are higher in sexual communal strength may use different types of sexual talk because they are motivated to meet their partner's sexual needs, which would suggest that both their mutualistic and individualistic talk is in fact sharing/partner-focused. Additionally, if a person engages in sexual talk because of approach goals (e.g., to increase their partner's sexual arousal), they and their partner may experience greater sexual and relational outcomes, regardless of the type of sexual talk used. Alternatively, if a person engages in sexual talk for avoidance reasons (e.g., to prevent their partner from doing something they do not enjoy), they and their partner may experience poorer sexual and relationship well-being. Consequently, future research should examine these potential moderators and mediators of the associations between sexual talk and sexual and relational outcomes.

5.3 Theoretical Implications

My dissertation used an integrated theoretical framework, drawing upon interdependence theory, the interpersonal process model of intimacy, the interpersonal exchange model of sexual

satisfaction (IEMSS), sexual script theory, the two pathways model of sexual communication, and the theory of erotic plasticity. One important implication of this integrated theoretical framework is that it suggests that each of these theories can work and be applied in tandem, as opposed to individually. Given the complexity of sexual and romantic relationships and interactions, it is not surprising that researchers may require a more holistic, theoretical approach. Overall, my dissertation highlights the importance of considering the dynamic processes through which closeness and well-being are cultivated in relationships.

Importantly, I found few gender/sex differences in the amount of mutualistic and individualistic sexual talk used in long-term relationships in my dissertation. There are several possible theoretical implications given these generally null findings. First, my conceptualization of mutualistic and individualistic talk being more aligned with women's and men's roles (respectively) in the TSS [which was based on my integrated theoretical framework and the work of Jonason et al. (2016)] may have been incorrect. Given that I found few gender/sex differences in the amount of sexual talk used (Study 2), it is possible that these types of sexual talk are not aligned clearly with the gender/sex roles in the TSS. (Although it is important not to over-interpret these null findings as they do not necessarily mean the null hypothesis was true, but rather that it is not yet conclusive; it also plausible that gender/sex differences in the use of sexual talk exist but were simply not detected). Second, Jonason et al.'s (2016) conceptualization of individualistic and mutualistic talk as self- and partner/sharing-focused, respectively, may have been inaccurate. If Jonason et al.'s (2016) original conceptualization was inaccurate, this raises the question of how they should be conceptualized instead. Extrapolating from the items on each sexual talk subscale, as well as the fact that mutualistic talk seems to be more commonly used than individualistic talk (Studies 1 and 2), it is possible that the two types of sexual talk

may be better conceptualized as 'vanilla/common' and 'kink/novel,' respectively. If this alternative conceptualization is more accurate, factors other than gender/sex, but still relevant to sexual script theory, such as kink identities and practices should be considered in the theoretical framework. Consequently, the sexual talk literature may benefit from integrating queer theory (Minton, 1997), which emphasizes resisting normative and dominant behaviours, identities, and orientations for more fluid ones that exist outside established categories and boundaries (e.g., kink). Alternatively, the self-focused and partner/sharing-focused conceptualization of sexual talk may be correct and relevant, but inaccurately applied to individualistic and mutualistic talk. Perhaps the nature of sexual talk as self- or partner/sharing-focused is not determined by the type of sexual talk, but rather the motivation behind this communication. For example, mutualistic talk, such as instructing a partner to touch you in a certain way so that you experience more pleasure, could also be considered self-focused; whereas individualistic talk, such as using sexually dominating statements because you know your partner enjoys that, could be considered partner/sharing-focused. Indeed, there is evidence from the BDSM literature which supports the idea that individualistic talk may be focused on sharing the experience with one's partner (e.g., Hammack et al., 2019; Ortmann & Sprott, 2013). Thus, it is plausible that the *motivation* for using sexual talk (e.g., to seek connection with one's partner vs. to seek personal pleasure) may be more important than the type of sexual talk used. Building on this new conceptualization of sexual talk, it may be that sexual script theory cannot predict who will use more of each type of sexual talk, but rather that sexual script theory and the theory of erotic plasticity should only be used as a framework to examine for whom sexual talk will be beneficial.

Third, it is possible that it is also possible that, as previously mentioned, there are initial gender/sex differences in the use of sexual talk but that as couples in long-term relationships

develop their interpersonal ('couple') level sexual scripts over time this leads to more equal uses of sexual talk regardless of gender/sex. This explanation would be in line with sexual script theory but would require an alteration to my integrated theoretical framework such that the influence of cultural level sexual scripts (and the gendered/sexed roles that are a part of these scripts) on the use of sexual talk decreases as relationship length increases and couple level sexual scripts are solidified. Fourth, it may be how much a person believes in or adheres to the gender/sex roles in their cultural level sexual script—rather than their own gender/sex—influences the amount of sexual talk used, meaning that sexual script theory may need to be modified to be more in line with the increasing egalitarianism in North American cultural sexual scripts (Bay-Cheng & Zucker, 2007; Dworkin & O'Sullivan, 2004).

Collectively, my dissertation studies demonstrated support for several parts of my integrated theoretical framework, while raising questions about sexual script theory at the same time. Moreover, my dissertation highlighted the importance of expanding the theoretical frameworks—especially sexual script theory and the theory of erotic plasticity—beyond binary conceptualizations of gender/sex and the integration of additional theories, such as queer theory, to better reflect the established nuances of sexuality and gender/sex.

5.4 Possible Clinical Implications

Although the findings in this dissertation are of a correlational nature, they suggest that targeting sexual talk in long-term couples may help them maintain or enhance their sexual and relational well-being over time. It is important to note that longitudinal research examining directionality and causality of sexual talk in long-term couples is required before firm clinical recommendations can be made. Nonetheless, I will review some of the possible clinical implications of my dissertation.

Sexual communication has long been a focus of interventions in sex and couples therapy, especially increasing the amount that an individual and their partner discuss their sexual likes and dislikes and increasing comfort with sexual communication (Hall & Binik, 2020; Johnson, 2008; Weiner & Avery-Clark, 2017). Problems with sexual communication are also believed to play a central role in maintaining sexual problems and dysfunctions (e.g., Kelly et al., 2006; Rancourt et al., 2016). Both theoretical and empirical literature have long supported sexual communication interventions in therapy (Benson et al., 2011; Jacobson & Addis, 1993; Morgis et al., 2019; Rosier & Tyler, 2017), yet the literature has neglected a specific emphasis on how couples communicate verbally with each other *during* sex (i.e., sexual talk). Overall, my dissertation provides information that could be useful in the development of evidence-based interventions targeting sexual talk in sex and couples' therapy. My findings suggest that sexual talk, as well as how a partner is perceived to respond to sexual talk, may be important components of the sexual and relational outcomes of couples in long-term relationships. Further, the findings suggest that interventions may benefit from targeting different types of sexual talk depending on gender/sex. For instance, people in sex and couples' therapy who are experiencing declines in sexual desire may benefit from interventions that aim to increase their individualistic and mutualistic sexual talk, or for those experiencing declines in several facets of sexual well-being, a focus on increasing a partner's responsiveness to sexual talk may be more beneficial. Alternatively, if a partner is being responsive but is not perceived as such, increasing mindfulness of a partner's responsiveness to sexual talk might also be a beneficial therapeutic strategy. Similarly, psychoeducational interventions informing (a) women (in binary couples) that their own sexual talk is strongly linked to their own sexual satisfaction and (b) men and

GSD individuals in GSD couples that they may benefit from increasing their use of mutualistic sexual talk may also be valuable.

It is also possible that integrating sexual talk into Sensate Focus 2 therapy would be beneficial to couples struggling with sexual arousal, desire, or orgasm. Sensate Focus 2 has a greater focus on direct verbal communication between members of a relationship compared to stage one of sensate focus therapy (i.e., Sensate Focus 1) and encourages couples to experiment with a wider variety of sexual activities, including creating and enacting fantasy scenarios (Weiner & Avery-Clark, 2017). Encouraging types of sexual talk that include sexual fantasies or instructive statements may help couples increase sexual communication during sex, as well as help to introduce sexual novelty, which is associated with greater sexual outcomes (de Oliveira et al., 2021; Muise et al., 2019). Unfortunately, no research to date has been conducted on sex therapy interventions that specifically target verbal sexual communication during or outside of sexual activity, so the effectiveness of such interventions is currently unknown.

5.5 Conclusions

My dissertation demonstrated that mutualistic and individualistic sexual talk were related to multiple aspects of sexual well-being (e.g., sexual satisfaction, desire, distress, and functioning) and relationship satisfaction for individuals and couples in long-term relationships. Additionally, I found that perceived partner responsiveness to sexual talk and gender/sex moderate some of the associations between sexual talk and sexual and relational outcomes. These findings support the continued investigation of sexual communication, and in particular, sexual talk, as a potential treatment target in psychological interventions aimed at helping couples in long-term relationships maintain their sexual and relationship well-being. However, longitudinal research is needed to establish directionality and causality, as well as to better

understand the mechanisms by which sexual talk relates to greater sexual and relationship well-being. More research is also needed to better understand sexual talk in sexual and gender/sex diverse populations and the potential moderating role of gender/sex in these relationships. The numerous future directions for this field indicate that sexual talk is emerging as a relevant aspect of couples' sexual communication and as a potentially relevant treatment target to facilitate greater sexual and relational well-being for couples in long-term relationships, who often face declines in these areas over time.

References

Ackerman, R. A., & Kenny, D. A. (2016). *APIMPowerR: An interactive tool for actor-partner interdependence model power analysis.* https://robert−a−ackerman.shinyapps.io/APIMPowerRdis/

Allgeier, E. R. (1984, April). State of the science: Sex research—Contrasts and complements. Paper presented at the annual meeting of The Society for the Scientific Study of Sex, Eastern Region, Philidelphia.

Altman, D. (2004). Sexuality and globalization. *Sexuality Research & Social Policy, 1*(1), 63-68. https://doi.org/10.1525/srsp.2004.1.1.63

Andersen, J. P., & Zou, C. (2015). Exclusion of sexual minority couples from research. *Health Science Journal, 9*(6), 1-9.

Arriaga, X. B. (2013). An interdependence theory analysis of close relaitonships. In J. A. Simpson & L. Campbell (Eds.), *Oxford library of psychology. The Oxford handhook of close relationships* (pp. 39-65). Oxford Univeristy Press.

Babin, E. A. (2012). An examination of predictors of nonverbal and verbal communication of pleasure during sex and sexual satisfaction. *Journal of Social and Personal Relationships, 30*(3), 270-292. https://doi.org/10.1177/0265407512454523

Barr, S. M., Budge, S. L., & Adelson, J. L. (2016). Transgender community belongingness as a mediator between strength of transgender identity and well-being. *Journal of Counseling Psychology, 63*(1), 87-97. https://doi.org/10.1037/cou0000127

Basson, R. (2001). Human sex-response cycles. *Journal of Sex & Marital Therapy, 27*, 33-43.

Bauer, G. R., Braimoh, J., Scheim, A. I., & Dharma, C. (2017). Transgender-inclusive measures of sex/gender for population surveys: Mixed-methods evaluation and recommendations. *PLoS One, 12*(5), 1-28. https://doi.org/10.1371/journal.pone.0178043

Baumeister, R. F. (2000). Gender differences in erotic plasticity: The female sex drive as socially flexible and responsive. *Psychological Bulletin, 126*, 347-374. https://doi.org/10.1037/0033-2909.126.3.347

Baumeister, R. F. (2004). Gender and erotic plasticity: Sociocultural influences on the sex drive. *Sexual and Relationship Therapy, 19*(2), 133-139. https://doi.org/10.1080/14681990410001691343

Bay-Cheng, L. Y., & Zucker, A. N. (2007). Feminism between the sheets: Sexual attitudes among feminists, nonfeminists, and egalitarians. *Psychology of Women Quarterly, 31*(2), 157-163. https://doi.org/10.1111/j.1471-6402.2007.00349.x

Beck, A. M., Robinson, J. W., & Carlson, L. E. (2013). Sexual values as the key to maintaining satisfying sex after prostate cancer treatment: The physical pleasure–relational intimacy model of sexual motivation. *Archives of Sexual Behavior, 42*(8), 1637-1647. https://doi.org/10.1007/s10508-013-0168-z

Bennett, M. (2019). *Talk dirty to me: An examination of the effects of communication during sexual activity on relational outcomes for young adults beginnin romantic relaitonships* (Publication No. 2209) [Doctoral dissertation, University of Connecticut]. OpenCommons@UConn: Doctoral Dissertations.

Benson, L. A., McGinn, M. M., & Christensen, A. (2011). Common principles of couple therapy. *Behavior Therapy, 43*(1), 25-35. https://doi.org/10.1016/j.beth.2010.12.009

Benuto, L., & Meana, M. (2008). Acculturation and sexuality: Investigating gender differences in erotic plasticity. *Journal of Sex Research, 45*(3), 217-224. https://doi.org/10.1080/00224490801987465

Birditt, K. S., Hope, S., Brown, E., & Orbuch, T. (2012). Developmental trajectories of marital happiness over 16 years. *Research in Human Development, 9*, 126-144. https://doi.org/10.1080/15427609.2012.680844

Birnbaum, G. E., & Finkel, E. J. (2015). The magnetism that holds us together: Sexuality and relationship maintenance across relationship development. *Current Opinion in Psychology, 1*, 29-33. https://doi.org/10.1016/j.copsyc.2014.11.009

Birnbaum, G. E., & Reis, H. T. (2012). When does responsiveness pique sexual interest? Attachment and sexual desire in initial acquaintanceships. *Personality and Social Psychology Bulletin, 38*, 946-958. https://doi.org/10.1177/0146167212441028

Birnbaum, G. E., Reis, H. T., Mizrahi, M., Kanat-Maymon, Y., Sass, O., & Granovski-Milner, C. (2016). Intimately connected: The importance of partner responsiveness for experiencing sexual desire. *Journal of Personality and Social Psychology, 111*, 530-546. https://doi.org/10.1037/pspi0000069

Blair, K. L., & Goldberg, A. E. (2016). Ethical research with sexual and gender minorities. In *The SAGE encyclopedia of LGBTQ studies*. SAGE. https://doi.org/10.4135/9781483371283.n139

Blumenstock, S. M., & Papp, L. M. (2017). Sexual distress and marital quality of newlyweds: An investigation of sociodemographic moderators: Sexual distress and marital quality. *Family relations, 66*(5), 794-808. https://doi.org/10.1111/fare.12285

Blunt-Vinti, H., Jozkowski, K. N., & Hunt, M. (2019). Show or tell? Does verbal and/or nonverbal sexual communication matter for sexual satisfaction? *Journal of Sex & Marital Therapy, 45*(3), 206-217. https://doi.org/10.1080/0092623X.2018.1501446

Bois, K., Bergeron, S., Rosen, N., Mayrand, M. H., Brassard, A., & Sadikaj, G. (2016). Intimacy, sexual satisfaction, and sexual distress in vulvodynia couples: An observational study. *Health Psychology, 35*, 531-540. https://doi.org/10.1037/hea0000289

Bouchard, K. N., Stewart, J. G., Boyer, S. C., Holden, R. R., & Pukall, C. F. (2019). Sexuality and personality correlates of willingness to participate in sex research. *Canadian Journal of Human Sexuality, 28*(1), 26-37. https://doi.org/10.3138/cjhs.2018-0028

Breslow, A. S., Wojcik, H., Cox, R., Jr., Tran, N. M., & Brewster, M. E. (2021). Toward nonbinary nuance in research and care: Mapping differences in gender affirmation and transgender congruence in an online national U.S. survey. *Transgender health, 6*(3), 156-163. https://doi.org/10.1089/trgh.2020.0038

Bridges, A. J., Sun, C. F., Ezzell, M. B., & Johnson, J. (2016). Sexual scripts and the sexual behavior of men and women who use pornography. *Sexualization, Media, & Society, 2*(4), 1-14. https://doi.org/10.1177/2374623816668275

Bridges, S. K., & Horne, S. G. (2007). Sexual satisfaction and desire discrepancy in same sex women's relationships. *Journal of Sex & Marital Therapy, 33*(1), 41-53. https://doi.org/10.1080/00926230600998466

Brogan, S. M., Fiore, A., & Wrench, J. S. (2009). Understanding the psychometric properties of the sexual communication style scale. *Human Communication, 12*(4), 421-445. http://www.jasonswrench.com/pdf/articles/sex_comm_style.pdf

Brown, N. R. (2010). The sexual relationships of sexual-minority women partnered with trans men: A qualitative study. *Archives of Sexual Behavior, 39*(2), 561-572. https://doi.org/10.1007/s10508-009-9511-9

Brown, R. D., & Weigel, D. J. (2018). Exploring a contextual model of sexual self-disclosure and sexual satisfaction. *Journal of Sex Research, 55*(2), 202-213. https://doi.org/10.1080/00224499.2017.1295299

Byers, E. S. (1999). The interpersonal exchange model of sexual satisfaction: Implications for sex therapy with couples. *Canadian journal of counselling, 33*(2), 95-111.

Byers, E. S. (2005). Relationship satisfaction and sexual satisfaction: A longitudinal study of individuals in long−term relationships. *Journal of Sex Research, 42*(2), 113-118. https://doi.org/10.1080/00224490509552264

Byers, E. S. (2011). Beyond the birds and the bees and was it good for you?" Thirty years of research on sexual communication. *Canadian Psychology, 52*(1), 20-28. https://doi.org/10.1037/a0022048

Byers, E. S., & Demmons, S. (1999). Sexual satisfaction and sexual self-disclosure within dating relationships. *Journal of Sex Research, 36*(2), 180-189.

Byers, E. S., Henderson, J., & Hobson, K. M. (2009). University students' definitions of sexual abstinence and having sex. *Archives of Sexual Behavior, 38*(5), 665-674. https://doi.org/10.1007/s10508-007-9289-6

Byers, E. S., & MacNeil, S. (2006). Further validation of the interpersonal exchange model of sexual satisfaction. *Journal of Sex & Marital Therapy, 32*(1), 53-69. https://doi.org/10.1080/00926230500232917

Byers, E. S., O'Sullivan, L. F., & Brotto, L. A. (2016). Time out from sex or romance: Sexually experienced adolescents' decisions to purposefully avoid sexual activity or romantic relationships. *Journal of Youth and Adolesence, 45*(5), 831-845. https://doi.org/10.1007/s10964-016-0447-9

Calvillo, C., Sánchez-Fuentes, M. D. M., & Sierra, J. C. (2020). An explanatory model of sexual satisfaction in adults with a same-sex partner: An analysis based on gender differences. *International Journal of Environmental Research and Public Health, 17*(10), 3393-3410. https://doi.org/10.3390/ijerph17103393

Carden, S. W., Holtzman, N. S., & Strube, M. J. (2017). CAHOST: An excel workbook for facilitating the johnson-neyman technique for two-way interactions in multiple regression. *Frontiers in Psychology, 8*, 1-7. https://doi.org/10.3389/fpsyg.2017.01293

Chan, D. (2009). So why ask me? Are self-report data really that bad? In C. E. Lance & R. J. Vandenberg (Eds.), *Statistical and Methodological Myths and Urban Legends; Doctrine, Verity, and Fable in the Organizational and Social Sciences* (pp. 309-336). Routledge. https://worldcat.org/oclc/228300731

Chandler, J., & Shapiro, D. (2016). Conducting clinical research using crowdsourced convenience samples. *Annual Review of Clinical Psychology, 12*, 53-81. https://doi.org/10.1146/annurev-clinpsy-021815-093623

Chatard, A., Guimond, S., & Selimbegovic, L. (2007). “How good are you in math?” The effect of gender stereotypes on students’ recollection of their school marks. *Journal of Experimental Social Psychology, 43*(6), 1017-1024. https://doi.org/10.1016/j.jesp.2006.10.024

Coffelt, T. A., & Hess, J. A. (2014). Sexual disclosures: Connections to relational satisfaction and closeness. *Journal of Sex & Marital Therapy, 40*(6), 577-591. https://doi.org/10.1080/0092623X.2013.811449

Coffelt, T. A., & Hess, J. A. (2015). Sexual goals-plans-actions: Toward a sexual script in marriage. *Communication Quarterly, 63*(2), 221-238. https://doi.org/10.1080/01463373.2015.1012216

Cook, W., & Kenny, D. A. (2005). The actor-partner interdependence model: A model of bidirectional effects in developmental studies. *International Journal of Behavioral Development, 29*(2), 101-109. https://doi.org/10.1080/01650250444000405

Costello, A. B., & Osborne, J. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research, and Evaluation, 10*, 1-9, Article 7. https://doi.org//10.7275/jyj1-4868

Courtice, E. L., & Shaughnessy, K. (2018). The partner context of sexual minority women's and men's cybersex experiences: Implications for the traditional sexual script. *Sex Roles, 78*, 272-285. https://doi.org/10.1007/s11199-017-0792-5

Cupach, W. R., & Metts, S. (1991). Sexuality and communication in close relationships. In K. McKinney & S. Sprecher (Eds.), *Sexuality in close relationships*. Lawrence Erlbaum.

Cychosz, M., Romeo, R., Soderstrom, M., Scaff, C., Ganek, H., Cristia, A., Casillas, M., de Barbaro, K., Bang, J. Y., & Weisleder, A. (2020). Longform recordings of everyday life: Ethics for best practices. *Behavior Research Methods, 52*(5), 1951-1969. https://doi.org/10.3758/s13428-020-01365-9

Davison, S. L., Bell, R. J., La China, M., Holden, S. L., & Davis, S. R. (2008). Assessing sexual function in well women: Validity and reliability of the monash women's health program

female sexual satisfaction questionnaire. *Journal of Sexual Medicine, 5*(11), 2575-2586. https://doi.org/10.1111/j.1743-6109.2008.00967.x

Dawson, S. J., & Chivers, M. L. (2014). Gender differences and similarities in sexual desire. *Current Sexual Health Reports, 6*(4), 211-219. https://doi.org/10.1007/s11930-014-0027-5

Dawson, S. J., Leonhardt, N. D., Impett, E. A., & Rosen, N. O. (2021). Associations between postpartum depressive symptoms and couples' sexual function and sexual distress trajectories across the transition to parenthood. *Annals of behavioral medicine*, Advance online publication. https://doi.org/10.1093/abm/kaaa117

Day, L. C., Muise, A., Joel, S., & Impett, E. A. (2015). To do it or not to do it? How communally motivated people navigate sexual interdependence dilemmas. *Personality and Social Psychology Bulletin, 41*(6), 791-804. https://doi.org/10.1177/0146167215580129

de Oliveira, L., Carvalho, J., & Nobre, P. (2021). A systematic review on sexual boredom. *The Journal of Sexual Medicine*, Advance online publication. https://doi.org/10.1016/j.jsxm.2020.12.019

Debrot, A., Meuwly, N., Muise, A., Impett, E. A., & Schoebi, D. (2017). More than just sex: Affection mediates the association between sexual activity and well-being. *Personality and Social Psychology Bulletin, 43*, 287-299. https://doi.org/10.1177/0146167216684124

Derogatis, L., Clayton, A., Lewis-D'Agostino, D., Wunderlich, G., & Fu, Y. (2008). Validation of the female sexual distress scale-revised for assessing distress in women with hypoactive sexual desire disorder. *Journal of Sexual Medicine, 5*, 357-364. https://doi.org/10.1111/j.1743-6109.2007.00672.x

Dewitte, M., & Mayer, A. (2018). Exploring the link between daily relationship quality, sexual desire, and sexual activity in couples. *Archives of Sexual Behavior, 47*, 1675-1686. https://doi.org/10.1007/s10508-018-1175-x

Diamond, L. M. (2003). What does sexual orientation orient? A biobehavioral model distinguishing romantic love and sexual desire. *Psychological Review, 110*(1), 173-192. https://doi.org/10.1037/0033-295X.110.1.173

Diamond, L. M. (2004). Emerging perspectives on distinctions between romantic love and sexual desire. *Current Directions in Psychological Science, 13*(3), 116-119. https://doi.org/10.1111/j.0963-7214.2004.00287.x

Diamond, L. M. (2007). The evolution of plasticity in female-female desire. *Journal of Psychology and Human Sexuality, 18*(4), 245-274. https://doi.org/10.1300/J056v18n04_01

Diamond, L. M., & Huebner, D. (2012). Is good sex good for you? Rethinking sexuality and health. *Social and Personality Psychology Compass, 6*, 54-69. https://doi.org/10.1111/J.1751-9004.2011.00408.X

Dulko, S. (1988). Sexual activity and temperament in polish transsexuals. *Archives of Sexual Behavior, 17*(2), 163-171. https://doi.org/10.1007/BF01542665

Dworkin, S. L., Lerum, K., & Zakaras, J. M. (2016). Sexuality in the global south: 50 years of published research in the Journal of Sex Research-inclusions, omissions, and future possibilities. *Journal of Sex Research, 53*(9), 1059-1064. https://doi.org/10.1080/00224499.2015.1106433

Dworkin, S. L., & O'Sullivan, L. F. (2004). Actual versus desired initiation patterns among a sample of college men: Tapping disjunctures within traditional male sexual script. *Journal of Sex Research, 42*(2), 150-158. https://doi.org/10.1080/00224490509552268

Eaton, A. A., & Rose, S. (2011). Has dating become more egalitarian? A 35 year review using *Sex Roles*. *Sex Roles, 64*, 843-862. https://doi.org/10.1007/s11199-011-9957-9

Ellison, C. R. (2002). A research inquiry into some American women's sexual concerns and problems. *Women and Therapy, 24*, 147-159. https://doi.org/10.1300/J015v24n01_17

England, P., & Bearak, J. (2014). The sexual double standard and gender differences in attitudes towards casual sex among U.S. university students. *Demographic Research, 30*, 1327-1338.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Research Methods, 41*, 1149-1160.

Fiani, C. N., & Han, H. J. (2019). Navigating identity: Experiences of binary and non-binary transgender and gender non-conforming (TGNC) adults. *International Journal of Transgenderism, 20*(2-3), 181-194. https://doi.org/10.1080/15532739.2018.1426074

Fish, J. N., & Russell, S. T. (2018). Queering methodologies to understand queer families. *Family relations, 67*(1), 12-25. https://doi.org/10.1111/fare.12297

Fisher, T. (2013). Gender roles and pressure to be truthful: The bogus pipeline modifies gender differences in sexual but not non-sexual behavior. *Sex Roles, 68*(7-8), 401-414. https://doi.org/10.1007/s11199-013-0266-3

Flake, J. K., & Fried, E. I. (2020). Measurement schmeasurement: Questionable measurement practices and how to avoid them. *Advances in methods and practices in psychological science, 3*(4), 456-465. https://doi.org/10.1177/2515245920952393

Fleming, M. Z., Macgowan, B. R., & Salt, P. (1984). Female-to-male transsexualism and sex roles: Self and spouse ratings on the PAQ. *Archives of Sexual Behavior, 13*(1), 51-57. https://doi.org/10.1007/BF01542977

Fletcher, G. J. O., Simpson, J. A., & Thomas, G. (2000). The measurement of perceived relationship quality components:

A confirmatory factor analytic approach. *Personality and Social Psychology Bulletin, 26*, 340-354. https://doi.org/10.1177/0146167200265007

Flores, A. R., Herman, J. L., Gates, G. J., & Brown, T. N. T. (2016). *How many adults identify as transgender in the United States*. https://williamsinstitute.law.ucla.edu/wp-content/uploads/Trans-Adults-US-Aug-2016.pdf

Fraser, G. (2018). Evaluating inclusive gender identity measures for use in quantitative psychological research. *Psychology and sexuality, 9*(4), 343-357. https://doi.org/10.1080/19419899.2018.1497693

Fraser, G., Bulbulia, J., Greaves, L. M., Wilson, M. S., & Sibley, C. G. (2020). Coding responses to an open-ended gender measure in a New Zealand national sample. *Journal of Sex Research, 57*(8), 979-986. https://doi.org/10.1080/00224499.2019.1687640

Frederick, D., Gillespie, B. J., Lever, J., Berardi, V., & Garcia, J. R. (2021). Sexual practices and satisfaction among gay and heterosexual men in romantic relationships: A comparison

using coarsened exact matching in a U.S. national sample. *Journal of Sex Research*, Advance online publication. https://doi.org/10.1080/00224499.2020.1861424

Frederick, D. A., Lever, J., Gillespie, B. J., & Garcia, J. R. (2017). What keeps passion alive? Sexual aatisfaction is associated with sexual communication, mood setting, sexual variety, oral sex, orgasm, and sex frequency in a national U.S. study. *Journal of Sex Research, 54*(2), 186-201. https://doi.org/10.1080/00224499.2015.1137854

Frigon, J.-Y., & Laurencelle, L. (1993). Analysis of covariance: A proposed algorithm. *Educational and Psychological Measurement, 53*, 1-18. https://doi.org/10.1177/0013164493053001001

Gabb, J. (2019). The relationship work of sexual intimacy in long-term heterosexual and LGBTQ partnerships. Advance online publication. *Current Sociology*, 1-8. https://doi.org/10.1177/0011392119826619

Gable, S. L., & Impett, E. A. (2012). Approach and avoidance motives and close relationships. *Social and Personality Psychology Compass, 6*(1), 95-108. https://doi.org/10.1111/j.1751-9004.2011.00405.x

Gagnon, J. H. (1990). The explicit and implicit use of scripting perspective in sex research. *Annual Review of Sex Research, 1*(1), 1-43. https://doi.org/10.1080/10532528.1990.10559854

Gagnon, J. H., & Simon, W. (1973). *Sexual Conduct: The Social Sources of Human Sexuality*. Aldine.

Garcia, R. L., Kenny, D. A., & Ledermann, T. (2014). Moderation in the actor-partner interdependence model. *Personal Relationships, 22*(1), 8-29. https://doi.org/10.1111/pere.12060

Gates, G. J. (2014). *LGBT Demographics: Comparisons among population-based surveys*. https://williamsinstitute.law.ucla.edu/wp-content/uploads/lgbt-demogs-sep-2014.pdf

Gauvin, S., Merwin, K. E., Kilimnik, C., Maxwell, J. A., & Sakaluk, J. K. (2019). *A large-scale test of the replicability and generalizability of survey measures in close relationships and sexuality science*. PsyArXiv. https://doi.org/10.31234/osf.io/d47q2

Gauvin, S., & Pukall, C. F. (2018). Sexual problems and sexual scripts: Overview and future directions for bisexual-identified individuals. *Sexual and Relationship Therapy, 33*(1-2), 34-44. https://doi.org/10.1080/14681994.2018.1426851

Geldhof, G. J., Preacher, K. J., & Zyphur, M. J. (2014). Reliability estimation in a multilevel confirmatory factor analysis framework. *Psychological Methods, 19*(1), 72-91. https://doi.org/10.1037/a0032138

Girard, A. (2019). Sexual desire discrepancy. *Current Sexual Health Reports, 11*(2), 80-83. https://doi.org/10.1007/s11930-019-00196-w

Goldey, K. L., & van Anders, S. M. (2012). Sexual arousal and desire: Interrelations and responses to three modalities of sexual stimuli. *Journal of Sexual Medicine, 9*, 2315-2329. https://doi.org/**10.1111/j.1743-6109.2012.02845.x**

Gómez-López, M., Viejo, C., & Ortega-Ruiz, R. (2019). Well-being and romantic relationships: A systematic review in adolescence and emerging adulthood. *International Journal of Environmental Research and Public Health, 16*(13), 2415-2446. https://doi.org/10.3390/ijerph16132415

Graham, C. A., Catania, J. A., Brand, R., Duong, T., & Canchola, J. A. (2003). Recalling sexual behavior: A methodological analysis of memory recall bias via interview using the diary

as the gold standard. *Journal of Sex Research, 40*(4), 325-332. https://doi.org/10.1080/00224490209552198

Gravel, E. E., Reissing, E. D., & Pelletier, L. G. (2020). The ebb and flow of sexual well-being: The contributions of basic psychological needs and autonomous and controlled sexual motivation to daily variations in sexual well-being. *Journal of Social and Personal Relationships, 37*(7), 2286-2306. https://doi.org/10.1177/0265407520921558

Gray, J. A. (1987). *The Psychology of Fear and Stress* (2nd ed.). Cambridge University Press.

Greene, K., & Faulkner, S. L. (2005). Gender, belief in the sexual double standard, and sexual talk in heterosexual dating relationships. *Sex Roles, 53*(3-4), 239-251. https://doi.org/10.1007/s11199-005-5682-6

Hair, J. F., Black, B., Babin, B., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6 ed.). Pearson.

Hall, K. S. K. (2019). Cultural differences in the treatment of sex problems. *Current Sexual Health Reports, 11*(1), 29-34. https://doi.org/10.1007/s11930-019-00189-9

Hall, K. S. K., & Binik, Y. M. (2020). *Principles and practices of sex therapy* (6th ed.). The Guilford Press.

Hammack, P. L., Frost, D. M., & Hughes, S. D. (2019). Queer intimacies: A new paradigm for the study of relationship diversity. *Journal of Sex Research, 56*(4-5), 556-592. https://doi.org/10.1080/00224499.2018.1531281

Hart, C. G., Saperstein, A., Magliozzi, D., & Westbrook, L. (2019). Gender and health: Beyond binary categorical measurement. *Journal of Health and Social Behavior, 60*(1), 101-118. https://doi.org/10.1177/0022146519825749

Hatfield, E., & Sprecher, S. (1986). Measuring passionate love in intimate relationships. *Journal of Adolescence, 9*, 383-410. https://doi.org/10.1016/S0140-1971(86)80043-4

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2 ed.). Guilford Press.

Hayes, R., & Dennerstein, L. (2005). The impact of aging on sexual function and sexual dysfunction in women: A review of population−based studies. *Journal of Sexual Medicine, 2*(3), 317-330. https://doi.org/10.1111/j.1743-6109.2005.20356.x

Heck, R. H., & Thomas, S. L. (2009). *An introduction to multilevel modeling techniques* (2nd ed.). Psychology Press.

Heck, R. H., Thomas, S. L., & Tabata, L. N. (2014). *Multilevel and longitudinal modeling with IBM SPSS* (2nd ed.). Routledge.

Heiman, J. R. (2002). Sexual dysfunction: Overview of prevalence, etiological factors, and treatments. *Journal of Sex Research, 39*(1), 73-78. https://doi.org/10.1080/00224490209552124

Heiman, J. R., Long, J. S., Smith, S. N., Fisher, W. A., DSand, M. S., & Rosen, R. C. (2011). Sexual satisfaction and relationship happiness in midlife and older couples in five countries. *Archives of Sexual Behavior, 40*(4), 741-753. https://doi.org/10.1007/s10508-010-9703-3

Hendrickx, L., Gijs, L., & Enzlin, P. (2015). Age−related prevalence rates of sexual difficulties, sexual dysfunctions, and sexual distress in heterosexual women: Results from an online survey in flanders. *Journal of Sexual Medicine, 12*(2), 424-435. https://doi.org/10.1111/jsm.12725

Hendrickx, L., Gijs, L., & Enzlin, P. (2019). Age-related prevalence rates of sexual difficulties, sexual dysfunctions and sexual distress in heterosexual men: Results from an online survey in Flanders. *Sexual and Relationship Therapy, 34*(4), 440-461. https://doi.org/10.1080/14681994.2018.1500017

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences, 33*, 61-83. https://doi.org/10.1017/S0140525X0999152X

Holmberg, D., & Blair, K. L. (2009). Sexual desire, communication, satisfaction, and preferences of men and women in same-sex versus mixed-sex relationships. *Journal of Sex Research, 46*(1), 57-66. https://doi.org/10.1080/00224490802645294

Holmberg, D., Blair, K. L., & Phillips, M. (2010). Women's sexual satisfaction as a predictor of well-being in same-sex versus mixed-sex relationships. *Journal of Sex Research, 47*(1), 1-11. https://doi.org/10.1080/00224490902898710

Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Med, 7*, e1000316. https://doi.org/10.1371/journal.pmed.1000316

Howard, J. R., O'Neill, S., & Travers, C. (2006). Factors affecting sexuality in older Australian women: Sexual interest, sexual arousal, relationships and sexual distress in older Australian women. *Climacteric, 9*(5), 355-367. https://doi.org/10.1080/13697130600961870

Imker, H. J., Luong, H., Mischo, W. H., Schlembach, M. C., & Wiley, C. (2021). An examination of data reuse practices within highly cited articles of faculty at a research university. *Journal of Academic Librarianship, 47*(4), 102369. https://doi.org/https://doi.org/10.1016/j.acalib.2021.102369

Impett, E. A., Muise, A., & Harasymchuk, C. (2019). Giving in the bedroom: The costs and benefits of responding to a partner's sexual needs in daily life. *Journal of Social and Personal Relationships, 36*(8), 2455-2473. https://doi.org/10.1177/0265407518787349

Impett, E. A., Muise, A., & Peragine, D. (2014). Sexuality in the context of relationships. In D. L. Tolman, L. M. Diamond, J. A. Bauermeister, W. H. George, J. G. Pfaus, & L. M. Ward (Eds.), *APA handbook of sexuality and psychology* (Vol. 1, pp. 269-315). American Psychological Association.

Impett, E. A., Muise, A., & Rosen, N. O. (2015). Is it good to be giving in the bedroom? A prosocial perspective on sexual health and well-being in romantic relationships. *Current Sexual Health Reports, 7*, 180-190. https://doi.org/10.1007/s11930-015-0055-9

Impett, E. A., Peplau, L. A., & Gable, S. L. (2005). Approach and avoidance sexual motives: Implications for personal and interpersonal well-being. *Personal Relationships, 12*(4), 465-482. https://doi.org/10.1111/j.1475-6811.2005.00126.x

Jaafarpour, M., Khani, A., Khajavikhan, J., & Suhrabi, Z. (2013). Female sexual dysfunction: Prevalence and risk factors. *Journal of Clinical and Diagnostic Research, 7*(12), 2877-2880. https://doi.org/10.7860/JCDR/2013/6813.3822

Jackson, D. L., Gillaspy, J. A., & Purc-Stephenson, R., Jr. . (2009). Reporting practices in confirmatory factor analysis: An overview and some recommendations. *Psychological Methods, 14*(1), 6-23. https://doi.org/10.1037/a0014694

Jackson, S. (2006). Interchanges: Gender, sexuality and heterosexuality: The complexity (and limits) of heteronormativity. *Feminist theory, 7*(1), 105-121. https://doi.org/10.1177/1464700106061462

Jacobson, N. S., & Addis, M. E. (1993). Research on couples and couple therapy: What do we know? Where are we going? *Journal of Consulting and Clinical Psychology, 61*(1), 85-93. https://doi.org/10.1037/0022-006X.61.1.85

Jacobson, R., & Joel, D. (2019). Self-reported gender identity and sexuality in an online sample of cisgender, transgender, and gender-diverse individuals: An exploratory study. *Journal of Sex Research, 56*(2), 249-263. https://doi.org/10.1080/00224499.2018.1523998

James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). *The report of the 2015 U.S. transgender survey*. https://www.transequality.org/sites/default/files/docs/USTS-Full-Report-FINAL.PDF

Jodouin, J.-F., Rosen, N. O., Merwin, K. E., & Bergeron, S. (2021). Discrepancy in dyadic sexual desire predicts sexual distress over time in a community sample of committed couples: A daily diary and longitudinal study. *Archives of Sexual Behavior*, Advance online publication. https://doi.org/10.1007/s10508-021-01967-0

Johnson, S. (2008). *Hold me tight: Seven conversations for a lifetime of love*. Little, Brown Spark.

Jonason, P. K., Betteridge, G. L., & Kneebone, I. I. (2016). An examination of the nature of erotic talk. *Archives of Sexual Behavior, 45*(1), 21-31. https://doi.org/10.1007/s10508-015-0585-2

Jones, A. C., Robinson, W. D., & Seedall, R. B. (2018). The role of sexual communication in couples' sexual outcomes: A dyadic path analysis. *Journal of Marital and Family Therapy, 44*(4), 606-623. https://doi.org/10.1111/jmft.12282

Jozkowski, K. N., & Peterson, Z. D. (2013). College students and sexual consent: Unique insights. *Journal of Sex Research, 50*(6), 517-523. https://doi.org/10.1080/00224499.2012.700739

Kaiser, K. (2009). Protecting respondent confidentiality in qualitative research. *Qualitative Health Research, 19*(11), 1632-1641. https://doi.org/10.1177/1049732309350879

Kamp Dush, C. M., Taylor, M. G., & Kroeger, R. A. (2008). Marital happiness and psychological well-being across the life course. *Family relations, 57*, 211-226. https://doi.org/10.1111/j.1741-3729.2008.00495.x

Kashy, D. A., Donnellan, M. B., Burt, S. A., & McGue, M. (2008). Growth curve models for inddistinguishable dyads using multilevel modeling and structural equation modeling: The case of adolescent twins' conflict with their mothers. *Developmental Psychology, 44*(2), 316-329. https://doi.org/10.1037/0012-1649.44.2.316

Kelley, H. H., Holmes, J. G., Kerr, N. L., Reis, H. T., Rusbult, C. E., & Van Lange, P. A. M. (2003). *An atlast of interpersonal situations*. Cambridge University Press. https://doi.org/10.1017/CBO9780511499845

Kelley, H. H., & Thibaut, J. W. (1978). *Interpersonal relationships: A theory of interdependence*. John Wiley & Sons.

Kelly, M. P., Strassberg, D. S., & Turner, C. M. (2006). Behavioral assessment of couples' communication in female orgasmic disorder. *Journal of Sex & Marital Therapy, 32*(2), 81-95. https://doi.org/10.1080/00926230500442243

Kenny, D. A. (1996). Models of non-independence in dyadic research. *Journal of Social and Personal Relationships, 13*(2), 279-294. https://doi.org/10.1177/0265407596132007

Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. Guilford.

Kerpen, S., & Marston, K. (2019). Heteronormativity. In P. Atkinson, S. Delamont, A. Cernat, J. W. Sakshaug, & R. A. Williams (Eds.), *SAGE Research Methods Foundations*. SAGE. https://doi.org/10.4135/9781526421036767642

Klein, V., Imhoff, R., Reininger, K. M., & Briken, P. (2019). Perceptions of sexual script deviation in women and men. *Archives of Sexual Behavior, 48*(2), 631-644. https://doi.org/10.1007/s10508-018-1280-x

Klein, V., Savaş, Ö., & Conley, T. D. (2021). How WEIRD and androcentric Is sex research? Global inequities in study populations. *Journal of Sex Research*, Advance online publication. 1-8. https://doi.org/10.1080/00224499.2021.1918050

Kleinplatz, P. J., Ménard, A. D., Paquet, M.-P., Paradis, N., Campbell, M., Zuccarino, D., & Mehak, L. (2009). The components of optimal sexuality: A portrait of "great sex". *Canadian Journal of Human Sexuality, 18*, 1-13. https://www.utpjournals.press/loi/cjhs

Klinkenberg, D., & Rose, S. (1994). Dating scripts of gay men and lesbians. *Journal of Homosexuality, 26*(4), 23-35. https://doi.org/10.1300/ J082v26n04_02

Klusmann, D. (2002). Sexual motivation and the duration of partnership. *Archives of Sexual Behavior, 31*(3), 275-287. https://doi.org/10.1023/A:1015205020769

Konicki Di lorio, C. (2005). *Measurement in health behavior: Methods for research and evaluation*. Jossey-Bass.

Kontula, O., & Haavio-Mannila, E. (2009). The impact of agin on human sexuality and sexual desire. *Journal of Sex Research, 46*(1), 46-56. https://doi.org/10.1080/00224490802624414

Kosenko, K. A. (2010). Meanings and dilemmas of sexual safety and communication for transgender individuals. *Health Communication, 25*(2), 131-141. https://doi.org/10.1080/10410230903544928

Kosenko, K. A. (2011). The safer sex communication of transgender adults: Processes and Problems. *Journal of Communication, 61*(3), 467-495. https://doi.org/10.1111/j.1460-2466.2011.01556.x

Kroeger, R. A., & Powers, D. A. (2019). Examining same-sex couples using dyadic data methods. In *Analytical Family Demography* (pp. 157-186). Springer.

Kuper, L. E., Nussbaum, R., & Mustanski, B. (2012). Exploring the diversity of gender and sexual orientation identities in an online sample of transgender individuals. *Journal of Sex Research, 49*(2-3), 244-254. https://doi.org/10.1080/00224499.2011.596954

Kuper, L. E., Wright, L., & Mustanski, B. (2018). Gender identity development among transgender and gender nonconforming emerging adults: An intersectional approach. *International Journal of Transgenderism, 19*(4), 436-455. https://doi.org/10.1080/15532739.2018.1443869

Kuperberg, A., & Padgett, J. E. (2016). The role of culture in explaining college students' selection into hookups, dates, and long-term romantic relationships. *Journal of Social and Personal Relationships, 33*(8), 1070-1096. https://doi.org/10.1177/0265407515616876

La France, B. (2010). What verbal and nonverbal communication cues lead to sex?: An analysis of the traditional sexual script. *Communication Quarterly, 58*(3), 297-318. https://doi.org/10.1080/01463373.2010.503161

Lamont, E. (2017). “We can write the scripts ourselves”: Queer challenges to heteronormative courtship practices. *Gender & Society, 31*(5), 624-646. https://doi.org/10.1177/0891243217723883

Landgraf, S., von Treskow, I., & Osterheider, M. (2018). “Sex in a relationship” versus “sex during a one-night stand”: The link between mental representations of consensual sexuality, mating strategies, and sexual experience in heterosexual women and men. *Archives of Sexual Behavior, 47*(3), 725-736. https://doi.org/10.1007/s10508-017-1088-0

Langhaug, L. F., Sherr, L., & Cowan, F. M. (2010). How to improve the validity of sexual behaviour reporting: Systematic review of questionnaire delivery modes in developing countries. *Tropical Medicine & International Health, 15*(3), 362-381. https://doi.org/10.1111/j.1365-3156.2009.02464.x

Laurenceau, J. P., Barrett, L. F., & Rovine, M. J. (2005). The interpersonal process model of intimacy in marriage: A daily-diary and multilevel modeling approach. *Journal of Family Psychology, 19*(2), 314-323. https://doi.org/10.1037/0893-3200.19.2.314

Laurenceau, J. P., Feldman Barrett, L., & Pietromonaco, P. R. (1998). Intimacy as an interpersonal process: The importance of self-disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology, 74*, 1238-1251.

Lavner, J. A., & Bradbury, T. N. (2010). Patterns of change in marital satisfaction over the newlywed years. *Journal of Marriage and Family, 72*(5), 1171-1187. https://doi.org/10.1111/j.1741-3737.2010.00757.x

Lawrance, K.-a., & Byers, E. S. (1992). Development of the interpersonal exchange model of sexual satisfaction in long-term relationships. *Canadian Journal of Human Sexuality, 1*(3), 123-128.

Lawrance, K.-A., & Byers, E. S. (1995). Sexual satisfaction in long-term heterosexual relationships: The interpersonal exchange model of sexual satisfaction. *Personal Relationships, 2*(4), 267-285. https://doi.org/10.1111/j.1475-6811.1995.tb00092.x

Lawrance, K.-a., & Byers, E. S. (1998). Interpersonal exchange model of sexual satisfaction questionnaire. In C. M. Davis, W. L. Yarber, R. Bauserman, G. Schreer, & S. L. Davis (Eds.), *Sexuality-related measures: A compendium* (2nd ed.). Sage.

Le, B., Dove, N. L., Agnew, C. R., Korn, M. S., & Mutso, A. A. (2010). Predicting nonmarital romantic relationship dissolution: A meta−analytic synthesis. *Personal Relationships, 17*(3), 377-390. https://doi.org/10.1111/j.1475-6811.2010.01285.x

Ledermann, T., & Kenny, D. A. (2017). Analyzing dyadic data with multilevel modeling versus structural equation modeling: A tale of two methods. *Journal of Family Psychology, 31*(4), 442-452. https://doi.org/10.1037/fam0000290

Lee, D. M., Vanhoutte, B., Nazroo, J., & Pendleton, N. (2016). Sexual health and positive subjective well-being in partnered older men and women. *Journals of Gerontology, 71*(4), 698-710. https://doi.org/10.1093/geronb/gbw018

Lindley, L. M., Anzani, A., Prunas, A., & Galupo, M. P. (2020). Sexual fantasy across gender identity: A qualitative investigation of differences between cisgender and non-binary people's imagery. *Sexual and Relationship Therapy*, Advance online publication. https://doi.org/10.1080/14681994.2020.1716966

Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*, 1198-1202. https://www.jstor.org/stable/2290157

Little, T. D. (2013). *Longitudinal structural equation modeling*. Guilford Press.

Liu, C. (2003). Does quality of marital sex decline with duration? *Archives of Sexual Behavior, 32*(1), 55-60. https://doi.org/10.1023/A:1021893329377

Loewenstein, G., Krishnamurti, T., Kopsic, J., & McDonald, D. (2015). Does increased sexual frequency enhance happiness? *Journal of Economic Behavior & Organization, 116*, 206-218. https://doi.org/10.1016/j.jebo.2015.04.021

Lorimer, K., DeAmicis, L., Dalrymple, J., Frankis, J., Jackson, L., Lorgelly, P., McMillan, L., & Ross, J. (2019). A rapid review of sexual wellbeing definitions and measures: Should we now include sexual wellbeing freedom? *Journal of Sex Research, 56*(7), 843-853. https://doi.org/10.1080/00224499.2019.1635565

Lyons, S., Duxbury, L., & Higgins, C. (2005). Are gender differences in basic human values a generational phenomenon? *Sex Roles, 53*(9/10), 763-778. https://doi.org/10.1007/s11199-005-7740-4

MacNeil, S., & Byers, E. S. (2005). Dyadic assessment of sexual self-disclosure and sexual satisfaction in heterosexual dating couples. *Journal of Social and Personal Relationships, 22*(2), 169-181. https://doi.org/10.1177/0265407505050942

MacNeil, S., & Byers, E. S. (2009). Role of sexual self-disclosure in the sexual satisfaction of long-term heterosexual couples. *Journal of Sex Research, 46*(1), 3-14. https://doi.org/10.1080/00224490802398399

Mahar, E. A., Mintz, L. B., & Akers, B. M. (2020). Orgasm equality: Scientific findings and societal implications. *Current Sexual Health Reports, 12*, 24-32. https://doi.org/https://doi.org/10.1007/s11930-020-00237-9

Mallory, A. B., Stanton, A. M., & Handy, A. B. (2019). Couples' sexual communication and dimensions of sexual function: A meta-analysis. *Journal of Sex Research, 56*(7), 882-898. https://doi.org/10.1080/00224499.2019.1568375

Manning, J. (2021). Communication studies about sex: Implications for relationships, health, culture, and identity. A review. *El profesional de la informacion, 30*(1), e300114. https://doi.org/10.3145/epi.2021.ene.14

Mark, K. P. (2015). Sexual desire discrepancy. *Current Sexual Health Reports, 7*(3), 198-202. https://doi.org/10.1007/s11930-015-0057-7

Mark, K. P., & Jozkowski, K. N. (2013). The mediating role of sexual and nonsexual communication between relationship and sexual satisfaction in a sample of college-age heterosexual couples. *Journal of Sex & Marital Therapy, 39*, 410-427. https://doi.org/10.1080/0092623X.2011.644652

Mark, K. P., Leistner, C. E., & Dai, M. (2019). Daily sexual desire and its impact on next-day desire and behavior in mixed sex couples. *Archives of Sexual Behavior, 48*(3), 795-801. https://doi.org/10.1007/s10508-018-1320-6

Mark, K. P., Vowels, L. M., & Murray, S. H. (2018). The impact of attachment style on sexual satisfaction and sexual desire in a sexually diverse sample. *Journal of Sex & Marital Therapy, 44*(5), 450-458. https://doi.org/10.1080/0092623X.2017.1405310

Marshall, E. A., Miller, H. A., & Bouffard, J. A. (2021). Bridging the theoretical gap: Using sexual script theory to explain the relationship between pornography use and sexual

coercion. *Journal of Interpersonal Violence, 36*(9-10), NP5215-NP5238. https://doi.org/10.1177/0886260518795170

Martin, K. M., & Woodgate, R. L. (2017). Concept analysis: The holistic nature of sexual well-being. *Sexual and Relationship Therapy, 35*(1), 15-29. https://doi.org/10.1080/14681994.2017.1419567

Mason, W., & Suir, S. (2012). Conducting behavioral research on Amazon's mechanical turk. *Behavior Research Methods, 44*, 1-23. https://doi.org/10.3758/s13428-011-0124-6

Masters, N. T., Casey, E., Wells, E. A., & Morrison, D. M. (2013). Sexual scripts among young heterosexually active men and women: Continuity and change. *Journal of Sex Research, 50*(5), 409-420. https://doi.org/10.1080/00224499.2012.661102

Maxwell, C. (2007). 'Alternative' narratives of young people's heterosexual experiences in the UK. *Sexualities, 10*(5), 539-558. https://doi.org/10.1177/1363460707083168

McCall, K. M., Rellini, A. H., Seal, B. N., & Meston, C. M. (2007). Sex differences in memory for sexually-relevant information. *Archives of Sexual Behavior, 36*(4), 508-517. https://doi.org/10.1007/s10508-006-9106-7

McCallum, E. B., & Peterson, Z. D. (2012). Investigating the impact of inquiry mode on self-reported sexual behavior: Theoretical considerations and review of the literature. *Journal of Sex Research, 49*(2-3), 212-226. https://doi.org/10.1080/00224499.2012.658923

McKenna, J. L., Roemer, L., & Orsillo, S. M. (2021). Predictors of sexual consent communication among sexual minority cisgender and nonbinary young adults during a penetrative sexual encounter with a new partner. *Sexuality & Culture*, Advance online publication. https://doi.org/10.1007/s12119-021-09831-y

McNeil, J., Rehman, U. S., & Fallis, E. (2018). The influence of attachment styles on sexual communication behavior. *Journal of Sex Research, 55*(2), 191-201. https://doi.org/10.1080/00224499.2017.1318817

McNeish, D. (2018). Thanks coefficient alpha, we'll take it from here. *Psychological Methods, 23*(3), 412-433. https://doi.org/10.1037/met0000144

McNulty, J. K., Wenner, C. A., & Fisher, T. D. (2016). Longitudinal associations among relationship satisfaction, sexual satisfaction, and frequency of sex in early marriage. *Archives of Sexual Behavior, 45*, 85-97. https://doi.org/10.1007/s10508-014-0444-6

McNulty, J. K., & Widman, L. (2013). The implications of sexual narcissism for sexual and marital satisfaction. *Archives of Sexual Behavior, 42*(6), 1021-1032. https://doi.org/10.1007/s10508-012-0041-5

Meana, M. (2010). Elucidating women's (hetero)sexual desire: Definitional challenges and content expansion. *Journal of Sex Research, 47*(2-3), 104-122. https://doi.org/10.1080/00224490903402546

Ménard, A. D., & Offman, A. (2009). The interrelationships between sexual self-esteem, sexual assertiveness and sexual satisfaction. *Canadian Journal of Human Sexuality, 18*(1-2), 35-45.

Mertens, D. M., & Hesse-Biber, S. (Eds.). (2012). Triangulation and mixed methods research: Provocative positions. [Special issue]. *Journal of Mixed Methods Research*, *6*(2). https://doi.org/10.1177/1558689812437100

Merwin, K. E., Bergeron, S., Jodouin, J.-F., Mackinnon, S. P., & Rosen, N. O. (2021). *Few differences in sexual talk by gender/sex and dyad type: A retrospective and daily diary study with couples*. [Manuscript submitted for publication].

Merwin, K. E., O'Sullivan, L. F., & Rosen, N. O. (2017). We need to talk: Disclosure of sexual problems is associated with depression, sexual functioning, and relationship satisfaction in women. *Journal of Sex & Marital Therapy, 43*, 786-800. https://doi.org/10.1080/0092623X.2017.1283378

Merwin, K. E., & Rosen, N. O. (2019). *Perceived partner responsiveness and sexual talk dataset* (Version 1) [Data set]. OSF. https://doi.org/10.17605/OSF.IO/TJ76W

Merwin, K. E., & Rosen, N. O. (2020). Perceived partner responsiveness moderates the associations between sexual talk and sexual and relationship well-being in individuals in long-term relationships. *Journal of Sex Research, 57*(3), 351-364. https://doi.org/10.1080/00224499.2019.1610151

Meston, C. M., & Derogatis, L. R. (2002). Validated instruments for assessing female sexual function. *Journal of Sex & Marital Therapy, 28*, 155-164. https://doi.org/10.1080/00926230252851276

Mikalson, P., Pardo, S., & Green, J. (2013). *First, do no harm: Reducing disparities for lesbian, gay, bisexual, transgender, queer and questioning populations in California*. https://lhc.ca.gov/sites/lhc.ca.gov/files/Reports/225/ReportsSubmitted/CRDPLGBTQReport.pdf

Millman, R. D. (2018). *To talk or not to talk? Communication during sexual activity as a mediator of the association between relationship and sexual satisfaction* [Unpublished doctoral dissertation]. Simon Fraser University.

Minton, H. L. (1997). Queer theory: Historical roots and implications for psychology. *Theory and Psychology, 7*(3), 337-353. https://doi.org/10.1177/0959354397073003

Mitchell, K., Wellings, K., Elam, G., Erens, B., Fenton, K., & Johnson, A. (2007). How can we facilitate reliable reporting in surveys of sexual behaviour? Evidence from qualitative research. *Culture, Health & Sexuality, 9*(5), 519-531. https://doi.org/10.1080/13691050701432561

Mitchell, K. R. D., Mercer, C. H. P., Ploubidis, G. B. P., Jones, K. G. M., Datta, J. M., Field, N. M., Copas, A. J. P., Tanton, C. P., Erens, B. M. A., Sonnenberg, P. P., Clifton, S. B., Macdowall, W. M., Phelps, A. B. A., Johnson, A. M. P., & Wellings, K. P. (2013). Sexual function in Britain: Findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *Lancet, 382*(9907), 1817-1829. https://doi.org/10.1016/S0140-6736(13)62366-1

Montesi, J. L., Fauber, R. L., Gordon, E. A., & Heimberg, R. G. (2010). The specific importance of communicating about sex to couples' sexual and overall relationship satisfaction. *Journal of Social and Personal Relationships, 28*, 591-609. https://doi.org/10.1177/0265407510386833

Morgis, B. L., Ewing, E. S. K., Liu, T., Slaughter-Acey, J., Fisher, K., & Jampol, R. (2019). A hold me tight workshop for couple attachment and sexual intimacy. *Contemporary Family Therapy 41*(4), 368-383. https://doi.org/10.1007/s10591-019-09504-x

Mortensen, K., & Hughes, T. L. (2018). Comparing Amazon's mechanical turk platform to conventional data collection methods in the health and medical research literature. *Journal of General Internal Medicine, 33*, 533-538. https://doi.org/10.1007/s11606-017-4246-0

Muehlenhard, C. L., & Felts, A. S. (2019). Sexual beliefs scale. In R. Milhausen, J. K. Sakaluk, T. D. Fisher, C. M. Davis, & W. L. Yarber (Eds.), *Handbook of sexuality-related measures* (4th ed., pp. 109-110). Routledge.

Muehlenhard, C. L., & Quackenbush, D. M. (2019). Sexual double standard scale. In R. Milhausen, J. K. Sakaluk, T. D. Fisher, C. M. Davis, & W. L. Yarber (Eds.), *Handbook of sexuality-related measures* (4th ed., pp. 645-646). Routledge.

Muise, A., Boudreau, G. K., & Rosen, N. O. (2017). Seeking connection versus avoiding disappointment: An experimental manipulation of approach and avoidance sexual goals and the implications for sesire and satisfaction. *Journal of Sex Research, 54*(3), 296-307. https://doi.org/10.1080/00224499.2016.1152455

Muise, A., Harasymchuk, C., Day, L. C., Bacey-Giles, C., Gere, J., & Impett, E. A. (2019). Broadening your horizons: Self-expanding activities promote desire and satisfaction in established romantic relationships. *Journal of Personality and Social Psychology, 116*(2), 237-258. https://doi.org/10.1037/pspi0000148

Muise, A., & Impett, E. A. (2014). Good, giving, and game: The relationship benefits of communal sexual motivation. *Social Psychological and Personality Science, 6*(2), 164-172. https://doi.org/10.1177/1948550614553641

Muise, A., & Impett, E. A. (2015). Good, giving, and game: The relationship benefits of communal sexual motivation. *Social Psychological and Personality Science, 6*, 164-172. https://doi.org/10.1177/1948550614553641

Muise, A., Impett, E. A., Kogan, A., & Desmarais, S. (2012). Keeping the spark alive: Being motivated to meet a partner's sexual needs sustains sexual desire in long-term romantic

relationships. *Social Psychological and Personality Science, 4*(3), 267-273. https://doi.org/10.1177/1948550612457185

Muise, A., Maxwell, J. A., & Impett, E. A. (2018). What theories and methods from relationship research can contribute to sex research. *Journal of Sex Research, 55*, 540-562. https://doi.org/10.1080/00224499.2017.1421608

Murray, S. H. (2018). Heterosexual men's sexual desire: Supported by, or deviating from, traditional masculinity norms and sexual scripts? *Sex Roles, 78*(1), 130-141. https://doi.org/10.1007/s11199-017-0766-7

Murray, S. H., & Milhausen, R. (2012). Sexual desire and relationship duration in young men and women. *Journal of Sex & Marital Therapy, 38*(1), 28-40. https://doi.org/10.1080/0092623X.2011.569637

Murray, S. H., Milhausen, R. R., Graham, C. A., & Kuczynski, L. (2017). A qualitative exploration of factors that affect sexual desire among men aged 30 to 65 in long-term relationships. *Journal of Sex Research, 54*(3), 319-330. https://doi.org/10.1080/00224499.2016.1168352

Murray, S. H., Milhausen, R. R., & Sutherland, O. (2014). A qualitative comparison of young women's maintained versus decreased sexual desire in longer-term relationships. *Women & Therapy, 37*(3-4), 319-341. https://doi.org/10.1080/02703149.2014.897559

Mustanski, B., Starks, T., & Newcomb, M. E. (2014). Methods for the design and analysis of relationship and partner effects on sexual health. *Archives of Sexual Behavior, 43*(1), 21-33. https://doi.org/10.1007/s10508-013-0215-9

Mutchler, M. G. (2000). Young gay men's stories in the states: Scripts, sex, and safety in the time of AIDS. *Sexualities, 3*(1), 31-54. https://doi.org/10.1177/136346000003001002

Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's guide* (Eighth ed.). Muthén & Muthén.

Newcomb, M. E., Swann, G., Ma, J., Moskowitz, D., Bettin, E., Macapagal, K., & Whitton, S. W. (2021). Interpersonal and intrapersonal influences on sexual satisfaction in young male couples: Analyses of actor-partner interdependence models. *Journal of Sex Research, 58*(2), 183-194. https://doi.org/10.1080/00224499.2020.1820933

O'Connor, B. P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instruments, & Computers, 32*, 396-402. https://doi.org/10.3758/BF03200807

Olsen, J. A., & Kenny, D. A. (2006). Structural equation modeling with interchangeable dyads. *Psychological Methods, 11*(2), 127-141. https://doi.org/10.1037/1082-989X.11.2.127

Olson, K. R., Key, A. C., & Eaton, N. R. (2015). Gender cognition in transgender children. *Psychological Science, 26*(4), 467-474. https://doi.org/10.1177/0956797614568156

Ortmann, D. M., & Sprott, R. A. (2013). *Sexual outsiders: Understanding BDSM sexualities and communities*. Rowman & Littlefield.

Oswald, R., Blume, L., & Marks, S. (2005). Decentering heteronormativity: A model for family studies. In V. L. Bengtson, A. C. Acock, K. R. Allen, P. Dilworth-Anderson, & D. M. Klein (Eds.), *Sourcebook of family theory and research* (pp. 143-165). SAGE. https://doi.org/10.4135/9781412990172

Otto, A. K., Laurenceau, J. P., Siegel, S. D., & Belcher, A. J. (2015). Capitalizing on everyday positive events uniquely predicts daily intimacy and well-being in couples coping with breast cancer. *Journal of Family Psychology, 29*, 69-79. https://doi.org/10.1037/fam0000042

Passuth Lynott, P., & McCandless, N. J. (2000). The impact of age vs. life experience on the gender role attitudes of women in different cohorts. *Journal of Women & Aging, 12*(1-2), 5-21. https://doi.org/10.1300/J074v12n01_02

Patterson, G. E., Ward, D. B., & Brown, T. B. (2013). Relationship scripts: How young women develop and maintain same-sex romantic relationships. *Journal of GLBT family studies, 9*(2), 179-201. https://doi.org/10.1080/1550428X.2013.765263

Pazmany, E., Bergeron, S., Verhaeghe, J., Van Oudenhove, L., & Enzlin, P. (2015). Dyadic sexual communication in pre-menopausal women with self-reported dyspareunia and their partners: Associations with sexual function, sexual distress and dyadic adjustment. *Journal of Sexual Medicine, 12*(2), 516-528. https://doi.org/10.1111/jsm.12787

Peplau, L. A. (2003). Human sexuality: How do men and women differ? *Current Directions in Psychological Science, 12*(2), 37-40. https://doi.org/10.1111/1467-8721.01221

Pett, M., Lackey, N. R., & Sullivan, J. J. (2003). *Making sense of factor analysis: The use of factor analysis for instrument development in health care research*. Sage Publishing.

Pham, J. M. (2016). The limits of heteronormative sexual scripting: College student development of individual sexual scripts and descriptions of lesbian sexual behavior. *Frontiers in Sociology, 1*. https://doi.org/10.3389/fsoc.2016.00007

Pink, J. (2018). *Attachment insecurity and sexual communication in cohabitating mixed-sex couples* [Unpublished doctoral dissertation]. Simon Fraser University.

Power, J., McNair, R., & Carr, S. (2009). Absent sexual scripts: Lesbian and bisexual women's knowledge, attitudes and action regarding safer sex and sexual health information. *Culture, Health & Sexuality, 11*(1), 67-81. https://doi.org/10.1080/13691050802541674

Pronk, T. E. (2019). The time efficiency gain in sharing and reuse of research data. *Data Science Journal, 18*(10), 1-8. https://doi.org/10.5334/dsj-2019-010

Pucker, B., Hafner, A., & Sielemann, K. (2020). The reuse of public datasets in the life sciences: Potential risks and rewards. *PeerJ, 8*, e9954-e9954. https://doi.org/10.7717/peerj.9954

Puckett, J. A., Brown, N. C., Dunn, T., Mustanski, B., & Newcomb, M. E. (2020). Perspectives from transgender and gender diverse people on how to ask about gender. *LGBT Health, 7*(6), 35-311. https://doi.org/10.1089/lgbt.2019.0295

Quinn-Nilas, C. (2020). Relationship and sexual satisfaction: A developmental perspective on bidirectionality. *Journal of Social and Personal Relationships, 37*(2), 624-646. https://doi.org/10.1177/0265407519876018

Rancourt, K. M., Rosen, N. O., Bergeron, S., & Nealis, L. J. (2016). Talking about sex when sex is painful: Dyadic sexual communication is associated with women's pain, and couples' sexual and psychological outcomes in provoked vestibulodynia. *Archives of Sexual Behavior, 45*, 1933-1944. https://doi.org/10.1007/s10508-015-0670-6

RCoreTeam. (2019). *R: A language and environment for statistical computing.* R Foundation for Statistical Computing. http://www.R-project.org/

Redhotpie. (2014). *The great Australian sex census*. http://www.sexcensus.com.au/Home

Rehman, U. S., Lizdek, I., Fallis, E. E., Sutherland, S., & Goodnight, J. A. (2017). How is sexual communication different from nonsexual communication? A moment-by-moment analysis of discussions between romantic partners. *Archives of Sexual Behavior, 46*(8), 2339-2352. https://doi.org/10.1007/s10508-017-1006-5

Rehman, U. S., Rellini, A. H., & Fallis, E. (2011). The importance of sexual self-disclosure to sexual satisfaction and functioning in committed relationships. *Journal of Sexual Medicine, 8*, 3108-3115. https://doi.org/10.1111/j.1743-6109.2011.02439.x

Reis, H. T. (2012). Perceived partner responsiveness as an organizing theme for the study of relationships and well-being. In L. Campbell & T. J. Loving (Eds.), *Interdisciplinary research on close relationships: The case for integration* (pp. 27-52). American Psychological Association. https://doi.org/http://dx.doi.org/10.1037/13486-002

Reis, H. T., Clark, M. S., & Holmes, J. G. (2004). Perceived partner responsiveness as an organizing construct in the study of intimacy and closeness. In D. Mashek & A. Aron (Eds.), *Handbook of closeness and intimacy* (pp. 201-225). Erlbaum.

Reis, H. T., Maniaci, M. R., Caprariello, P. A., Eastwick, P. W., & Finkel, E. J. (2011). Familiarity does indeed promote attraction in live interaction. *Journal of Personality and Social Psychology, 101*(3), 557-570. https://doi.org/10.1037/a0022885

Reis, H. T., & Shaver, P. R. (1988). Intimacy as an interpersonal process. In S. Duck (Ed.), *Handbook of personal relationships* (pp. 367-389). Wiley & Sons.

Revelle, W. (2020). *psych: Procedures for psychological, psychometric, and personality research.* Northwestern University, Evanston, Illinois. https://CRAN.R-project.org/package=psych

Richards, C., Bouman, W. P., Seal, L., Barker, M. J., Nieder, T. O., & T'Sjoen, G. (2016). Non-binary or genderqueer genders. *International Review of Psychiatry, 28*(1), 95-102. https://doi.org/10.3109/09540261.2015.1106446

Richters, J., De Visser, R. O., Rissel, C. E., Grulich, A. E., & Smith, A. M. A. (2008). Demographic and psychosocial features of participants in bondage and discipline,

"sadomasochism" or dominance and submission (BDSM): Data from a national survey. *Journal of Sexual Medicine, 5*(7), 1660-1668. https://doi.org/10.1111/j.1743-6109.2008.00795.x

Richters, J., Grulich, A. E., de Visser, R. O., Smither, A. M., & Rissel, C. E. (2003). Sex in Australia: Sexual difficulties in a representative sample of adults. *Australian and New Zealand Journal of Public Health, 27*(2), 164-170. https://doi.org/10.1111/j.1467-842X.2003.tb00804.x

Robbins, A. R., & Reissing, E. D. (2018). Appearance dissatisfaction, body appreciation, and sexual health in women across adulthood. *Archives of Sexual Behavior, 47*, 703-714. https://doi.org/10.1007/s10508-017-0982-9

Robertson, R. E., Tran, F. W., Lewark, L. N., & Epstein, R. (2018). Estimates of non-heterosexual prevalence: The roles of anonymity and privacy in survey methodology. *Archives of Sexual Behavior, 47*, 1069-1084. https://doi.org/10.1007/s10508-017-1044-z

Robles, T. F., Slatcher, R. B., Trombello, J. M., & McGinn, M. M. (2014). Marital quality and health: A meta-analytic review. *Psychological Bulletin, 140*, 140-187. https://doi.org/10.1037/a0031859

Roels, R., & Janssen, E. (2020). Sexual and relationship satisfaction in young, heterosexual couples: The role of sexual frequency and sexual communication. *Journal of Sexual Medicine, 17*(9), 1643-1652. https://doi.org/https://doi.org/10.1016/j.jsxm.2020.06.013

Røsand, G. M., Slinning, K., Eberhard-Gran, M., Roysamb, E., & Tambs, K. (2012). The buffering effect of relationship satisfaction on emotional distress in couples. *BMC Public Health, 12*, 66. https://doi.org/10.1186/1471-2458-12-66

Rosen, N. O., & Bergeron, S. (2019). Genito-pelvic pain through a dyadic lens: Moving toward an interpersonal emotion regulation model of women's sexual dysfunction. *Journal of Sex Research, 56*(4-5), 440-461. https://doi.org/10.1080/00224499.2018.1513987

Rosen, N. O., Dawson, S. J., Leonhardt, N. D., Vannier, S. A., & Impett, E. A. (2020). Trajectories of sexual well-being among couples in the transition to parenthood. *Journal of Family Psychology, 35*(4), 523-533. https://doi.org/10.1037/fam0000689

Rosen, N. O., Mooney, K., & Muise, A. (2017). Dyadic empathy predicts sexual and relationship well-being in couples transitioning to parenthood. *Journal of Sex & Marital Therapy, 43*, 543-559. https://doi.org/10.1080/0092623X.2016.1208698

Rosen, N. O., Muise, A., Bergeron, S., Impett, E. A., & Boudreau, G. K. (2015). Approach and avoidance sexual goals in couples with provoked vestibulodynia: Associations with sexual, relational, and psychological well−being. *Journal of Sexual Medicine, 12*(8), 1781-1790. https://doi.org/10.1111/jsm.12948

Rosen, R., Brown, C., Heiman, J., Leiblum, S., Meston, C., Shabsigh, R., Ferguson, D., & D'Agostino, R., Jr. (2000). The female sexual function index (FSFI): A multidimensional self-report instrument for the assessment of female sexual function. *Journal of Sex & Marital Therapy, 26*, 191-208. https://doi.org/10.1080/009262300278597

Rosen, R. C., & Bachmann, G. A. (2008). Sexual well-being, happiness, and satisfaction in women: The case for a new conceptual paradigm. *Journal of Sex & Marital Therapy, 34*(4), 291-297. https://doi.org/10.1080/00926230802096234

Rosen, R. C., Heiman, J. R., Long, J. S., Fisher, W. A., & Sand, M. S. (2016). Men with sexual problems and their partners: Findings from the international survey of relationships. *Archives of Sexual Behavior, 45*(1), 159-173. https://doi.org/10.1007/s10508-015-0568-3

Rosen, R. C., Riley, A., Wagner, G., Osterloh, I. H., Kirkpatrick, J., & Mishra, A. (1997). The international index of erectile function (IIEF): A multidimensional scale for assessment of erectile dysfunction. *Urology, 49*, 822-830. https://doi.org/10.1016/S0090-4295(97)00238-0

Rosenkrantz, D. E., & Mark, K. P. (2018). The sociocultural context of sexually diverse women's sexual desire. *Sexuality & Culture, 22*(1), 220-242. https://doi.org/10.1007/s12119-017-9462-6

Rosier, J. G., & Tyler, J. M. (2017). Finding the love guru in you: Examining the effectiveness of a sexual communication training program for married couples. *Marriage & Family Review, 53*(1), 65-87. https://doi.org/10.1080/01494929.2016.1177629

Rothblum, E. D. (2009). An overview of same-sex couples in relationships: An area still at sea. In D. A. Hope (Ed.), *Contemporary perspectives on lesbian, gay, and bisexual identities* (pp. 113-139). Springer.

Ruberg, B., & Ruelos, S. (2020). Data for queer lives: How LGBTQ gender and sexuality identities challenge norms of demographics. *Big Data & Society, 7*(1), 1-12. https://doi.org/10.1177/2053951720933286

Rubinsky, V., & Hosek, A. (2020). "We have to get over it": Navigating sex talk through the lens of sexual communication comfort and sexual self-disclosure in LGBTQ intimate partnerships. *Sexuality & Culture, 24*(3), 613-629. https://doi.org/10.1007/s12119-019-09652-0

Ruffieux, M., Nussbeck, F. W., & Bodenmann, G. (2014). Long-term prediction of relationship satisfaction and stability by stress, coping, communication, and well-being. *Journal of Divorce & Remarriage, 55*(6), 485-501. https://doi.org/10.1080/10502556.2014.931767

Ruppel, H. J. (1994). *Publication trends in the sexological literature: A comparison of two contemporary journals* [Unpublished doctoral dissertation]. Institute for the Advanced Study of Human Sexuality.

Sakaluk, J. K., & Fisher, A. N. (2019). Measurement memo I: Updated practices in psychological measurement for sexual scientists. *Canadian Journal of Human Sexuality, 28*(2), 1-9. https://doi.org/10.3138/cjhs.2019-0018

Sakaluk, J. K., & Short, S. D. (2017). A methodological review of exploratory factor analysis in sexuality research: Used practices, best practices, and data analysis resources. *Journal of Sex Research, 54*(1), 1-9. https://doi.org/10.1080/00224499.2015.1137538

Sakaluk, J. K., Todd, L. M., Milhausen, R., Lachowsky, N. J., & Undergraduate Research Group In Sexuality, U. (2014). Dominant heterosexual sexual scripts in emerging adulthood: Conceptualization and measurement. *Journal of Sex Research, 51*(5), 516-531. https://doi.org/10.1080/00224499.2012.745473

Sanchez, D. T., Fetterolf, J. C., & Rudman, L. A. (2012). Eroticizing inequality in the United States: The consequences and determinants of traditional gender role adherence in intimate relationships. *Journal of Sex Research, 49*(2-3), 168-183. https://doi.org/10.1080/00224499.2011.653699

Santos-Iglesias, P., Mohamed, B., Danko, A., & Walker, L. M. (2018). Psychometric validation of the female sexual distress scale in male samples. *Archives of Sexual Behavior, 47*, 1733-1743. https://doi.org/10.1007/s10508-018-1146-2

Saperstein, A., & Westbrook, L. (2021). Categorical and gradational: Alternative survey measures of sex and gender. *European Journal of Politics and Gender, 4*(1), 11-30. https://doi.org/10.1332/251510820X15995647280686

Saunders, B., Kitzinger, J., & Kitzinger, C. (2015). Anonymising interview data: Challenges and compromise in practice. *Qualitative Health Research, 15*(5), 616-632. https://doi.org/10.1177/1468794114550439

Scheffer, J. (2002). Dealing with missing data. *Research Letters in the Information and Mathematical Sciences, 3*, 153-160. http://hdl.handle.net/10179/4355

Schmiedeberg, C., Huyer-May, B., Castiglioni, L., & Johnson, M. D. (2017). The more or the better? How sex contributes to life satisfaction. *Archives of Sexual Behavior, 46*(2), 465-473. https://doi.org/10.1007/s10508-016-0843-y

Schmiedeberg, C., & Schröder, J. (2016). Does sexual satisfaction change with relationship duration. *Archives of Sexual Behavior, 45*(1), 99-107. https://doi.org/10.1007/s10508-015-0587-0

Schroder, K. E. E., Carey, M. P., & Vanable, P. A. (2003). Methodological challenges in research on sexual risk behavior: II. Accuracy of self-reports. *Annals of Behavioural Medicine, 26*(2), 104-123. https://doi.org/10.1207/S15324796ABM2602_03

Scott, S. B., Ritchie, L., Knopp, K., & Rhoades, G. K. (2018). Sexuality within female same-gender couples: Definitions of sex, sexual frequency norms, and factors associated with sexual satisfaction. *Archives of Sexual Behavior, 47*(3), 681-692. https://doi.org/**10.1007/s10508-017-1077-3**

Seiter, N. S., Quirk, K., Hardy, N., Zinbarg, R. E., Goldsmith, J. Z., & Pinsof, W. M. (2020). Changes in commitment and sexual satisfaction: Trajectories in couple therapy. *Journal of Sex & Marital Therapy, 46*(3), 296-302. https://doi.org/10.1080/0092623X.2019.1677274

Shen Johfre, S., & Saperstein, A. (2019). *State of the Union 2019: Racial and gender identities*. Stanford Center on Poverty & Inequality. https://inequality.stanford.edu/sites/default/files/Pathways_SOTU_2019_RaceGender.pdf

Shibley Hyde, J., Bigler, R. S., Joel, D., Tate, C. C., & van Anders, S. M. (2019). The future of sex and gender in psychology: Five challenges to the gender binary. *American Psychologist, 74*(2), 171-193. https://doi.org/10.1037/amp0000307

Sijtsma, K. (2009). On the use, the misuse, and the very limited usefulness of Cronbach's alpha. *Psychometrika, 74*(1), 107-120. https://doi.org/10.1007/S11336-008-9101-0

Simon, W., & Gagnon, J. H. (1986). Sexual scripts: Permanence and change. *Archives of Sexual Behavior, 15*(2), 97-120. https://doi.org/10.1007/BF01542219

Simon, W., & Gagnon, J. H. (2003). Sexual scripts: Origins, influences and changes. *Qualitative Sociology, 26*(4), 491-497. https://doi.org/10.1023/B:QUAS.0000005053.99846.e5

Simula, B. L. (2019a). A "different economy of bodies and pleasures"?: Differentiating and evaluating sex and sexual BDSM experiences. *Journal of Homosexuality, 66*(2), 209-237. https://doi.org/10.1080/00918369.2017.1398017

Simula, B. L. (2019b). Pleasure, power, and pain: A review of the literature on the experiences of BDSM participants. *Sociology Compass, 13*(3), e12668-n/a. https://doi.org/10.1111/soc4.12668

Slatcher, R. B., Selcuk, E., & Ong, A. D. (2015). Perceived partner responsiveness predicts diurnal cortisol profiles 10 years later. *Psychological Science, 26*, 972-982. https://doi.org/10.1177/0956797615575022

Smith, A. Z., Goldberg, A. E., & Garcia, R. L. (2020). Multilevel modeling approached to the study of LGBTQ-parent families. In A. E. Goldberg & K. R. Allen (Eds.), *LGBTQ-*

parent families innovations in research and implications for practice (2nd ed., pp. 451-470). Springer.

Spector, I. P., Carey, M. P., & Steinberg, L. (1996). The sexual desire inventory: Development, factor structure, and evidence of reliability. *Journal of Sex & Marital Therapy, 22*(3), 175-190. https://doi.org/10.1080/00926239608414655

Sprecher, S., & Regan, P. C. (1998). Passionate and companionate love in courting and young married couples. *Sociological Inquiry, 68*, 163-185. https://doi.org/10.1111/j.1475-682X.1998.tb00459.x

Statistics Canada. (2017). *Census in brief: Same-sex couples in Canada in 2016* (Catalogue no. 98-200-X2016007). https://www12.statcan.gc.ca/census-recensement/2016/as-sa/98-200-x/2016007/98-200-x2016007-eng.cfm

Stephenson, K. R., & Meston, C. M. (2010a). Differentiating components of sexual well-being in women: Are sexual satisfaction and sexual distress independent constructs? *Journal of Sexual Medicine, 7*(7), 2458-2468. https://doi.org/10.1111/j.1743-6109.2010.01836.x

Stephenson, K. R., & Meston, C. M. (2010b). When are sexual difficulties distressing for women? The selective protective value of intimate relationships. *Journal of Sexual Medicine, 7*(11), 3683-3694. https://doi.org/10.1111/j.1743-6109.2010.01958.x

Stephenson, K. R., & Meston, C. M. (2015a). The conditional importance of sex: Exploring the association between sexual well-being and life satisfaction. *Journal of Sex & Marital Therapy, 41*(1), 25-38. https://doi.org/10.1080/0092623X.2013.811450

Stephenson, K. R., & Meston, C. M. (2015b). Why is impaired sexual function distressing to women? The primacy of pleasure in female sexual dysfunction. *Journal of Sexual Medicine, 12*, 728-737. https://doi.org/10.1111/jsm.12804

Streiner, D. L. (2002). The case of the missing data: Methods of dealing with dropouts and other research vagaries. *Canadian Journal of Psychiatry, 47*(1), 70-77. https://doi.org/10.1177/070674370204700111

Strizzi, J. M., Øverup, C. S., Ciprić, A., Hald, G. M., & Træen, B. (2021). BDSM: Does it hurt or help sexual satisfaction, relationship satisfaction, and relationship closeness? *Journal of Sex Research*, Advance online publication. https://doi.org/10.1080/00224499.2021.1950116

Stulhofer, A., Hinchliff, S., & Træen, B. (2020). Relationship intimacy, sexual distress, and help-seeking for sexual problems among older European couples: A hybrid dyadic approach. *International Journal of Impotence Research, 32*, 525-534. https://doi.org/10.1038/s41443-019-0214-z

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Allyn & Bacon.

Tate, C. C., Youssef, C. P., & Bettergarcia, J. N. (2014). Integrating the study of transgender spectrum and cisgender experiences of self-categorization from a personality perspective. *Review of General Psychology, 18*(4), 302-312. https://doi.org/10.1037/gpr0000019

The GenIUSS Group. (2014). *Best practices for asking questions to identity transgender and other gender minority respondents on population-based surveys.*

Theiss, J. A., & Estlein, R. (2013). Antecedents and consequences of the perceived threat of sexual communication: A test of the relational turbulence model. *Western Journal of Communication, 78*(4), 404-425. https://doi.org/10.1080/10570314.2013.845794

Thibaut, J. W., & Kelley, H. H. (1959). *The social psychology of groups*. Transaction Publishers.

Thomas, K. A., & Clifford, S. (2017). Validity and mechanical turk: An assessment of exclusion methods and interactive experiments. *Computers in Human Behavior, 77*, 184-197. https://doi.org/10.1016/j.chb.2017.08.038

Thomeer, M. B., Umberson, D., & Reczek, C. (2020). The gender−as−relational approach for theorizing about romantic relationships of sexual and gender minority mid− to later−life adults. *Journal of Family Theory & Review, 12*(2), 220-237. https://doi.org/10.1111/jftr.12368

Thompson, A. E., & Byers, E. S. (2021). An experimental investigation of variations in judgments of hypothetical males and females initiating mixed-gender threesomes: An application of sexual script theory. *Archives of Sexual Behavior, 50*(3), 1129-1142. https://doi.org/10.1007/s10508-020-01729-4

Thompson, W. H., Wright, J., Bissett, P. G., & Poldrack, R. A. (2020). Dataset decay and the problem of sequential analyses on open datasets. *Elife, 9*. https://doi.org/10.7554/eLife.53498

Thurmond, V. A. (2001). The point of triangulation. *Journal of Nursing Scholarship, 33*(3), 253-258. https://doi.org/10.1111/j.1547-5069.2001.00253.x

Uchino, B. N. (2013). Understanding the links between social ties and health: On building stronger bridges with relationship science. *Journal of Social and Personal Relationships, 30*(2), 155-162. https://doi.org/10.1177/0265407512458659

Umberson, D., Thomeer, M. B., Kroeger, R. A., Lodge, A. C., & Xu, M. (2015). Challenges and opportunities for research on same-sex relationships. *Journal of Marriage and Family, 77*(1), 96-111. https://doi.org/10.1111/jomf.12155

Vaillancourt-Morel, M.-P., Rosen, N. O., Štulhofer, A., Bosisio, M., & Bergeron, S. (2021). Pornography use and sexual health among same-sex and mixed-sex couples: An event-level dyadic analysis. *Archives of Sexual Behavior, 50*, 667-681. https://doi.org/10.1007/s10508-020-01839-z

Vaillancourt-Morel, M.-P., Rosen, N. O., Willoughby, B. J., Leonhardt, N. D., & Bergeron, S. (2020). Pornography use and romantic relationships: A dyadic daily diary study. *Journal of Social and Personal Relationships, 37*(10-11), 2802-2821. https://doi.org/10.1177/0265407520940048

van Anders, S. M. (2015). Beyond sexual orientation: Integrating gender/sex and diverse sexualities via sexual configurations theory. *Archives of Sexual Behavior, 44*(5), 1177-1213. https://doi.org/10.1007/s10508-015-0490-8

Van Ness, N., Miller, M. M., Negash, S., & Morgan, M. (2017). Embracing our eroticism: A foucauldian discourse analysis of women's eroticism. *Journal of Feminist Family Therapy, 29*(3), 103-126. https://doi.org/10.1080/08952833.2017.1245062

van Raaij, E. M. (2018). Déjà lu: On the limits of data reuse across multiple publications. *Journal of Purchasing and Supply Management, 24*(3), 183-191. https://doi.org/10.1016/j.pursup.2018.06.002

Vannier, S. A., & O'Sullivan, L. F. (2011). Communicating interest in sex: Verbal and nonverbal initiation of sexual activity in young adults' romantic dating relationships. *Archives of Sexual Behavior, 40*, 961-969. https://doi.org/10.1007/s10508-010-9663-7

Vannier, S. A., & O'Sullivan, L. F. (2010). Sex without desire: Characteristics of occasions of sexual compliance in young adults' committed relationships. *Journal of Sex Research, 47*, 429-439. https://doi.org/10.1080/00224490903132051

Vanwesenbeeck, I. (2009). Doing gender in sex and sex research. *Archives of Sexual Behavior, 38*(6), 883-898. https://doi.org/10.1007/s10508-009-9565-8

Vowels, M. J., Mark, K. P., Vowels, L. M., & Wood, N. D. (2018). Using spectral and cross-spectral analysis to identify patterns and synchrony in couples' sexual desire. *PLoS One, 13*(10), e0205330-e0205330. https://doi.org/10.1371/journal.pone.0205330

Warshowsky, H., Mahar, E. A., & Mintz, L. B. (2020). Cliteracy for him: Effectiveness of bibliotherapy for heterosexual men's sexual functioning. *Sexual and Relationship Therapy*, Advance online publication. https://doi.org/10.1080/14681994.2020.1739638

Weiner, L., & Avery-Clark, C. (2017). *Sensate focus in sex therapy: The illustrated manual*. Routledge.

Weis, D. L. (1998). The use of theory in sexuality research. *Journal of Sex Research, 35*(1), 1-9. https://doi.org/10.1080/00224499809551912

West, T. V., Popp, D., & Kenny, D. A. (2008). A guide for the estimation of gender and sexual orientation effects in dyadic data: An actor-partner interdependence model approach. *Personality and Social Psychology Bulletin, 34*(3), 321-336. https://doi.org/10.1177/0146167207311199

Wiederman, M. W. (2005). The gendered nature of sexual scripts. *Family Journal: Counseling and Therapy for Couples and Families, 13*(4), 496-502. https://doi.org/10.1177/1066480705278729

Wiederman, M. W., Maynard, C., & Fretz, A. (1996). Ethnicity in 25 years of published sexuality research: 1971-1995. *Journal of Sex Research, 33*(4), 339-342. https://doi.org/10.1080/00224499609551851

Williamson, K., Burstein, F., & McKemmish, S. (2002). The two major traditions of research. In K. Williamson (Ed.), *Research methods for students, academics, and professionals: Information management and systems* (2nd ed., pp. 25-47). Chandos. https://doi.org/10.1016/B978-1-876938-42-0.50009-5

Willis, M., Hunt, M., Wodika, A., Rhodes, D. L., Goodman, J., & Jozkowski, K. N. (2019). Explicit verbal sexual consent communication: Effects of gender, relationship status, and type of sexual behavior. *International Journal of Sexual Health, 31*(1), 60-70. https://doi.org/10.1080/19317611.2019.1565793

Willis, M., & Jozkowski, K. N. (2018). Barriers to the success of affirmative consent initiatives: An application of the social ecological model. *American Journal of Sexuality Education: A Special Issue of Health Teen Network, 13*(3), 324-336. https://doi.org/10.1080/15546128.2018.1443300

Witmer, J. (2021). Inclusivity in statistics and data science education. *Journal of Statistics and Data Science Education, 29*(1), 2-3. https://doi.org/10.1080/26939169.2021.1906555

Wood, J., De Santis, C., Desmarais, S., & Milhausen, R. (2021). Motivations for engaging in consensually non-monogamous relationships. *Archives of Sexual Behavior, 50*(4), 1253-1272. https://doi.org/10.1007/s10508-020-01873-x

Wood, J., Desmarais, S., Burleigh, T., & Milhausen, R. (2018). Reasons for sex and relational outcomes in consensually nonmonogamous and monogamous relationships: A self-determination theory approach. *Journal of Social and Personal Relationships, 35*(4), 632-654. https://doi.org/10.1177/0265407517743082

World Health Organization. (2015). *Sexual health, human rights and the law*. www.who.int

Worthington, R. L., & Whittaker, T. A. (2006). Scale development research: A content analysis and recommendations for best practices. *Counseling Psychologist, 34*(6), 806-838. https://doi.org/10.1177/0011000006288127

Ziegler, A., & Conley, T. D. (2016). The importance and meaning of sexual fantasies in intimate relationships. In K. Aumer (Ed.), *The psychology of love and hate in intimate relationships* (pp. 29-45). Springer.

APPENDIX A. COPYRIGHT PERMISSION TO INCLUDE STUDY 1

Our Ref: SM/HJSR/P21/0786

10 August 2021

Dear Kathleen E. Merwin,

Kathleen E. Merwin & Natalie O. Rosen (2020) Perceived Partner Responsiveness Moderates the Associations Between Sexual Talk and Sexual and Relationship Well-Being in Individuals in Long-Term Relationships, The Journal of Sex Research, 57:3, 351-364, DOI: 10.1080/00224499.2019.1610151

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APPENDIX B. SUPPLEMENTAL MATERIALS FOR STUDY 1

Supplementary Table B.1 *Rotated factor loadings and communalities for two-factor solution for sexual talk measure*

Item	Factor 1 (Mutualistic Talk) Loadings	Factor 2 (Individualistic Talk) Loadings	Communality
1. Short exclamations of excitement or pleasure	.813	-.085	.573
2. Positive feedback or compliments	.737	.140	.703
3. Statements which are sexually dominant	.099	.718	.622
4. Statements which are sexually submissive	.256	.498	.488
5. Instructive statements	.672	.175	.643
6. Messages of sexual "ownership"	-.197	.984	.742
7. Speaking fantasies	.012	.640	.420
8. Messages that strengthen the intimate/emotional bond with your partner	.524	-.109	.208

Note. While communality for Item 8 is low (i.e., < .4) this item was retained because the difference between the loadings on each factor is greater than 0.2 (Costello & Osborne, 2005; Tabachnick & Fidell, 2001).

Supplementary Table B.2 *Factor loadings and communalities for two-factor solution for perceived partner responsiveness to sexual talk measure (including 5 behaviourally-oriented items).*

Item	Factor 1 Loadings	Factor 2 Loadings	Communality
1. When you use sexual talk with your partner during sexual activity, how much do you feel your partner understands you?	.846	.037	.752
2. When you use sexual talk with your partner during sexual activity, how much do you feel cared for by your partner?	.918	-.025	.816
3. When you use sexual talk with your partner during sexual activity, how much do you feel your partner accepts you as you are?	.942	-.078	.809
4. When you use sexual talk with your partner during sexual activity, how validated do you feel by your partner?	.815	.032	.695
5. When you use sexual talk with your partner during sexual activity, how much does your partner act on the instructive statements or feedback that you provide (e.g., "Go down on me" "That feels so good, keep going")? **(Mutualistic item)**	.579	.226	.535
6. When you use sexual talk with your partner during sexual activity, how much does your partner go along with the sexual fantasies you talk about during sex? **(Individualistic item)**	.148	.604	.490
7. When you use sexual talk with your partner during sexual activity, how much does your partner go along with the statements of submission/dominance (e.g., "Fuck me good" "Show me your pussy/cock") that you make? **(Individualistic item)**	.011	.858	.748
8. When you use sexual talk with your partner during sexual activity, how much does your partner go along with the statements of sexual ownership (e.g., "You're mine now") that you make? **(Individualistic item)**	-.082	.880	.699
9. When you use sexual talk with your partner during sexual activity, how close (or emotionally intimate) do you feel with your partner? **(Mutualistic item)**	.767	-.005	.548

Note. For the PPR measure used in this study, we first adapted the original 4 PPR items to be specific to sexual talk (i.e., how understanding, validating, caring, and accepting is your partner when you use sexual talk?). The original items are well validated as a measure of PPR more generally in the relationship (e.g., Birnbaum et al., 2016; Laurenceau et al., 2005; Reis et al., 2011). We developed 5 behaviourally-oriented items that were specific to the different types of sexual talk (2 mutualistic, 3 individualistic). Using all 9 items, we ran an EFA with our sample according to the best practices of Sakaluk and Short (2017). We conducted all analyses in SPSS and used O'Connor's (2000) SPSS syntax for parallel analysis. Common factors were extracted using maximum likelihood estimation, and promax (i.e., oblique) rotation to achieve simple structure and estimate correlations between common factors. We determined how many factors to retain by conducting parallel analysis, using nested-model comparisons, and examining descriptive measures of model fit.

The parallel analysis revealed that factor solutions containing 1 or 2 common factors explained more of the variance in the scale items than randomly simulated factors, and thus were plausible factor solutions. We subsequently extracted factor solutions of 1 and 2 common factors for further examination. The solution entailing a single common factor had a poor model fit, $\chi^2(27) = 318.988$, $p < .001$, RMSEA = .189, NNFI = .794 (Little, 2013). A two-factor solution, alternatively, had an acceptable model fit, $\chi^2(19) = 56.878$, $p < .001$, RMSEA = .081, NNFI = .962 (Little, 2013), and was a significant improvement compared to the one-factor solution, $\Delta \chi^2 (8) = 262.11$, $p < .0001$. Factor one consisted of the 4 original PPR items and the 2 mutualistic PPR items, and factor 2 consisted of the 3 individualistic PPR items.

While the two-factor solution had adequate fit, we found it difficult to interpret Factor 1 as it contained both 'general' PPR to sexual talk items (i.e., items in reference to *all* types of sexual talk) and PPR to mutualistic talk items. It is also worth noting that while the two PPR to mutualistic talk items had acceptable loading onto Factor 1, they had weaker loadings compared to the more general PPR items. Additionally, the communalities were lower for the PPR to mutualistic talk items, compared to the general PPR items and some of the PPR to individualistic talk items (see table above—'general' PPR items are bolded).

Given the results of the EFA and the fact that the adapted general PPR items were drawn from a well-validated measure of PPR (Laurenceau et al., 2005), we decided to retain only those items as a measure of PPR to sexual talk. Additionally, the 5 behaviourally-oriented items developed (e.g., PPR to statements of sexual ownership) may be problematic as not all participants may use these specific statements.

Moreover, theoretically, our hypothesis regarding the role of PPR to sexual talk largely did not differ according to the type of sexual talk. Thus, we believe that a more general measure of PPR to sexual talk is appropriate. The results of a subsequent EFA with only the original 4 general PPR items that were adapted to sexual talk can be found in Supplemental Table 2.10.3.

Supplementary Table B.3 *Factor loadings and communalities for one-factor solution for perceived partner responsiveness to sexual talk measure.*

Item	Factor 1 Loadings	Communality
1. When you use sexual talk with your partner during sexual activity, how much do you feel your partner understands you?	.862	.743
2. When you use sexual talk with your partner during sexual activity, how much do you feel cared for by your partner?	.920	.847
3. When you use sexual talk with your partner during sexual activity, how much do you feel your partner accepts you as you are?	.880	.775
4. When you use sexual talk with your partner during sexual activity, how validated do you feel by your partner?	.841	.707

Supplementary Table B.4 *Correlations between sociodemographic variables and study outcomes.*

Variable	Sexual Satisfaction	Sexual Functioning (Female)	Sexual Functioning (Male)	Sexual Distress	Relationship Satisfaction
Age (years)	.203***	.164*	.101	-.154**	.130*
Sex[a]	-.022	.110	-	.044	.113
Gender	-.034	.070	-	.049	.111
Sexual Orientation	.028	.104	-.065	-.049	.054
Relationship duration (years)	.028	.039	.012	-.049	.082
Years of schooling (starting from first grade)	-.113*	-.056	-.025	.118*	-.005
Annual household income	.076	.086	.185*	-.114*	.147*

[a] Correlations between sex or gender and male sexual functioning were not conducted because all participants who completed the male sexual functioning measure (IIEF) identified their sex and gender as male. Correlations between sex or gender and female sexual functioning were conducted because not all participants who completed the female sexual functioning measure (FSFI) identified their sex and/or gender as female.

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

APPENDIX C. SUPPLEMENTAL MATERIALS FOR STUDY 2

Supplementary Syntax C.1 *SPSS Syntax for Secondary Analyses of (Merwin & Rosen, 2019) Dataset to Test for Gender/Sex Differences*

```
T-TEST GROUPS=Sex(1 2)
  /MISSING=ANALYSIS
  /VARIABLES=Mutualistic_Talk_CompsiteScore_OWN_EM
Individualistic_Talk_CompsiteScore_OWN_EM
  /CRITERIA=CI(.95).
```

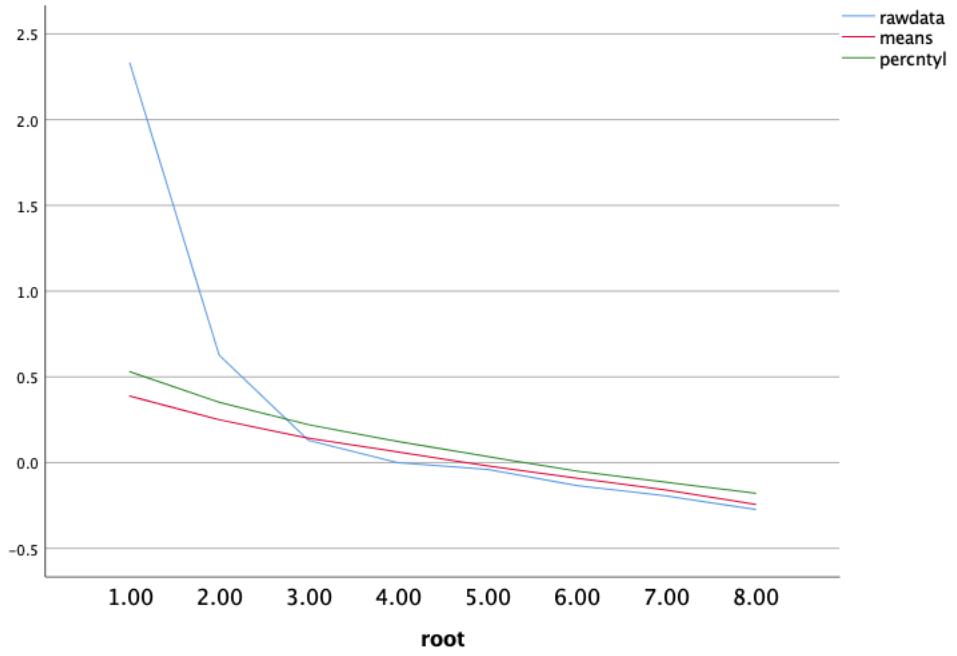
Supplementary Methods C.2 *Exploratory Factor Analysis (French Version of the Sexual Talk Measure) for Retrospective Data*

Given that the SexTalk measure is still novel and the French language version has not previously been validated, we conducted an EFA with the French-speaking participants (n = 163) according to the best practices of Sakaluk and Short (2017). We conducted all analyses in SPSS version 25 and used O'Connor's (2000) SPSS syntax for parallel analysis. Common factors were extracted using maximum likelihood estimation, and promax (i.e., oblique) rotation to achieve simple structure and estimate correlations between common factors. We determined how many factors to retain by conducting parallel analysis, using nested-model comparisons, and examining descriptive measures of model fit. A well-fitting model was defined as a CFI ≥ .95, NNFI ≥ .95, a RMSEA ≤ 0.08, and factor loadings > .40 (Hu & Bentler, 1999; Kline, 2005). The parallel analyses revealed that factor solutions containing 1 or 2 common factors explained more of the variance in the scale items than randomly simulated factors, and thus were plausible factor solutions.[0] We subsequently extracted factor solutions of 1 and 2 common factors for further examination, anticipating that the 2-factor solution may be best given the results of the parallel analyses. For French participants, the solution entailing one factor had poor model fit: $\chi^2(20) = 82.53$, $p < .001$, RMSEA = .13, NNFI = .68 (Little, 2013). Alternatively, a two-factor solution had good model fit: $\chi^2(13) = 17.67$, $p = .17$, RMSEA = .05, NNFI = .96 (Little, 2013), and was a

[0] While a three-factor model had excellent fit, upon examination of the parallel analysis the eigenvalue for the real data (.129) was smaller than that from the randomly generated data set (0.142). Sakaluk and Short (2017) encourage researchers to retain the number of factors that have eigenvalues from their real data that are larger than those from the randomly generated data set. The rationale is that factors should be retained only if they account for more meaningful variance than random statistical noise (Sakaluk & Short, 2017). Additionally, the third factor would only have one item in it (item #4: submissive statements), and a factor with fewer than 3 items is generally weak and unstable (Costello & Osborne, 2005). Finally, the three-factor solution was **not** a significant improvement compared to the two-factor solution, $\Delta \chi^2$ (6) = 10.60, $p = .101$.

significant improvement compared to the one-factor solution: $\Delta \chi^2$ (7) = 64.86, $p < .001$. As the two-factor model was congruent with prior theory on the distinctions between individualistic and mutualistic sexual talk (Jonason et al., 2016), we selected it as the final model for the SexTalk scale.

Scree Plot (eigenvalues by root for real/raw data and for the random data)



Item	Loading		
	Factor 1 (Mutualistic Talk)	Factor 2 (Individualistic Talk)	Communality
1. Exclamations of excitement/pleasure	**.658**	-.113	.375
2. Positive Feedback/compliments	**.668**	.086	.509
3. Dominance	-.128	**.980**	.858
4. Submissive	.356	**.316**	.327

5. Instructive	**.585**	-.014	.334
6. Sexual Ownership	.140	**.558**	.404
7. Sexual Fantasies	.006	**.484**	.237
8. Emotional Bonding	**.444**	.060	.226

Note. While communality for four items (#1, 5, 7, & 8) are low (i.e., < .4) these items will be retained because the difference between the loadings on each factor is greater than 0.2 (Tabachinick & Fidell, 2001; Costello & Osborne, 2005). Further, while the communality for one item (#4) is low (< .4) and the difference between the loadings on each factor are less than 0.2, this item will be retained because (1) it has previously been shown to load well (with higher communality and lower cross-loading; Merwin & Rosen, 2020), (2) removing this item would make it difficult to examine sexual talk in couples where one member was French-speaking and the other was English-speaking, and (3) removing this item would lead to a loss of information for a less frequently utilized subtype of individualistic sexual talk. When items have high cross-loadings, there are several options: (a) place the item on the factor with the highest loading, (b) place the item on the factor with the best conceptual fit, (c) rewrite the item to better fit with items on one factor, or (d) delete the item (Konicki Di lorio, 2005). Pett et al. (2003) suggest retaining these items if they are essential for the scale. Given that the purpose of this EFA was to determine if the two-factor structure of the SexTalk measure held in the French-version of the measure and not to select only strong items for each factor or dimension reduction, we elected to retain item #4 and to place the item on the factor with the best conceptual fit (i.e., Individualistic Talk Factor; Konicki Di lorio, 2005; Pett et al., 2003).

Supplementary Methods C.3 *Confirmatory Factor Analysis of Sexual Talk Measure with the Full Sample (Retrospective Data)*

Following an EFA with the French participants, which confirmed the two-factor structure of the SexTalk measure, we conducted a confirmatory factor analysis (CFA) with the entire sample in MPlus v8 (Muthén & Muthén, 2018) using maximum likelihood estimation with robust standard errors (MLR). A well-fitting model was defined as a CFI ≥ .95, a TLI ≥ .95[0], a RMSEA ≤ 0.08 a SRMR ≤ .08, and factor loadings > .40 (Hu & Bentler, 1999; Kline, 2005). We hypothesized a two-factor model based on prior research (Jonason et al., 2016; Merwin & Rosen, 2020 [Study 1]), as well as the EFA with French participants. For all participants, the two-factor model had good model fit: $\chi^2(19) = 45.236$, $p = .0006$, RMSEA = 0.055 (CI = 0.034, 0.076), CFI = 0.959, TLI = 0.939, SRMR = 0.045.

Item	Factor 1 (Mutualistic Talk)	Factor 2 (Individualistic Talk)
1. Exclamations of excitement/pleasure	0.587	-
2. Positive feedback/compliments	0.820	-
3. Dominance	-	0.800
4. Submissive	-	0.501
5. Instructive	0.560	-
6. Sexual ownership	-	0.687
7. Sexual fantasies	-	0.489
8. Emotional bonding	0.441	-

[0] Note: a TLI ≥ .90 indicates acceptable model fit (Bentler & Bonnet, 1980; Byrne, 1994).

Supplementary Table C.4 *Correlations between Sexual Talk subscales and Demographic Variables for Retrospective Data*

Variable	*r*	
	Mutualistic Sexual Talk	Individualistic Sexual Talk
Age	0.04	0.07
Culture	0.13**	0.21**
Survey Language[a]	-0.23**	-0.25**
Personal Income	-0.03	-0.07
Relationship Status	0.08	-0.02
Relationship Duration	-0.06	-0.10
Sexual Orientation	0.23**	0.22**
Number of Children	-0.04	-0.02

[a] Participants were able to complete the survey in either English or French, based on what they were more fluent in. This variable indicates which language the survey was completed in.

*$p < .05$; **$p < .01$

Supplementary Table C.5 *Descriptive Characteristics of the Sample for Daily Diary Data (Daily Diaries; N = 434 individuals; 217 couples)*

Variable	*M* (*SD*) or *n*	Range	*% of final sample*
Age	30.39 (8.47)	18 - 70	
Gender/sex			
Woman	230	-	53.0
Man	180	-	41.5
GSD[a]	24	-	5.5
Dyad Type (number of *couples*)			
Total Same-Gender/sex couples	**64**	**-**	**29.5**
Man-Man	20	-	9.2
Woman-Woman	42	-	19.4
GSD-GSD	2	-	0.9
Total Mixed-Gender/sex couples	**153**	**-**	**70.5**
Man-Woman	133	-	61.3
Man-GSD	7	-	3.2
Woman-GSD	13	-	6.0
Language (for study)			
English	266	-	61.3
French	168	-	38.7
First Language			
English	223	-	51.4
French	180	-	41.5

Spanish	3	-	0.7
Other[b]	28	-	6.5
Sexual Orientation			
Asexual	1	-	0.2
Bisexual	48	-	11.1
Heterosexual	243	-	56.0
Homosexual (lesbian, gay)	78	-	18.0
Pansexual	17	-	3.9
Queer	38	-	8.8
Uncertain or confused	3	-	0.7
Other[c]	6	-	1.4
Relationship Status			
Co-habitation/living together, but not married	170	-	39.2
Co-habitation and common-law	144	-	33.2
Married	120	-	27.6
Relationship Duration (years)	5.84 (5.10)	1 – 37.83	-
Place of Birth			
Canada	326	-	75.1
United States	55	-	12.7
Western Europe	26	-	6.0
Latin America/South America	8	-	1.8
Asia	7	-	1.6
Africa	3	-	0.7

Eastern Europe	3	-	0.7
Caribbean	2	-	0.5
Other[d]	4	-	0.9
Culture			
French Canadian	165	-	38.0
English Canadian	160	-	36.9
First Nations	1	-	0.2
American	48	-	11.1
Western European	18	-	4.1
Eastern European	4	-	0.9
African	3	-	0.7
Asian	13	-	3.0
Middle Eastern	2	-	0.5
Latin American/South American	6	-	1.4
Caribbean	1	-	0.2
Other[e]	13	-	3.0
Personal Annual Income			
$0-9,999	77	-	17.4
$10,000-39,999	188	-	43.3
$40,000-69,999	121	-	27.9
$70,000-99,999	33	-	7.6
$100,000 and over	15	-	3.5
Years of Education (starting from first	16.71 (2.84)	8 - 25	-

grade)			
Number of children at home	0.43 (0.97)	0 - 5	-

Note. GSD = gender/sex diverse.

[a] Participants identified as: Agender (*n* = 8), Gender-queer/fluid (*n* = 6), Non-binary (*n* = 5), Androgyne (*n* = 1), Butch (*n* =1), Non-binary with a transmasculine history (*n* = 1), Transmasculine gender-queer (*n* =1), and Transmasculine non-binary (*n* = 1).

[b] Participants who did not identify with any of the provided language were able to select 'Other' and provide their first language in an open textbox. These responses included the following: Arabic (*n* = 2), Bulgarian (*n* = 1), Chinese (*n* = 4), Duala (*n* = 1), French and English (*n* = 2), German (*n* = 4), German English Bilingual (*n* = 1), Korean (*n* = 1), Polish (*n* = 1), Portuguese (*n* = 3), Romanian (*n* = 1), Russian (*n* = 1), Shanghainese (Chinese dialect; *n* = 1), Ukrainian (*n* = 1), and Vietnamese (*n* = 3).

[c] Participants who did not identify with any of the provided sexual orientation labels were able to select 'Other' and provide a written response with their sexual orientation label in an open textbox. These responses included the following: mostly straight (*n* = 1), homoromantic demisexual (*n* = 1), homoflexible (*n* = 1), dyke (*n* = 2), and 'bisexual but designation is irrelevant given the length of the marriage' (*n* = 1).

[d] Participants who did not identify with any of the provided locations were able to select 'Other' and provide their place of birth in an open textbox. These responses included the following: Romania (*n* = 2) and Vietnam (*n* = 2).

[e] 'Other' included the following: African Nova Scotian (*n* = 1), English Canadian/Quebecois Francais (*n* = 1), French (*n* = 1), Japanese-Irish Canadian (*n* = 1), Jewish (*n* = 3), Jewish-

Canadian (n = 1), Metis (n = 1), Mixed (n = 1), Montreal Canadian (n = 1), New Zealander (n = 1), and No Culture (n = 1).

Supplementary Methods C.6 *Multilevel Confirmatory Factor Analysis of Sexual Talk Measure with the Full Sample (Daily Diary)*

We conducted a two-level confirmatory factor analysis (CFA; person, day) with the entire sample in MPlus v8 (Muthén & Muthén, 2018) using maximum likelihood estimation with robust standard errors (MLR). A well-fitting model was defined as a CFI ≥ .95, a TLI ≥ .95[0], a RMSEA ≤ 0.08, a SRMR ≤ 0.08, and factor loadings > .40 (Hu & Bentler, 1999; Kline, 2005). However, it should be noted that model fit criteria such as these were proposed in the context of single-level CFAs, thus caution should be used when employing these cut-off criteria for multilevel CFAs (Kim et al., 2016). We hypothesized a two-factor model based on research (Jonason et al., 2016; Merwin & Rosen, 2020) as well as the CFA for the Retrospective data. Overall, the two-factor model had adequate model fit: $\chi^2(46) = 314.95$, $p < .0001$, RMSEA = 0.02, CFI = 0.91, SRMR within = 0.05, SRMR between = 0.08 (TLI = 0.89 and thus did not meet cut-off criteria for acceptable model fit; however, all other fit indices met cut-off criteria). As well, the two-factor model had a better fit than the null model based on the AIC value (AIC = 160611.09). The SRMR fit indices at each level indicated that the fit of the Level 1 (within; SRMR = 0.05) part of the model was better than at Level 2 (between; SRMR = 0.08). All factor loadings (coefficients) were significantly different from zero at Level 1 and Level 2 ($p < .001$).

Item	Mutualistic Talk	Individualistic Talk
	Within-level	
	Factor Loading [CI]	Factor Loading [CI]
1. Exclamations of excitement/pleasure	0.679 [0.637-0.720]	-
2. Positive feedback/compliments	0.761 [0.727-0.796]	-

[0] Note: a TLI ≥ .90 indicates acceptable model fit (Bentler & Bonnet, 1980; Byrne, 1994).

3. Dominance	-	0.658 [0.586-0.730]
4. Submissive	-	0.542 [0.449-0.635]
5. Instructive	0.639 [0.594-0.684]	-
6. Sexual ownership	-	0.649 [0.567-0.730]
7. Sexual fantasies	-	0.406 [0.314-0.0.498]
8. Emotional bonding	0.486 [0.397-0.507]	-
Between-level		
1. Exclamations of excitement/pleasure	0.737 [0.668-0.805]	-
2. Positive feedback/compliments	0.992 [0.948-1.037]	-
3. Dominance	-	0.852 [0.742-0.962]
4. Submissive	-	0.600 [0.419-0.782]
5. Instructive	0.687 [0.587-0.787]	-
6. Sexual ownership	-	0.898 [0.822-0.974]
7. Sexual fantasies	0.737 [0.668-0.805]	-
8. Emotional bonding	0.992 [0.948-1.037]	-

Note. CI = 95% Confidence Interval

APPENDIX D. SUPPLEMENTAL MATERIALS FOR STUDY 3

Supplementary Table D.1 *Descriptive Characteristics of the Sample (N = 434 individuals; 217 couples)*

Variable	*M* (*SD*) or *n*	Range	*% of final sample*
Age	30.39 (8.47)	18 - 70	
Gender/sex			
Woman	230	-	53.0
Man	180	-	41.5
GSD[a]	24	-	5.5
Dyad Type (number of *couples*)			
Total Same-Gender/sex couples	**64**	**-**	**29.5**
Man-Man	20	-	9.2
Woman-Woman	42	-	19.4
GSD-GSD	2	-	0.9
Total Mixed-Gender/sex couples	**153**	**-**	**70.5**
Man-Woman	133	-	61.3
Man-GSD	7	-	3.2
Woman-GSD	13	-	6.0
Language (for study)			
English	266	-	61.3
French	168	-	38.7
First Language			
English	223	-	51.4

French	180	-	41.5
Spanish	3	-	0.7
Other[b]	28	-	6.5
Sexual Orientation			
Asexual	1	-	0.2
Bisexual	48	-	11.1
Heterosexual	243	-	56.0
Homosexual (lesbian, gay)	78	-	18.0
Pansexual	17	-	3.9
Queer	38	-	8.8
Uncertain or confused	3	-	0.7
Other[c]	6	-	1.4
Relationship Status			
Co-habitation/living together, but not married	170	-	39.2
Co-habitation and common-law	144	-	33.2
Married	120	-	27.6
Relationship Duration (years)	5.84 (5.10)	1 – 37.83	-
Place of Birth			
Canada	326	-	75.1
United States	55	-	12.7
Western Europe	26	-	6.0
Latin America/South America	8	-	1.8

Asia	7	-	1.6
Africa	3	-	0.7
Eastern Europe	3	-	0.7
Caribbean	2	-	0.5
Other[d]	4	-	0.9
Culture			
French Canadian	165	-	38.0
English Canadian	160	-	36.9
First Nations	1	-	0.2
American	48	-	11.1
Western European	18	-	4.1
Eastern European	4	-	0.9
African	3	-	0.7
Asian	13	-	3.0
Middle Eastern	2	-	0.5
Latin American/South American	6	-	1.4
Caribbean	1	-	0.2
Other[e]	13	-	3.0
Personal Annual Income			
$0-9,999	77	-	17.4
$10,000-39,999	188	-	43.3
$40,000-69,999	121	-	27.9
$70,000-99,999	33	-	7.6

$100,000 and over	15	-	3.5
Years of Education (starting from first grade)	16.71 (2.84)	8 - 25	-
Number of children at home	0.43 (0.97)	0 - 5	-

Note. GSD = gender/sex diverse.

[a] Participants identified as: Agender (*n* = 8), Gender-queer/fluid (*n* = 6), Non-binary (*n* = 5), Androgyne (*n* = 1), Butch (*n* =1), Non-binary with a transmasculine history (*n* = 1), Transmasculine gender-queer (*n* =1), and Transmasculine non-binary (*n* = 1).

[b] Participants who did not identify with any of the provided language were able to select 'Other' and provide their first language in an open textbox. These responses included the following: Arabic (*n* = 2), Bulgarian (*n* = 1), Chinese (*n* = 4), Duala (*n* = 1), French and English (*n* = 2), German (*n* = 4), German English Bilingual (*n* = 1), Korean (*n* = 1), Polish (*n* = 1), Portuguese (*n* = 3), Romanian (*n* = 1), Russian (*n* = 1), Shanghainese (Chinese dialect; *n* = 1), Ukrainian (*n* = 1), and Vietnamese (*n* = 3).

[c] Participants who did not identify with any of the provided sexual orientation labels were able to select 'Other' and provide a written response with their sexual orientation label in an open textbox. These responses included the following: mostly straight (*n* = 1), homoromantic demisexual (*n* = 1), homoflexible (*n* = 1), dyke (*n* = 2), and 'bisexual but designation is irrelevant given the length of the marriage' (*n* = 1).

[d] Participants who did not identify with any of the provided locations were able to select 'Other' and provide their place of birth in an open textbox. These responses included the following: Romania (*n* = 2) and Vietnam (*n* = 2).

[e] 'Other' included the following: African Nova Scotian (*n* = 1), English Canadian/Quebecois Francais (*n* = 1), French (*n* = 1), Japanese-Irish Canadian (*n* = 1), Jewish (*n* = 3), Jewish-Canadian (*n* = 1), Metis (*n* = 1), Mixed (*n* = 1), Montreal Canadian (*n* = 1), New Zealander (*n* = 1), and No Culture (*n* = 1).

Supplementary Table D.2 *Illustration of Dummy Variable Coding Systems for GSD Couples*

A. Women as reference group				
	Code variables			
Gender/sex	Actor's C_1	Actor's C_2	Partner's C_1	Partner's C_2
Woman	0	0	0	0
Man	1	0	1	0
GSD	0	1	0	1
B. Men as reference group				
	Code variables			
Gender/sex	Actor's D_1	Actor's D_2	Partner's D_1	Partner's D_2
Woman	1	0	1	0
Man	0	0	0	0
GSD	0	1	0	1

Note: Actor's C_1 = dummy coded variable contrasting men with women (actor effect); Actor's C_2 = dummy coded variable contrasting GSD with women (actor effect); Partner's C_1 = dummy coded variable contrasting men with women (partner effect); Partner's C_2 = dummy coded variable contrasting GSD with women (partner effect); Actor's D_1 = dummy coded variable contrasting women with men (actor effect); Actor's D_2 = dummy coded variable contrasting GSD with men (actor effect); Partner's D_1 = dummy coded variable contrasting women with men (partner effect); Partner's D_2 = dummy coded variable contrasting GSD with men (partner effect).

Supplementary Table D.3 *Mutualistic Talk Moderated Multilevel Model Results for Sexual Satisfaction and Dyadic Sexual Desire*

	B(*SE*)	
	Sexual Satisfaction	Dyadic Sexual Desire
Binary Couples (n = 195)		
Intercept	21.82 (1.03)***	3.08 (0.09)***
Previous Day's Sexual Satisfaction/Dyadic Sexual Desire	0.32 (0.03)***	0.35 (0.02)***
Actor's Mutualistic Talk	0.24 (0.05)***	0.12 (0.11)***
Partner's Mutualistic Talk	0.11 (0.05)*	0.01 (0.01)
Actor's Gender/sex	-0.27 (0.25)	-0.05 (0.06)
Partner's Gender/sex	-0.29 (0.25)	-0.08 (0.06)
Dyad Type (Actor's Gender/sex*Partner's Gender/sex)	0.003 (0.28)	-
Actor's Gender/sex*Actor's Mutualistic Talk	-0.16 (0.05)**	-
Actor's Gender/sex*Partner's Mutualistic Talk	0.07 (0.05)	-
Partner's Gender/sex*Actor's Mutualistic Talk	-0.02 (0.05)	-
Partner's Gender/sex*Partner's Mutualistic Talk	-0.01 (0.05)	-
Actor's Mutualistic Talk*Partner's Mutualistic Talk	-0.004 (0.02)	-
GSD Couples (n = 22)		
Intercept	19.45 (5.66)**	4.09 (0.94)**
Previous Day's Sexual Satisfaction/Dyadic Sexual Desire	0.42 (0.15)**	0.23 (0.06)***
Actor's Mutualistic Talk	0.69 (0.20)**	-0.31 (0.22)
Partner's Mutualistic Talk	-0.05 (0.19)	0.09 (0.21)
Actor's Gender/sex DummyC1	-1.62 (1.94)	-0.19 (0.54)
Partner's Gender/sex DummyC1	2.37 (1.72)	-0.61 (0.54)
Actor's Gender/sex DummyC2	-0.78 (2.01)	-0.16 (0.74)

Note. In the GSD models, DummyC1 contrasts men with women and DummyC2 contrasts GSD individuals with women. Each

regression coefficient and significance test is a comparison of the mean of one of the groups with the mean of the reference group. We

chical model reduction in combination with p-value criterion model reduction to reduce model complexity and improve interpretation (Heck & Thomas, 2009; Heck et al., 2014): when all of the highest-order interaction terms were non-significant these terms were removed and the model was re-run; this table presents the final models.

***$p < .001$. ** $p < .01$. *$p < .05$.

Supplementary Table D.4

Individualistic Talk Moderated Multilevel Model Results for Sexual Satisfaction and Dyadic Sexual Desire

	B(*SE*)	
	Sexual Satisfaction	Dyadic Sexual Desire
Binary Couples (n = 195)		
Intercept	21.40 (1.04)***	3.04 (0.09)***
Previous Day's Sexual Satisfaction/Dyadic Sexual Desire	0.34 (0.03)***	0.36 (0.06)***
Actor's Individualistic Talk	0.32 (0.08)***	0.10 (0.02)***
Partner's Individualistic Talk	0.16 (0.08)*	0.06 (0.02)**
Actor's Gender/sex	-0.34 (0.24)	-0.05 (0.06)
Partner's Gender/sex	-0.31 (0.24)	-0.07 (0.06)
Dyad Type (Actor's Gender/sex*Partner's Gender/sex)	0.03 (0.27)	-
Actor's Gender/sex*Actor's Individualistic Talk	-0.23 (0.08)**	-
Actor's Gender/sex*Partner's Individualistic Talk	0.06 (0.08)	-
Partner's Gender/sex*Actor's Individualistic Talk	0.04 (0.08)	-
tner's Gender/sex*Partner's Individualistic Talk	-0.15 (0.08)	-
tor's Individualistic Talk*Partner's Individualistic Talk	-0.07 (0.04)	-
GSD Couples (n = 22)		
Intercept	19.011 (4.22)***	4.04 (0.95)**
Previous Day's Sexual Satisfaction/Dyadic Sexual Desire	0.48 (0.11)***	0.24 (0.06)***
Actor's Individualistic Talk	0.49 (0.24)	0.05 (0.06)
Partner's Individualistic Talk	0.29 (0.24)	0.02 (0.06)
Actor's Gender/sex DummyC1	-1.10 (1.42)	-0.16 (0.54)
Partner's Gender/sex DummyC1	0.66 (1.22)	-0.70 (0.54)
Actor's Gender/sex DummyC2	-1.65 (1.27)	-0.16 (0.75)

Note. In the GSD models, DummyC1 contrasts men with women and DummyC2 contrasts GSD individuals with

women. Each regression coefficient and significance test is a comparison of the mean of one of the groups with the mean of the reference group. We used hierarchical model reduction in combination with p-value criterion model reduction to reduce model complexity and improve interpretation (Heck & Thomas, 2009; Heck et al., 2014): when all of the highest-order interaction terms were non-significant these terms were removed and the model was re-run; this table presents the final models.

***$p < .001$. **$p < .01$. *$p < .05$.

Supplementary Table D.5 *Mutualistic Talk Moderated Multilevel Mixed Model Results for Sexual Satisfaction and Dyadic Sexual Desire for GSD Couples (with Men as Reference Group)*

Variable	B (*SE*)	
	Sexual Satisfaction	Dyadic Sexual Desire
GSD Couples (*n* = 22) Model		
Intercept	20.19 (6.32)**	3.30 (1.03)**
Previous Day's Sexual Satisfaction (or Dyadic Sexual Desire)	0.42 (0.15)**	0.23 (0.06)***
Actor's Mutualistic Talk	0.69 (0.20)**	-0.23 (0.22)
Partner's Mutualistic Talk	-0.05 (0.19)	0.10 (0.22)
Actor's Gender/sex Dummy D1	1.62 (1.94)	0.19 (0.54)
Partner's Gender/sex Dummy D1	-2.37 (1.72)	0.61 (0.54)
Actor's Gender/sex Dummy D2	0.84 (2.33)	0.03 (0.78)
Partner's Gender/sex Dummy D2	-3.81 (2.19)	0.02 (0.78)
Actor's Mutualistic Talk * Actor's Gender/sex Dummy D1	-	-0.22 (0.09)*
Partner's Mutualistic Talk * Actor's Gender/sex Dummy D1	-	0.03 (0.11)
Actor's Mutualistic Talk * Partner's Gender/sex Dummy D1	-	0.14 (0.10)
Partner's Mutualistic Talk * Partner's Gender/sex Dummy D1	-	-0.04 (0.09)
Actor's Mutualistic Talk * Actor's Gender/sex Dummy D2	-	0.20 (0.21)
Partner's Mutualistic Talk * Actor's Gender/sex Dummy D2	-	-0.14 (0.21)
Actor's Mutualistic Talk * Partner's Gender/sex Dummy D2	-	0.33 (0.21)
Partner's Mutualistic Talk * Partner's Gender/sex Dummy D2	-	-0.07 (0.20)
Actor's Mutualistic Talk * Partner's Mutualistic Talk	-	0.002 (0.01)

Note. In the GSD Couples Model, actor and partner gender/sex are represented by 2 dummy codes each with men as the reference

group. Dummy D1 contrasts women with men and Dummy D2 contrasts GSD individuals with men. Each regression coefficient and its significance test are a comparison of the mean of one of the groups with the mean of the reference group (e.g., regression coefficient for Actor's Dummy D2 represents a comparison of the mean of GSD compared to mean of men).

***$p < .001$. **$p < .01$. *$p < .05$.

Supplementary Table D.6 *Individualistic Talk Moderated Multilevel Mixed Model Results for Sexual Satisfaction and Dyadic Sexual Desire for GSD Couples (with Men as Reference Group)*

Variable	B (*SE*)	
	Sexual Satisfaction	Dyadic Sexual Desire
GSD Couples (*n* = 22) Model		
Intercept	18.58 (4.97)**	3.18 (1.03)**
Previous Day's Sexual Satisfaction (or Dyadic Sexual Desire)	0.48 (0.11)***	0.24 (0.06)***
Actor's Individualistic Talk	0.49 (0.24)	0.05 (0.06)
Partner's Individualistic Talk	0.29 (0.24)	0.02 (0.06)
Actor's Gender/sex Dummy D1	1.10 (1.42)	0.16 (0.54)
Partner's Gender/sex Dummy D1	-0.66 (1.22)	0.70 (0.54)
Actor's Gender/sex Dummy D2	-0.55 (1.67)	0.01 (0.78)
Partner's Gender/sex Dummy D2	-2.45 (1.47)	0.15 (0.78)

Note. In the GSD Couples Model, actor and partner gender/sex are represented by 2 dummy codes each with men as the reference group. Dummy D1 contrasts women with men and Dummy D2 contrasts GSD individuals with men. Each regression coefficient and

its significance test are a comparison of the mean of one of the groups with the mean of the reference group (e.g., regression coefficient for Actor's Dummy D2 represents a comparison of the mean of GSD compared to mean of men).

***$p < .001$. **$p < .01$. *$p < .05$.

Supplementary Figure D.7 *Flowchart of Participants*