THE BALANCE OF SEXUAL RESPONSIVENSS AND AUTONOMY: COMMUNAL AND SELF-DETERMINED APPROACHES TO SEXUAL MOTIVATION, NEED FULFILLMENT, AND SUPPORT IN ROMANTIC RELATIONSHIPS

ARIEL SHOIKHEDBROD

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Abstract

Sexual need fulfillment between partners is central to the maintenance of a romantic relationship over time. However, it can be challenging to assert one's sexual needs in the process of being responsive to a partner's sexual needs, presenting a key interdependent dilemma couples navigate in the sexual domain. In the following dissertation, I integrated communal and self-determined theories of sexual motivation to further our understanding of how people balance being responsive to a partner's sexual needs with asserting their own sexual needs and how perceiving a partner as supportive of one's sexual needs is central to maintaining sexual and relationship well-being. In my first paper, I examine how balancing the motivation to be responsive to a partner's sexual needs with asserting one's own sexual needs (i.e., high *sexual communal strength*) is associated with greater sexual and relationship well-being as a function of engaging in sex for pleasure and meaning (i.e., *autonomous reasons*) rather than out of pressure or obligation (i.e., *controlled reasons*). In contrast, sexual responsiveness that involves self-neglect (i.e., high *unmitigated sexual communion*) is costly to well-being due to controlled reasons for engaging in sex. In my second paper, I demonstrate how experimentally orienting people in relationships to high sexual responsiveness is associated with differences in autonomous versus controlled reasons for engaging in sex and sexual and relationship well-being depending on whether people are also oriented toward high versus low sexual assertiveness. In my third and final paper, I examine the novel role of perceiving a partner as autonomously supportive in the sexual domain (i.e., feeling that a partner supports one's ability to freely choose and act on their sexual preferences and interests) in fostering sexual need fulfillment, and in turn, sexual and relationship satisfaction, over and above the role of perceiving a partner as responsive to one's sexual needs. By emphasizing the value of being sexually responsive and self-

determined in relationships, this dissertation provides key insights into the dynamics of sexual motivation, sexual need fulfillment and support in romantic relationships, as well as the potential for applying and extending this work to diverse populations, contexts, and interventions.

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The balance of sexual responsiveness and autonomy: Communal and self-determined approaches to sexual motivation, need fulfillment, and support in romantic relationships

> Today, we turn to one person to provide what an entire village once did: a sense of grounding, meaning, and continuity. At the same time, we expect our committed relationships to be romantic as well as emotionally and sexually fulfilling. Is it any wonder that so many relationships crumble under the weight of it all? (Perel, 2007)

More than ever before, people rely on their romantic relationships for need fulfillment. Over time, relationship expectations have shifted from traditionally helping each other satisfy basic physiological and safety needs to the expectation that partners help each other meet higher-order goals for personal growth and self-actualization that demand investing more time and psychological resources into relationships (Finkel et al., 2014). However, couples often struggle to meet such a high threshold for need fulfillment, leading many partners to separate or remain in unfulfilling relationships (Joel et al., 2018; Slotter & Finkel, 2009). One area of relationships that is especially sensitive to the struggle of balancing one's own needs with a partner's needs is the domain of sexuality in which partners, at least those in sexually monogamous relationships, exclusively rely on one another for sexual need fulfillment (Levine et al., 2018). Indeed, research consistently shows that sexual desire tends to peak in the early stages of a relationship and decline over time (Baumeister & Bratskavsky, 1999; Impett et al., 2014), and many long-term couples encounter challenges in fulfilling each other's sexual needs including desire discrepancies between partners (Mark & Murray, 2012), major life events that alter the desire for or the importance of sex such as the transition to parenthood (Schwenck et al., 2020), or one or more partners coping with sexual dysfunction (Brotto et al., 2016). These situations can create interdependent dilemmas in which people must navigate the process of balancing their own sexual needs with meeting their partner's needs (Day et al., 2015).

Guided by Communal Theories of Sexual Motivation and Self-Determination Theory, my dissertation seeks to understand the interpersonal and motivational factors involved in balancing sexual need fulfillment between partners in romantic relationships. I present three papers that provide insight into the overarching questions of when and how the balance of sexual responsiveness (i.e., attending to a partner's sexual needs) and autonomy (i.e., attending to one's own sexual needs) in relationships is associated with sexual desire and sexual and relationship satisfaction. In the first paper, I examine why balancing the motivation to be responsive to a partner's sexual needs with asserting one's own sexual needs (i.e., high *sexual communal strength*) is associated with sexual and relationship well-being, whereas sexual responsiveness that involves self-neglect (i.e., high *unmitigated sexual communion*) can be costly for well-being. In the second paper, I examine whether orienting people in relationships to high sexual responsiveness is associated with differences in sexual desire and relationship and sexual satisfaction depending on whether people are also oriented toward high versus low sexual assertiveness. In both my first and second paper, I test the role of autonomous (i.e., having sex for pleasure and meaning) and controlled (i.e., feeling pressured and obligated to have sex) reasons for engaging in sex as the key mechanisms accounting for these differences. In the third paper, I consider the role of perceiving a partner as autonomously supportive in the sexual domain (i.e., feeling that a partner supports one's ability to freely choose and act on their sexual preferences and interests) and associations with sexual need fulfillment and sexual and relationship satisfaction. Across these papers, I combine principles from Communal Theories of Sexual Motivation and Self-Determination Theory to provide new insights into sexual need fulfillment in romantic relationships.

Theoretical Approaches to Sexual Motivation

People are strongly motivated by the desire to have satisfying sexual encounters with a romantic partner, which are central to psychological and physical health (Diamond & Huebner, 2012). However, not all sex is equally satisfying, and sexual satisfaction might depend, at least in part, on the reasons why people engage in sex, which can be varied and complex, with one study identifying 237 unique sexual motives (Meston & Buss, 2007). Although most partnered sex occurs within the context of a relationship (Impett et al., 2014), theoretical conceptualizations of sexual motivation have been largely mechanistic and *intra*personal, focusing on physical explanations of pleasure, reproduction, and stress-reduction for sex, and until recently, had paid less attention to the *inter*personal reasons behind sexual motivation (see reviews by Dewitte, 2014; Mark & Lasslo, 2018; Prekatsounaki et al., 2022). In recent decades there has been a growing acknowledgement of the interpersonal factors involved in sexual motivation such as having sex to express love or exercise control (Hill & Preston, 1996). This development has been notably furthered with the application of social motivation theories to sexuality (Muise et al., 2018), providing a more nuanced understanding of what motivates people to meet their partner's sexual needs and get their own sexual needs met in a relationship.

Sexual Communal Motivation

Theories of communal and exchange relationships offer one approach to conceptualizing the motivational processes underlying sexual need fulfillment between partners. In general, communal norms in relationships have emphasized the value of caring for a partner without the expectation of direct reciprocation, in contrast to exchange norms that involve providing benefits to a partner with the expectation of direct reciprocation to keep things even in the relationship (Clark et al., 2010). As people become more interdependent in romantic relationships over time (Thibault & Kelley, 1959), communal norms are often favoured over exchange norms with

people developing trust in their partner that responsiveness will be presumably reciprocated (Clark et al., 2010). Beyond adhering to relationship norms, people vary in their willingness or motivation to be responsive to a partner's needs, which has been referred to as communal strength (Mills et al., 2004). People higher in communal strength and their partners consistently report greater relationship and personal well-being (Le et al., 2018).

A large body of research has extended communal motivation to the domain of sexuality more specifically by examining the role of *sexual communal strength*, the motivation to be responsive to a partner's sexual needs (Muise et al., 2023). In sticking with the original theorizing of communal and exchange relationships, sexual communal strength has been contrasted with *sexual exchange*, which refers to the motivation to provide sexual benefits to a partner with the expectation of receiving equal or comparable benefits in return (Raposo et al., 2020). While research testing the role of sexual exchange on couple's sexual and relationship quality has produced mixed findings (see Lawrance & Byers, 1995; Raposo et al., 2020; Sprecher, 1998), sexual communal strength has been consistently associated with greater sexual desire, sexual satisfaction and relationship satisfaction (Balzarini et al., 2021; Day et al., 2015; Impett et al., 2019; Muise et al., 2013; 2019a; Muise & Impett, 2015; Tirone & Katz, 2020; Vance et al., 2022). These benefits extend to partners as people higher in sexual communal strength are perceived by their partner as more responsive to their sexual needs (Muise & Impett, 2015), and both partners report greater relationship and sexual satisfaction (Muise & Impett, 2015; Impett et al., 2019).

Being and having a sexually communal partner might be particularly important at times when partners' sexual interests differ or when couples are coping with a sexual challenge. For instance, people higher in sexual communal strength are more willing to engage in sex with their

romantic partner, even when their own desire is low, and as a result, both partners reported greater relationship and sexual satisfaction (Day et al., 2015). People who are sexually communal are more likely to reassure their partners of their love and care when rejecting their partner's sexual advances (Kim et al., 2020), and they tend to be more understanding and less resentful when their partner declines their sexual advances (Kim et al., 2018). For couples facing a major adjustment in their relationship that can present changes to their sex life, such as navigating the transition to parenthood, both partners can maintain higher sexual satisfaction when one partner is sexually responsive (Muise et al., 2017b). People with sexually communal partners are also buffered against lower relationship and sexual satisfaction when they have unmet sexual ideals (i.e., attributes they prefer in a sexual partner), such that they may value their partner being responsive to their needs despite not possessing their ideal attributes (Balzarini et al., 2021). People who construe their sex life as requiring hard work and effort to maintain also report greater sexual communal strength, even in the face of sexual challenges (Uppot et al., 2023).

Despite the importance of being responsive to a partner's sexual needs, there are limits to sexual communal motivation when it may no longer be beneficial. In a study of college-age women in dating relationships with men, despite women higher in sexual communal strength reporting higher sexual desire, they were also less assertive in their sexual refusal when their partner was sexually coercive (Tirone & Katz, 2020). The tendency to excessively care for others while neglecting oneself—referred to as *unmitigated communion* (Fritz & Helgeson, 1998)—has been linked with higher relationship well-being but lower personal well-being (Le et al., 2018). Research applying communal theories to sexuality has further distinguished sexual communal strength from *unmitigated sexual communion*, the motivation to prioritize a partner's sexual

needs to the exclusion of one's own needs (Muise et al., 2023). While people higher on sexual communal strength and unmitigated sexual communion are both motivated to be responsive to a partner's sexual needs (Le et al., 2018), the key distinction is that unmitigated sexual communion entails self-neglect whereas sexual communal strength involves responsiveness while still asserting one's own sexual needs (Muise & Impett, 2016). In a daily diary study of community couples, people higher in sexual communal strength reported higher sexual and relationship satisfaction whereas people higher in unmitigated sexual communion reported lower sexual but not relationship satisfaction (Impett et al., 2019).

The differences between sexual communal strength and unmitigated sexual communion have been pronounced among couples coping with sexual dysfunctions in which it might be more challenging to be communally responsive to a partner's sexual needs. In a clinical sample of couples in which a woman experiences pain during sex, on days when women and their partner reported higher sexual communal strength, both partners reported better sexual functioning as well as greater relationship and sexual satisfaction (Muise et al., 2017). In contrast, on days when women reported higher unmitigated sexual communion, both partners reported lower relationship satisfaction, and the women reported poorer sexual function and lower sexual satisfaction, as well as greater pain intensity, anxiety, and depressive symptoms, because they reported experiencing more distress during sex (Muise et al., 2018). Similarly, in a clinical sample of couples in which a woman is coping with low sexual desire, those higher in sexual communal strength reported higher desire and were more motivated to pursue sex to connect with and express love for a partner and both partners reported higher sexual satisfaction (Bockaj et al., 2019; Hogue et al., 2019), whereas a partner's higher unmitigated sexual communion was associated with greater sexual distress (Hogue, et al., 2019).

Despite growing empirical interest in sexual communal motivation, most of the existing research has been correlational, precluding causal conclusions about the divergent effects of sexual communal strength and unmitigated sexual communion on desire and satisfaction. Some work has examined the causal role of being communally motivated to meet a partner's sexual needs on sexual and relationship satisfaction (Balzarini et al., 2021; Day et al., 2015); however, there has been no experimental work to my knowledge aiming to distinguish the effect of sexual communal motivation from unmitigated sexual communion. Theory suggests that the defining feature distinguishing sexual communal strength from unmitigated sexual communion is the extent to which people balance responsiveness with asserting their own sexual needs relative to neglecting their sexual needs (Muise & Impett, 2016). There is a need for research that reflects this theoretical nuance by examining the motivational mechanisms accounting for the divergent effects of sexual communal strength and unmitigated sexual communion on relationship and sexual well-being.

Self-Determined Sexual Motivation

Self-Determination Theory (Ryan & Deci, 2017), a prominent theory of human motivation that has been increasingly applied to sexuality (Gravel et al., 2020), can provide a framework for understanding how partner responsiveness can be integrated with personal need fulfillment in the sexual domain of relationships. According to Self-Determination Theory, well-being rests on the fulfillment of three basic psychological needs, namely, the need for autonomy (i.e., experiencing a sense of psychological agency and choice), the need for competence (i.e., experiencing a sense of effectiveness and mastery), and the need for relatedness (i.e., feeling close and connected to others; Ryan & Deci, 2017). Being in a satisfying romantic relationship is one way people get their basic psychological needs met (La Guardia & Patrick, 2008) with

overall need fulfillment and the fulfillment of each independent need associated with greater personal well-being, felt-security, and relationship quality (Patrick et al., 2007). Extended to sexuality, several studies have demonstrated that fulfilling one's needs for autonomy, competence, and relatedness in the sexual domain of relationships are also associated with greater psychological well-being (Brunell & Webster, 2013), more positive and less negative sexual experiences (Smith, 2007), as well as greater sexual satisfaction and relationship quality (Brunell & Webster, 2013; Smith, 2007; Wood et al., 2018; 2021).

Self-Determination Theory further suggests that people may be motivated for different reasons that are more or less conducive to sexual need fulfillment. Sexual motivation is conceptualized in Self-Determination Theory along a continuum from reasons that are internally driven by the individual to those that are externally influenced by the environment (Brunell & Webster, 2013; Gravel et al., 2016). At the most internal end of the continuum, *intrinsic* sexual motives involve engaging in sex when it is enjoyable in and of itself. *Identified* sexual motives are somewhat internal yet externally value-based, which involve seeking out sex because it is personally important or meaningful for one's relationship. *Introjected* sexual motives maintain some internal aspects but start to start to encompass more external elements of engaging in sex with the focus on seeking approval from oneself or others to prove one's self-worth. At the most external end of the continuum, *external* sexual motives involve complying with sex based on rewards and punishments from others. The self-determined continuum of sexual motivation has also been dichotomized in research for simplicity, distinguishing more internally motivated autonomous reasons (i.e., intrinsic, identified) from more externally motivated controlled reasons (i.e., introjected, external). When people report enjoying and valuing sex for autonomous reasons and feeling less pressured and obligated to have sex for controlled reasons in romantic

orelationships, both partners report greater sexual need fulfillment for autonomy, competence, and relatedness (Brunell & Webster, 2013, Wood et al., 2018; 2021). Similarly, across different relationship types (i.e., causal, dating, committed) and methods (i.e., cross-sectional, daily diary, and longitudinal studies), engaging in sex for more autonomous and less controlled reasons is associated with various indices of personal (i.e., more positive and less negative affect, greater self-esteem), sexual (i.e., greater sexual satisfaction, better sexual functioning, less sexual distress), and relationship (i.e., greater relationship quality, less conflict) well-being (Brunell & Webster, 2013; Gravel et al., 2016, 2019; 2020; Jenkins, 2003; Vrangalova, 2015; Wongsomboon et al., 2022; Wood et al., 2018; 2021).

Self-determined sexual motivation has also been explored in couples coping with sexual difficulties. In a clinical sample of couples in which a man has been diagnosed with Hypoactive Sexual Desire Disorder (i.e., clinically low levels of sexual desire), men who reported being more autonomously motivated to have sex endorsed greater sexual satisfaction and both men and their partners reported greater intimacy, whereas men who felt more controlled in their sexual motivation reported lower sexual satisfaction, there was less intimacy reported by their partner, and more sexual distress was reported by both partners (McClung et al., 2024). In another clinical sample of couples in which the woman is coping with endometriosis (i.e., a pain condition that can impact sexuality), women who reported engaging in sex for more autonomous reasons reported greater sexual and relationship satisfaction whereas those who engaged in sex for controlled reasons described their pain more unpleasant, had partners who report feeling less sexually satisfied, and both partners reported worse sexual functioning (Pecore et al., 2023). Across community and clinical samples of couples, self-determined reasons for engaging in sex appear to be central to either promoting or undermining sexual need fulfillment, which can

provide unique insights into better understanding and distinguishing the processes involved in sexual communal motivation.

Self-Determined Reasons for Engaging in Sex as Mechanisms for Sexual Communal Motivation

Despite the overlapping features that cut across communal and self-determined theories of sexual motivation, these models have, for the most part, developed independent of each other. A better understanding of the social determinants of sexual motivation requires a framework that integrates these approaches together to understand how and why people are motivated to be responsive to their partner's needs in ways that either maintain or undermine their personal sexual need fulfillment. Although relationship science has typically emphasized that the interdependent nature of relationships can come at the expense of personal autonomy and agency (Kumashiro et al., 2008; 2017), there is increasing evidence from both communal and self-determined theories that fulfilling autonomy and responsiveness needs can be complimentary rather than antagonistic processes (Hadden & Girme, 2020). Self-Determination Theory suggests that caring for a partner's needs can either be adaptively internalized as a prosocial reflection of one's authentic sense of self and values or it can be maladaptively externalized as inauthentic and having one's sense of self contingent on appeasing others (Deci et al., 1994; Knee et al., 2013). Applied to the sexual domain, these principles from Self-Determination Theory can be used to understand the differences in sexual communal motivation, which captures sexual responsiveness with varying degrees of sexual autonomy. Research applying communal and self-determined theories to sexuality have also demonstrated that being responsive to a partner's sexual needs and self-determined reasons for engaging in sex not only have sexual and relational consequences for the self, but partners as well (Balzarini et al., 2021; Brunell & Webster, 2013; Day et al., 2015;

Impett et al., 2019; Muise et al., 2013; 2017, 2018; Muise & Impett, 2015; McClung et al., 2024; Pecore et al., 2023; Wood et al., 2021). The role that partners play in supporting the motivational processes involved in responsiveness and autonomy needs further consideration.

Perceived Responsiveness and Autonomy Support from a Partner in the Sexual Domain

Feeling supported by a partner is central to maintaining well-being in romantic relationships (Collins & Feeney, 2015). One prominent way of conceptualizing support in romantic relationships is perceived partner responsiveness, which refers to feeling understood, validated and cared for by a partner (Reis et al., 2004). In addition to contributing to overall relationship quality (Reis & Gable, 2015), a large body of research supports the positive role of perceived partner responsiveness on many sexual dynamics in romantic relationships (for a review see Birnbaum, 2023), including more effective sexual communication (Merwin & Rosen, 2019; Reyes & Clark, 2024), greater sexual desire (Birnbaum et al., 2016; van Lankveld et al., 2021), and greater sexual satisfaction (Birnbaum et al., 2016; Birnbaum & Reis, 2012; Gadassi et al., 2016). Applied more directly to the sexual domain of relationships, and in line with Communal Theories of Sexual Motivation, some work has demonstrated that perceiving a romantic partner as being responsive to one's sexual needs is associated with greater sexual and relationship satisfaction for both partners (e.g., Balzarini et al., 2021; Muise et al., 2013; Muise & Impett, 2015; Raposo & Muise, 2021; for a review see Muise et al., 2023). Despite the benefits of perceived partner sexual responsiveness for sexual need fulfillment, people express a variety of sexual needs, including autonomy, that may not be as sensitive to responsiveness compared to other forms of partner support.

Self-Determination Theory suggests that romantic partners play a critical role in supporting people's need for autonomy in addition to relatedness. Perceived autonomy support is

defined as a significant other acknowledging one's perspective, providing choice and options, and encouraging self-initiation (Deci et al., 2006). Feeling autonomously supported allows people to pursue opportunities within their social environment that directly fulfill their need for autonomy as well as indirectly seek out ways of fulfilling competence and relatedness needs on their own terms (Deci & Ryan, 2014). In this sense, perceived autonomy support enhances well-being by fulfilling all three basic psychological needs (Ryan & Deci, 2017). Although perceived autonomy support has been traditionally applied to hierarchical relationships (i.e., parent-child, teacher-student, coach-athlete, employer-employee; for a review, see Reeve, 2015), there has been a growing interest in examining the role of perceived autonomy support on need fulfillment and well-being in romantic relationships, which are more egalitarian and, in some case, more interdependent in structure (La Guardia & Patrick, 2008).

In hypothetical scenarios and observed conversations between couples, autonomy support was perceived by participants and independent coders as more effective than controlling strategies (i.e., eliciting pressure and thwarting autonomy) in promoting disclosure from a romantic partner and was associated with greater felt security and relationship satisfaction (Kil et al., 2021). Research on goal pursuit and need fulfillment among couples has shown that people who perceive their partner as autonomously supportive report greater progress on a shared relationship goal (e.g., engaging in exercise together) because they construe the goal progress as fulfilling their basic psychological needs (Chua et al., 2021). The benefits of perceived autonomy support in relationships have been demonstrated across various health contexts including goal progress for dieting, exercise, and smoking cessation (Labuda et al., 2023; Ng et al., 2014; Williams et al., 2006) as well as in clinical health populations such as people coping with chronic pain and their partners (e.g., Martire et al., 2013; Uysal et al., 2017). One area of health that may

be especially sensitive to the supportive elements of relationships is the sexual domain (Diamond & Huebner, 2012), in which partners are often motivated to support one another in fulfilling their sexual needs (Muise et al., 2023).

Although no work to my knowledge has examined perceived partner autonomy support in the sexual domain, sexuality research has historically alluded to value of bolstering sexual autonomy for sexual functioning and satisfaction (Weinberg et al., 1983). Sexual autonomy may serve a critical function in allowing people to pursue the sexual experiences they desire as well as decline undesired sexual requests. The ability to exercise one's sexual autonomy within a romantic relationship, however, is inherently contingent on another person, at least for partnered sexual experiences. Studies have shown that women are more likely to actively refuse sexual initiations when they perceive their partners will not react negatively (Morokoff et al., 1997) and having a partner who is responsive and understanding about sexual disinterest is associated with greater sexual and relationship satisfaction (Muise et al., 2017). Notwithstanding the importance of perceiving a partner as responsive to one's sexual needs, there may be unique benefits associated with perceived partner sexual autonomy support (Rocchi et al., 2017). People may feel empowered to assert their own needs when they notice a partner acknowledging their sexual preferences and interests, providing them with sexual options to choose from, and encouraging them to express and pursue their sexual interests and desires. Feeling autonomously supported in the sexual domain might allow for the expression of sexual preferences and interests that more closely align with one's authentic self (La Guardia & Patrick, 2008).

Overview of Current Research

The aim of the present research is to integrate communal and self-determined approaches to sexual need fulfillment by investigating how and why responsiveness and autonomy in the

sexual domain are central to sexual and relationship well-being. In the first paper, drawing on cross-sectional, daily diary and longitudinal data in couples, I will examine how engaging in sex for self-determined reasons can explain the divergent effects of sexual communal strength and unmitigated sexual communion on desire and satisfaction. In the second paper, I provide causal evidence in support of the theoretical model by experimentally manipulating sexual communal motivation and examining whether orienting people in relationships toward sexual communal strength relative to unmitigated sexual communion or a control condition is associated with differences in desire and satisfaction as a function of self-determined reasons for engaging in sex. In the third and final paper, I will validate a novel measure of perceived partner sexual autonomy support and examine its associations with sexual need fulfillment, and in turn, sexual and relationship satisfaction, over and above the influence of perceived partner sexual responsiveness, in cross-sectional, daily experiences, and longitudinal data of couples.

Being Responsive and Self-Determined When It Comes to Sex: How and Why Sexual Motivation is Associated with Satisfaction and Desire in Romantic Relationships

Ariel Shoikhedbrod[1], Natalie O. Rosen[2], Serena Corsini-Munt[3], Cheryl Harasymchuk[4], Emily A. Impett[5], & Amy Muise[1]

[1]Department of Psychology, York University, Canada

[2]Departments of Psychology and Neuroscience and Obstetrics and Gynaecology, Dalhousie University, Canada

[3]School of Psychology, University of Ottawa, Canada

[4]Department of Psychology, Carleton University, Canada

[5]Department of Psychology, University of Toronto Mississauga, Canada

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Abstract

Couples experience greater satisfaction and desire when they are motivated to meet each other's sexual needs (sexual communal strength); however, doing so at the expense of one's own sexual needs (unmitigated sexual communion) can detract from satisfaction and desire. Self-Determination Theory suggests engaging in sex for pleasure and value (autonomous reasons) versus out of pressure and obligation (controlled reasons) may account for these differences. Across two dyadic studies, one cross-sectional (N = 103 couples) and one longitudinal (N = 124 couples), people higher in sexual communal strength had sex for more autonomous and less controlled reasons, and in turn, reported greater satisfaction and desire, overall, in daily life, and over time. In contrast, people higher in unmitigated sexual communion endorsed more controlled reasons for engaging in sex, and in turn reported lower satisfaction. Partners of people higher in sexual communal strength reported less controlled reasons for engaging in sex, and in turn, both partners felt more satisfied, whereas partners of people high in unmitigated sexual communion endorsed more controlled reasons and reported lower satisfaction. This research furthers our understanding of when and why being motivated to be responsive to a partner's sexual needs enhances or detracts from sexual and relationship quality.

Keywords: Sexuality, romantic relationships, sexual motivation, couples, Self-Determination Theory

Being Responsive and Self-Determined When It Comes to Sex: How and Why Sexual Motivation is Associated with Satisfaction and Desire in Romantic Relationships

People in satisfying romantic relationships tend to live longer, healthier, and happier lives (Holt-Lunstad et al., 2010), in part because romantic partners help people meet their needs by providing emotional support, affection, and intimacy (Baumeister & Leary, 1995; Deci & Ryan, 2000). Being motivated to be responsive to a partner's needs may be particularly salient in the domain of sexuality in which partners, at least those in monogamous relationships, rely on one another to meet their sexual needs (Blanchflower & Oswald, 2004). Despite the benefits of sexually satisfying romantic relationships to health and well-being (Diamond & Huebner, 2012), partners often differ in their sexual interests (Mark & Murray, 2012), which can present the dilemma of weighing one's own versus a partner's sexual needs. Whereas some people can assert their own sexual needs and be responsive to their partner's needs (high *sexual communal strength*), which is associated with greater relationship and sexual satisfaction as well as sexual desire, others struggle to respond to their partner's sexual needs without neglecting their own needs (high *unmitigated sexual communion*) and report lower satisfaction (see reviews by Impett et al., 2020; Muise & Impett, 2016). Why do individuals high in sexual communal strength and unmitigated sexual communion experience divergent outcomes despite both being highly motivated to meet their partner's sexual needs? Drawing on Self-Determination Theory (Ryan & Deci, 2017), we suggest one answer might lie in a person's reasons for engaging in sex with their partner. We draw the distinction between people engaging in sex because they enjoy and value doing so (*autonomous reasons*) versus feeling pressured and obligated to do so (*controlled reasons*). Across two studies using dyadic and longitudinal methods, we tested whether people higher in sexual communal strength report more self-determined reasons for engaging in sex

(i.e., more autonomous, less controlled), if people higher in unmitigated communion report less self-determined reasons for engaging in sex (i.e., less autonomous, more controlled), and if these different reasons accounted for the divergent associations between sexual communal motivation and satisfaction as well as desire in relationships.

Sexual Communal Motivation

In romantic relationships, partners are often oriented toward caring for one another (Clark & Mills, 2012). People higher in *communal strength* (Mills et al., 2004) are motivated to be responsive to their partner's needs without the expectation of direct reciprocation and report higher personal and relationship well-being (Le et al., 2018). A growing body of research has extended theories of communal motivation to the domain of sexuality (Impett et al., 2020). *Sexual communal strength* refers to the motivation to be responsive to a partner's sexual needs (Muise et al., 2013), in contrast to *sexual exchange*, which refers to motivation to provide sexual benefits to a partner with the expectation of receiving equal or comparable benefits in return (Raposo et al., 2020). While research testing the role of sexual exchange on couple's sexual and relationship quality has produced mixed findings (see Lawrance & Byers, 1995; Raposo et al., 2020; Sprecher, 1998) sexual communal strength has been consistently associated with greater relationship satisfaction, sexual satisfaction, and sexual desire for both partners (Day et al., 2015; Impett et al., 2019; Muise et al., 2013; Muise & Impett, 2015).

There are, however, limits to when being communally responsive to a partner's needs is beneficial. The tendency to excessively care for others while neglecting oneself—referred to as *unmitigated communion* (Fritz & Helgeson, 1998)—has been linked with higher relationship well-being but lower personal well-being (Le et al., 2018). Research applying communal theories to sexuality has begun distinguishing sexual communal strength from *unmitigated sexual*

communion, the motivation to prioritize a partner's sexual needs to the exclusion of one's own needs. While people higher on sexual communal strength and unmitigated sexual communion are both motivated to be responsive to a partner's sexual needs (Le et al., 2018), the key distinction is that unmitigated sexual communion entails self-neglect whereas sexual communal strength involves responsiveness while still asserting one's own sexual needs (Muise & Impett, 2016). In a daily diary study of community couples, people higher in sexual communal strength reported higher sexual and relationship satisfaction whereas people higher in unmitigated sexual communion reported lower sexual but not relationship satisfaction (Impett et al., 2019). These findings have been extended to clinical samples of couples in which a woman experiences pain during sex (Muise et al., 2017, 2018) and is coping with low sexual desire (Bockaj et al., 2019; Hogue et al., 2019).

Identifying the reasons *why* people are motivated to respond to their partners' sexual needs to the benefit or detriment of their own needs is particularly important to understanding how people higher in sexual communal strength versus unmitigated sexual communion differ in satisfaction and desire. Sexual communal strength may be distinguished from unmitigated sexual communion by the extent to which communal motivation reflects an intrinsic interest in connecting with a partner and seeing them fulfilled compared to being responsive to their needs primarily out of extrinsic concerns contingent on maintaining self-esteem or preventing negative evaluations by a partner (Helgeson & Fritz, 1999; Muise & Impett, 2016). Insights from Self-Determination Theory (Ryan & Deci, 2017), a leading theory of intrinsic and extrinsic motivation, can inform why sexual communal strength and unmitigated sexual communion are differentially associated with satisfaction and desire in romantic relationships.

Self-Determined Sexual Motivation

The existing literature on *self-determined motivation* in romantic relationships suggests engaging with a partner in a freely chosen and self-endorsed manner is more conducive to need fulfillment and relationship functioning than feeling pressured by internal expectations or external demands from a partner (for a review, see Knee et al., 2013). More recently, research has applied Self-Determination Theory to sexual motivation and distinguished engaging in sex for *autonomous reasons*—deriving inherent pleasure and value from sex—from *controlled reasons*—pressuring oneself or feeling obligated to have sex (Gravel et al., 2020). Cross-sectional and daily diary studies have consistently shown that self-determined (i.e., more autonomous, less controlled) reasons for engaging in sex were associated with greater sexual need fulfillment, relationship quality, and general well-being for both partners (Brunell & Webster, 2013; Gravel et al., 2016, 2018, 2020; Jenkin, 2003; Smith, 2007; Vrangalova, 2015; Wood et al., 2018, 2021; Wongsomboon et al., 2022)

Autonomous and controlled reasons for engaging in sex can be further understood within the interpersonal context of being motivated to respond to a partner's needs. Although people in romantic relationships are motivated to be responsive to their partner's needs, they may be doing so for different reasons. For example, partners of people diagnosed with cancer who were motivated to help for more autonomous and less controlled reasons reported less depression, more life satisfaction, and greater benefits from caregiving than those who felt less autonomous and more controlled (Kim et al., 2008). Research on couples in which one partner was diagnosed with chronic pain has also shown that more autonomous and less controlled forms of helping motivation were associated with less distress, greater psychological well-being, and better relationship functioning for both the person with chronic pain and their partner (Kindt et al., 2016). That is, people in romantic relationships derive greater need fulfillment from helping their

partner out of genuine care and concern rather than helping out of guilt or fear of disappointing their partner.

Feeling a sense of volition or pressure to respond to a partner's needs can extend to the sexual domain. People who are higher in sexual communal strength report having sex for approach goals, that is seeking positive and pleasurable sexual experiences with their partner, rather than having sex out of obligation or solely for their own interests (Hogue et al., 2019; Muise et al., 2013). Even in situations that have the potential to elicit pressure from a partner, such as times when a partner's desire is high but the person is not in the mood for sex (Day et al., 2015), or when couples are coping with a sexual dysfunction (Hogue, et al., 2019; Muise et al., 2018), people who are higher in sexual communal strength remain genuinely motivated to be responsive to their partners' needs. In contrast, people higher in unmitigated sexual communion typically experience negative motivational states like distraction, boredom, and detachment during sex, indicating they may not find responding to their partners' sexual needs particularly enjoyable or meaningful (Impett et al., 2019). Instead, those higher in unmitigated sexual communion experience greater distress during sex possibly because they feel guilty for expressing their own sexual needs or fear being negatively evaluated by their partner (Muise et al., 2018).

A person's sexual communal motivation may also influence their partner's reasons for engaging in sex. People higher in sexual communal strength are perceived by their partner as being more sexually responsive (Muise & Impett, 2015). Partner responsiveness is a central feature of autonomy support (Deci et al., 2006; Knee et al., 2013), which involves acknowledging a partner's perspective, providing choice, and encouraging self-initiation to support a partner's needs. As such, partners of people higher in sexual communal strength may

be more motivated to enjoy and value having sex with someone who is autonomously supportive. Given that sexual communal strength also involves being motivated to be responsive to a partner's sexual needs without the expectation of direct reciprocation (Mills et al., 2004; Muise & Impett, 2016), partners of people higher in sexual communal strength may feel more comfortable expressing their sexual needs without feeling pressured. The overlapping feature of being responsive to a partner's sexual needs in unmitigated sexual communion may also be construed by partners as supportive (Le et al., 2018); however, the self-sacrificing nature of people higher in unmitigated sexual communion could have interpersonal consequences for partners who may feel guilty for not being as sexually responsive in return or construe the self-neglect as dissatisfaction in their relationship and sex life.

An area in which communal and self-determined theories converge is the integration of partner responsiveness with personal need fulfillment in romantic relationships. Self-Determination Theory suggests people are inherently motivated to internalize social values and behaviors, including being responsive to a partner's sexual needs, into their core sense of self (Deci et al., 1994; Knee et al., 2013). When people enjoy and value engaging in sex with their partner for autonomous reasons, they should feel more authentically congruent with their "true" self, which corresponds to experiencing optimal outcomes in their relationship. In contrast, people who feel pressured and obligated to have sex with a partner for controlled reasons assume they need to engage in sex without personally endorsing it, which negatively impacts their relationship. As such, one reason why people higher in sexual communal strength may experience higher satisfaction and desire in their relationship is because they engage in sex for autonomous reasons that align with their true self whereas people higher in unmitigated sexual

communion may report lower satisfaction and desire because they engage in sex for controlled reasons predicated on self-neglect.

Overview of Current Research

Although being motivated to meet a partner's sexual needs is central to relationship and sexual quality, people higher in sexual communal strength and unmitigated sexual communion report divergent effects on sexual satisfaction and desire despite both being highly responsive. Self-Determination Theory suggests that people may be responsive to a partner's sexual needs for different reasons, ranging from seeking enjoyment and value in having sex for autonomous reasons to feeling pressured and obligated to engage in sex for controlled reasons (Gravel et al., 2020). The aim of the current research was to test self-determined reasons for engaging in sex as one explanation for the associations between sexual communal motivation and satisfaction and desire in romantic relationships. We predicted that people higher in sexual communal strength and their partners will endorse more autonomous and less controlled reasons for engaging in sex, and in turn, both members of the couple will report greater relationship satisfaction, sexual satisfaction, and sexual desire overall and over time. In contrast, we predicted that people higher in unmitigated sexual communion and their partners will report lower satisfaction and desire overall and over time on account of being motivated to engage in sex for less autonomous and more controlled reasons. We also explored whether the findings for sexual communal motivation and self-determined reasons for engaging in sex differ between men and women as well as between those in short- and long-term relationships based on inconsistent effects of gender and relationship length found in past research (Gravel et al., 2016). We tested these predictions in an initial cross-sectional pilot study of people in romantic relationships (see online supplemental materials; OSM), a dyadic cross-sectional sample (Study 1), and a dyadic

longitudinal sample (Study 2). Study materials, data, and syntax are available on the Open Science Framework: https://osf.io/dakb2/?view_only=9b31c264b48645fdbfea49a8c3ceee1b

Pilot Study

As a preliminary step to inform our hypotheses, we ran a pilot study with a cross-sectional sample of individuals in romantic relationships ($N = 248$), recruited from Prolific Academic, an online crowdsourcing platform. A detailed summary of the participant demographics, methods, and results, which supported our key predictions, is provided in the OSM. In response to reviewers, we also conducted confirmatory factor analyses using this data to compare models in which sexual communal strength and unmitigated sexual communion are distinct constructs versus facets of the same construct. The findings, which are provided in the OSM, suggest that sexual communal strength and unmitigated sexual communion are indeed distinct constructs.

Study 1

In Study 1, a cross-sectional sample of couples, we tested whether, for both partners, self-determined reasons for engaging in sex accounted for the associations between sexual communal motivation and satisfaction and desire.

Participants and Procedure

We recruited both members of romantic couples using online (e.g., Kijiji, Facebook, Twitter, and Reddit) and physical (e.g., hospitals, universities, and community buildings) advertisements across North America. To be eligible, both partners had to agree to participate and be 18 years or older, fluent in English, and in a relationship with each other for at least six months, with a minimum of four in-person contacts per week during the last month, and not report any sexual problems. We aimed to recruit at least 100 couples based on guidelines for

average sample sizes in dyadic research (Kenny et al., 2006). The final sample consisted of 206 participants (N = 103 couples). Participant demographics are reported in Table 1. A sensitivity analysis using G*Power (Faul et al., 2007), indicated a sample of 103 couples accommodated the detection of a minimum unstandardized slope of .034 for the association between sexual communal strength and sexual satisfaction (ICC = .44), with 80% power and α (two-sided) = .05[1].

Couples were initially screened over the phone to confirm their eligibility. Each member of the couple was sent an individualized link and, after providing consent to participate, they were able to access the online survey. Partners completed the survey separately and were asked not to discuss their responses with each other. Once both members of the couple completed the survey, they were debriefed and each compensated $10 CAD with an Amazon gift card.

Measures

Sexual communal motivation. ***Sexual communal strength*** was assessed with the Sexual Communal Strength Scale (SCSS; Muise et al., 2013), which included six items (e.g., "How far would you be willing to go to meet your partner's sexual needs?"; M = 3.18, SD = .48; α = .67, ω = .66), rated on a 5-point scale (0 = *not at all,* 4 = *extremely)*. ***Unmitigated sexual communion*** was assessed with the Unmitigated Sexual Communion Scale (USCS; Hogue et al., 2019), which included seven items (e.g., "I always place my partner's sexual needs above my own."; M = 3.16, SD = .71; α = .72, ω = .73) rated on a 5-point scale (1 = *strongly disagree,* 5 = *strongly agree).*

[1] The sample sizes used for sensitivity analyses were corrected for non-independence in the data to determine the number of independent observations. Effective sample size=N/(1+[n-1]*ICC, where N=total number of observations, n=cluster size (e.g., number of partners within a couple and/or number of repeated assessments within partners), and ICC=within-cluster correlation. See Wiley & Wiley, 2019, pp., 455-456.

Table 1.

Comparison of sample characteristics across studies

Characteristic	Study 1		Study 2	
	M or *n*	*SD* or *%*	*M* or *n*	*SD* or *%*
Age (years)	30.7	9.4	32.6	7.5
Relationship duration (years)	6.2	6.8	7.8	5.1
Race				
White	69.9		70.7	
Black	4.4		0.7	
Asian	4.9		16	
Hispanic	3.4		1.7	
Multi-racial/Cultural	14.2		7.1	
Identities not listed	3.4		3.8	
Relationship status				
Dating	23.3		1	
Cohabitating	22.8		21.1	
Common Law	5.8		29.6	
Married	45.1		48.3	
Status not listed	1.9		0	
Sexual orientation				
Bisexual	12.6		8.2	
Lesbian/gay	2.9		6.5	
Heterosexual	71.8		82.7	
Orientation not listed	12.7		1.4	
Gender				
Man	46.1		47.6	
Woman	51.5		50.7	
Gender not listed	2.4		1.7	

Note. Percentages may not add up to 100% due to a small amount of missing data.

Categories are collapsed when applicable to enable comparisons across studies.

Self-determined reasons for engaging in sex. The Sexual Motivation Scale (SMS; Gravel et al., 2016) was used to measure self-determined reasons for engaging in sex with a partner. Participants rated the extent to which they were motivated to engage in sex for ***autonomous reasons*** (e.g., "Because sex is exciting"; 12 items; M = 5.76, SD = 1.03; α = .91, ω = .91) and ***controlled reasons*** (e.g., "To prove to myself that I am a good lover"; 12 items; M = 2.23, SD = .98; α = .86, ω = .88), on a 7-point scale (1 = *Does not correspond at all*, 7 = *Corresponds completely*). [2] [3]

Relationship satisfaction. Relationship satisfaction was measured using the Couple Satisfaction Index (CSI; Funk & Rogge, 2007). The CSI consists of 16 items (e.g., "In general, how often do you think that things between you and your partner are going well?"; M = 4.26, SD = .73; α = .95, ω = .96) rated on 5-point scales with anchors tailored to specific items (e.g., 0 = *Never,* 5 = *All the time*).

Sexual satisfaction. Sexual satisfaction was measured with the Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1995). Participants' sexual satisfaction with their partner was rated with five bipolar items on a 7-point scale (e.g., My sex life is "very bad" to "very good"; M = 6.29, SD = .79, α = .92, ω = .92).

Sexual desire. Sexual desire was measured with the partner-focused dyadic subscale of the Sexual Desire Inventory-2 (SDI-2; Moyano et al., 2017; Spector et al., 1996). Participants

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[2] Gravel et al. (2016) originally distinguished self-determined (i.e., intrinsic, identified, and integrated) from non-self-determined (i.e., introjected, external, amotivation) sexual motives subscales, which we respectively refer to as autonomous and controlled reasons for engaging in sex across studies. Previous research has suggested that amotivation may reflect an impersonal motivational orientation that is distinct from the introjected and external elements of a controlled motivational orientation (Deci & Ryan, 1985). However, when analyzing our data with the amotivation items included versus excluded from the controlled subscale, our findings largely remained the same (see OSM).

[3] In addition to self-determined reasons for engaging in sex, approach and avoidance sexual goals were also measured and examined as competing motivational mechanisms based on previous research (Muise et al., 2013). We re-ran our primary mediation models of self-determined reasons for engaging in sex mediating the effects of sexual communal motivation on satisfaction while controlling for approach and avoidance sexual goals, and largely, the findings reported in the results remained. (see OSM).

rated their sexual desire for their partner with seven items (e.g., "When you have sexual thoughts, how strong is your desire to engage in sexual behavior with a partner?"; M = 5.93, SD = 1.28; α = .84, ω = .84) on 9-point scales with anchors tailored to specific items (e.g., 0 = *no desire*, 8 = *strong desire*).

Data Analysis

We analyzed the data with multilevel modeling using mixed models in SPSS 27. In line with our pre-registered analytic plan (https://osf.io/39sxq/?view_only = 4f06e130516a4b6888ac886cec3b018a), we first examined the descriptive statistics and bivariate correlations among the primary variables (see Table 2). To account for the non-independence of the dyadic data, analyses were conducted in accordance with the Actor-Partner Interdependence Model (APIM; Cook & Kenny, 2005). We tested two-level indistinguishable models in which individuals were nested within dyads (Kenny et al., 2006). To test whether sexual communal strength and unmitigated sexual communion were associated with relationship satisfaction, sexual satisfaction, and sexual desire through autonomous and controlled reasons for engaging in sex for both partners, we conducted multilevel mediation analyses guided by APIM (Ledermann et al., 2011). All predictors were mean-centred. Actors' and partners' sexual communal strength and unmitigated sexual communion were entered simultaneously as predictors and autonomous and controlled reasons for engaging in sex were tested as simultaneous mediators. We used the Monte Carlo Method for Assessing Mediation (MCMAM; Selig & Preacher, 2008) with 20,000 resamples and 95% Confidence Intervals (CIs). Significant indirect effects were present if the 95% CIs did not contain zero. We also conducted exploratory moderation analyses by gender and relationship duration. Largely, the effects were consistent for people in shorter and longer relationships and for men and women (see OSM).

Table 2.

Correlations in Study 1

	1	2	3	4	5	6	7
1. Sexual Communal Strength	**.22****						
2. Unmitigated Sexual Communion	.39***	**-.17***					
3. Autonomous Reasons	.30***	.01	**.20****				
4. Controlled Reasons	-.18**	.29***	-.13	**.31*****			
5. Relationship Satisfaction	.27***	-.06	.25***	-.39***	**.62*****		
6. Sexual Satisfaction	.43***	.05	.32***	-.39***	.69***	**.50*****	
7. Sexual Desire	.39***	.21**	.55***	-.21**	.29***	.47**	**.21****

Note. * $p<.05$, ** $p<.01$, *** $p<.001$. Correlations between partners are bolded on the diagonal.

Results

First, we tested whether sexual communal strength and unmitigated sexual communion were associated with satisfaction and desire (see total effects in Table 3). After controlling for unmitigated sexual communion, people higher in sexual communal strength reported significantly higher relationship satisfaction, sexual satisfaction, and sexual desire, as did their partners. In contrast, people higher in unmitigated sexual communion reported lower sexual desire but not lower relationship and sexual satisfaction after controlling for sexual communal strength, and there were no significant associations with their partner's satisfaction and desire.

Next, consistent with our predictions, people higher in sexual communal strength endorsed engaging in sex for more autonomous reasons (see Table 3 for total effects), and in turn, reported greater relationship satisfaction (b = .11, SE = .05, t(164.93) = 2.36, p = .019, 95% CI[.02, .20]), sexual satisfaction (b = .14, SE = .05, t(188.70) = 2.96, p = .003, 95% CI[.05, .23]), and sexual desire (b = .52, SE = .06, t(192.61) = 8.22, p<.001, 95% CI[.40, .64]). Autonomous reasons for engaging in sex significantly mediated the associations between sexual communal strength and relationship satisfaction, sexual satisfaction, and sexual desire (see direct and indirect effects in Table 2)[4].

Controlled reasons for engaging in sex reported by both partners also significantly mediated the association between sexual communal strength and relationship satisfaction, sexual satisfaction, and sexual desire for both partners (see total, direct and indirect effects in Table 3). People higher in sexual communal strength endorsed less controlled reasons for engaging in sex,

[4] Given that people may be motivated to have sex in the presence or absence of sexual desire, we were interested in whether our effects on relationship and sexual satisfaction were specific to sexual motivation and not solely driven by desire. We reran the models examining the mediating effects of self-determined reasons for engaging in sex on the associations between sexual communal motivation and relationship and sexual satisfaction while controlling for sexual desire and found no significant changes to the findings.

Table 3.

Total, Direct and Indirect Effects in Study 1

Effects	Autonomous reasons	Controlled reasons	Actor's relationship satisfaction	Partner's relationship satisfaction	Actor's sexual satisfaction	Partner's sexual satisfaction	Actor's sexual desire	Partner's sexual desire
Sexual Communal Strength (effects mediated by actor's reasons)								
Total Effect	.73***(.16)	-.57***(.14)	.41***(.10)	.35***(.10)	.64***(.11)	.47***(.11)	.76***(.17)	.35*(.17)
Direct Effect	—	—	.18(.11)	.17(.11)	.39**(.11)	.33**(.11)	.31[a](.16)	.29[b](.16)
Indirect Effect (Autonomous)[1]	—	—	**[.01, .16]**	[-.01, .04]	**[.03, .20]**	[-.02, .03]	**[.22, .60]**	[-.02, .03]
Indirect Effect (Controlled)[2]	—	—	**[.04, .20]**	[-.00, .09]	**[.05, .22]**	[-.01,.07]	**[.04, .25]**	**[-.14, -.00]**
Sexual Communal Strength (effects mediated by partner's reasons)								
Total Effect	.13(.16)	-.34*(.14)	.41***(.10)	.35***(.10)	.64***(.11)	.47***(.11)	.76***(.17)	.35*(.17)
Direct Effect	—	—	.18(.11)	.17(.11)	.39**(.11)	.33**(.11)	.31[a](.16)	.29[b](.16)
Indirect Effect (Autonomous)[1]	—	—	[-.03, .11]	[-.02, .06]	[-.05, .01]	[-.03, .08]	[-.08, .11]	[-.09, .24]
Indirect Effect (Controlled)[2]	—	—	[-.00, .13]	**[.01, .14]**	**[.02, .11]**	**[.01, .15]**	**[-.20 -.02]**	**[.01, .17]**
Unmitigated Sexual Communion (effects mediated by actor's reasons)								
Total Effect	-.16(.11)	.54***(.10)	-.17*(.08)	-.13(.08)	-.07(.08)	.01(.08)	.16(.11)	-.07(.11)
Direct Effect	—	—	-.03(.08)	-.05(.08)	.08(.08)	.08(.08)	.34**(.10)	-.14(.10)
Indirect Effect (Autonomous)[1]	—	—	[-.05, .01]	[-.02, .02]	[-.06, .01]	[-.01, .04]	[-.20, .03]	[-.01, .02]
Indirect Effect (Controlled)[2]	—	—	**[-.18, -.05]**	[-.04, .01]	**[-.20,.-.05]**	[-.03, .01]	**[-.22, -.04]**	[-.01, .07]
Unmitigated Sexual Communion (effects mediated by partner's reasons)								
Total Effect	.01(.11)	.12(.10)	-.17*(.08)	-.13(.08)	-.07(.08)	.01(.08)	.16(.11)	-.07(.11)
Direct Effect	—	—	-.03(.08)	-.05(.08)	.08(.08)	.08(.08)	.34**(.10)	-.14(.10)
Indirect Effect (Autonomous)[1]	—	—	[-.03, .01]	[-.02, .03]	[-0.3, .01]	[-.03, .04]	[-.03, .02]	[-.10, .12]
Indirect Effect (Controlled)[2]	—	—	[-.11, .00]	[-.07, .01]	[-.10, .02]	[-.07, .01]	[-.01, .07]	[-.08, .02]

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. [1]Indirect effects of sexual communal strength/sexual unmitigated communion → autonomous reasons for engaging in sex → relationship satisfaction/sexual satisfaction/sexual desire. [2]Indirect effects of sexual communal strength/sexual unmitigated communion → controlled reasons for engaging in sex → relationship satisfaction/sexual satisfaction/sexual desire. Significant indirect effects are bolded. *p<.05, ** p<.01. *** p<. 001, a = .052, b = .065.

and in turn, reported greater relationship satisfaction (b = .20, SE = .05, t(174.11) = 3.88, p<.001, 95% CI[.30, .10]), sexual satisfaction (b = .21, SE = .05, t(192.40) = 4.00, p<.001, 95% CI[.11, .31]), and sexual desire (b = .23, SE = .07, t(192.50) = 3.24, p<.001, 95% CI[.10, .37]); however, their partner reported less sexual desire (b = -.17, SE = .07, t(192.50) = -2.367, p = .019, 95% CI[-.31, -.03]) and there was a trending positive association with a partner's relationship satisfaction (b = .10, SE = .05, t(174.11) = 1.90, p = .059, 95% CI[-.01, .20]). People higher in sexual communal strength also had partners who reported engaging in sex for less controlled reasons, and in turn, they reported greater sexual satisfaction but lower sexual desire whereas partners reported greater relationship satisfaction, sexual satisfaction, and sexual desire.

Controlled reasons for engaging in sex also significantly mediated the associations between unmitigated sexual communion and relationship satisfaction, sexual satisfaction, and sexual desire (see total, direct and indirect effects in Table 3). People higher in unmitigated sexual communion reported engaging in sex for more controlled reasons (but there was no association with autonomous reasons), and in turn, reported lower relationship satisfaction, sexual satisfaction, and sexual desire, but these findings did not extend to partners.

In sum, the findings from Study 1, while cross-sectional, demonstrated that people higher in sexual communal strength and their partners reported greater satisfaction and desire because they endorsed engaging in sex for more autonomous and less controlled reasons whereas people higher in unmitigated sexual communion reported lower satisfaction and desire because they endorsed being sexually motivated for primarily more controlled reasons. The mediating role of controlled reasons for engaging in sex extended to partners of people higher in sexual communal strength but not to partners of people higher in unmitigated sexual communion. People higher in

sexual communal strength had partners who endorsed less controlled reasons for engaging in sex, which was associated with greater satisfaction for both partners and greater sexual desire for the partner; however, controlled reasons reported by a partner was positively associated with one's own sexual desire, which was inconsistent with our predictions.

Study 2

In Study 2, a multi-part dyadic study, we extended the cross-sectional findings from Study 1 using longitudinal methods to better capture the temporal sequence of sexual communal motivation, self-determined reasons for engaging in sex, satisfaction, and desire among romantic couples. In particular, we used measures captured at three different time points to determine if individual differences in sexual communal strength and unmitigated sexual communion (measured in a baseline survey) are associated with people's daily reports of their autonomous and controlled reasons for engaging in sex (measured in a 21-day survey), and in turn, whether self-determined reasons predicted relationship satisfaction, sexual satisfaction, and sexual desire over time (measured in a 3-month follow-up survey).

Participants and Procedure

Couples were recruited using online advertisements (e.g., Reddit) across Canada as part of a larger study. To be eligible, both partners had to agree to participate, be 18 years or older, fluent in English, in a relationship with each other for at least two years, and spend five out of seven nights together per week. We aimed to recruit at least 150 couples to account for attrition at the daily and follow-up stages of the study. The final sample consisted of 294 participants at baseline (N = 147 couples), 284 participants at the daily level, and 280 participants at follow up. Participant demographics are shown in Table 1. A sensitivity analysis using G*Power (Faul et al., 2007) indicated a sample of 140 couples accommodated the detection of a minimum

unstandardized slope of .014 for the association between sexual communal strength at baseline and sexual satisfaction at follow up (ICC = .22) with 80% power and α (two-sided) = .05.

Couples were pre-screened over the phone to confirm their eligibility. After providing their informed consent, each member of the couple was provided with an individualized link to complete a 60-minute baseline survey, which consisted of demographic items and our key measures in addition to other measures included as part of a broader research project. Starting on the following day, each partner was sent a 15-minute survey for 21 consecutive days, which they were instructed to complete separately before bed each night. Participants completed an average of 19.43 (out of 21) daily entries. Three months after completing their final daily survey, participants were sent a 20-minute follow up survey that included a smaller battery of questionnaires that overlapped with the baseline survey for our key measures over time. Each partner was paid up to CAD $65 in Amazon.ca gift cards for participating with payment prorated depending on the number of daily surveys completed and the completion of the follow-up survey.

Baseline Measures

Sexual communal strength and ***unmitigated sexual communion*** were exclusively measured at baseline using the SCSS (*M* = 5.27, *SD* = .87; α = .70, ω = .70) and the USCS (*M* = 4.10, *SD* = 1.13; α = .71, ω = .73), on a 7-point scale (1 = *strongly disagree,* 7 = *strongly agree).* ***Relationship satisfaction*** was measured at baseline with three items from the relationship satisfaction subscale of the Perceived Relationship Quality Component Inventory (PRQC; Fletcher et al., 2000) on a 7-point scale (1 = *not at all*; 7 = *extremely M* = 6.20, *SD* = .82; α = .90, ω = .90). ***Sexual satisfaction*** was measured at baseline with the GMSEX (*M* = 5.60, *SD* = 1.29; α = .93, ω = .93). ***Sexual desire*** was measured with six items from the dyadic subscale of

the SDI-2 (*M* = 5.30, *SD* = 1.58; α = .90, ω = .90) on a 9-point scale (e.g., 0 = *no desire*, 8 = *strong desire*).

Daily Measures

Daily self-determined reasons for engaging in sex were measured with a shortened version of the SMS, which consisted of five items for ***autonomous reasons*** ("Because I felt that having sex is meaningful; *M* = 5.01, *SD* = 1.12, α = .63, ω = .63) and four items for ***controlled reasons*** ("To prove to myself that I am a good lover; *M* = 2.22, *SD* = 1.39, α = .79, ω = .81). The SMS has been previously adapted and validated in a daily context (Gravel et al., 2020). Self-determined reasons for engaging in sex were only assessed on days when couples engaged in sex. ***Relationship satisfaction*** at the daily level was measured with a single item, "How satisfied were you with your relationship today?" (*M* = 5.99, *SD* = 1.17). ***Sexual satisfaction*** at the daily level was measured with the GMSEX (*M* = 4.94, *SD* = 1.59). ***Sexual desire*** was measured at the daily level with a single item, "I felt a great deal of sexual desire for my partner today" (*M* = 4.40, *SD* = 1.73).

Follow-up Measures

The relationship satisfaction subscale from the PRQC (*M* = 5.93, *SD* = 1.12; α = .94, ω = .94), the GMSEX (*M* = 5.58, *SD* = 1.36; α = .95, ω = .95), and the dyadic subscale of SDI-2 (*M* = 4.99, *SD* = 1.58; α = .90, ω = .90) from baseline were reassessed at the 3-month follow up.

Data Analysis

We analyzed the data with multilevel modeling using mixed models in SPSS 27 based on our pre-registered analytic plan (https://osf.io/pw5yg/?view_only = 4cc2ad3e3cd04e889da0da9792115f03). We first examined the descriptive statistics and bivariate correlations among the primary variables (see Table 4). For the daily diary portion of the study,

Table 4.

Correlations in Study 2

	1	2	3	4	5	6	7	8	9	10
1. Baseline Sexual Communal Strength	**-.14*****									
2. Baseline Unmitigated Sexual Communion	.56***	**-.06*****								
3. Baseline Relationship Satisfaction	.12***	.07***	**.35*****							
4. Baseline Sexual Satisfaction	.28***	0.02	.46***	**.50*****						
5. Baseline Sexual Desire	.57***	.28***	.09***	.47***	**.31*****					
6. Daily Autonomous Reasons	.21**	.03**	.16***	.32***	.41***	**.27*****				
7. Daily Controlled Reasons	-.22***	.12***	-.15***	-.25***	-.13***	.12***	**.33*****			
8. Follow-up Relationship Satisfaction	.16***	.07***	.56***	.27***	.06***	.06***	-.25***	**.50*****		
9. Follow-up Sexual Satisfaction	.19***	0.01	.47***	.59***	.26***	.25***	-.32***	.55***	**.51*****	
10. Follow-up Sexual Desire	.45***	.23***	.15***	.37***	.74***	.38***	-.10***	.26***	.48***	**.36*****

Note. * $p<.05$, ** $p<.01$, *** $p<.001$. Correlations between partners are bolded on the diagonal. Daily variables are aggregate values across the 21-day period.

we ran two-level cross-classified models in which people were nested within dyads, and people and days were crossed to account for both partners completing daily surveys on the same days (Kenny et al., 2006). To avoid confounding between- and within-person variance, daily predictor variables were aggregated and person-mean centered (Raudenbush et al., 2004; Zhang et al., 2009). As such, these analyses accounted for between-person differences in autonomous and controlled reasons for engaging in sex and assess whether day-to-day changes from a participant's own mean on the self-determined reasons variables are associated with corresponding changes in daily relationship satisfaction, sexual satisfaction, and sexual desire. Given that self-determined reasons for engaging in sex were only assessed on days when sexual activity occurred, the analyses only included sexual activity days (992 total days).

We then conducted multilevel mediation analyses guided by APIM (Ledermann et al., 2011) to longitudinally test whether sexual communal strength and unmitigated sexual communion at baseline were associated with relationship satisfaction, sexual satisfaction, and sexual desire three months later through autonomous and controlled reasons for engaging in sex aggregated over the 21-day period for both partners. Actors' and partners' sexual communal strength and unmitigated sexual communion were mean-centred and entered simultaneously as predictors. Aggregated values of actor's and partner's autonomous and controlled reasons for engaging in sex during the 21-day period were simultaneously entered as mediators in the models. We controlled for baseline satisfaction and desire on outcomes three months later in the corresponding mediation models. We used the MCMAM (Selig & Preacher, 2008) with 20,000 resamples and 95% CIs. We conducted exploratory moderation analyses by gender and relationship duration. Largely, the effects were consistent for people in shorter and longer relationships and for men and women (see OSM).

Results

Daily Associations

Our main goal in the daily analyses was to test whether daily changes (within-person fluctuations) in autonomous and controlled reasons for engaging in sex were associated with our key outcomes. However, we first examined whether sexual communal strength and unmitigated sexual communion at baseline were associated with autonomous and controlled reasons for engaging in sex during the 21-day period. People higher in sexual communal strength at baseline endorsed more autonomous (b = .30, SE = .08, t(227.42) = 3.76, p < .001, 95% CI[.14, .46]) and less controlled reasons (b = -.60, SE = .10, t(235.89) = -5.95, p < .001, 95% CI[-.80, -.40]) for engaging in sex during the 21-day period and their partner reported less daily controlled reasons (b = -.22, SE = .10, t(238.11) = -2.16, p = .032, 95% CI[-.42, -.19]). In contrast, people higher in unmitigated sexual communion at baseline reported more controlled reasons for engaging in sex (b = .37, SE = .07, t(238.15) = 4.91, p < .001, 95% CI[.22, .53]) during the 21-day period and their partner did as well (b = .18, SE = .07, t(238.35) = 2.39, p = .018, 95% CI[.03, .33]).

We then examined the within-person effects of self-determined reasons for engaging in sex on satisfaction and desire during the 21-day period. On days when people reported more autonomous reasons for engaging in sex during the 21-day period, they reported greater relationship satisfaction (b = .20, SE = .04, t(610.60) = 5.53, p < .001, 95% CI[.13, .27]), sexual satisfaction (b = .40, SE = .03, t(567.86) = 12.25, p < .001, 95% CI[.33, .46]), and sexual desire (b = .37, SE = .04, t(634.71) = 8.29, p < .001, 95% CI[.29. .46]), and their partner reported marginally greater sexual satisfaction (b = .06, SE = .03, t(567.86) = 1.88, p = .060, 95% CI[-.00, .12]). In contrast, on days when people reported more controlled reasons for engaging in sex during the 21-day period, they reported lower daily relationship satisfaction (b = -.12, SE = .04,

$t(587.14) = -2.91$, $p = .004$, 95% CI[-.20, -.04]), sexual satisfaction ($b = -.24$, $SE = .04$, $t(551.47) = -6.33$, $p < .001$, 95% CI[-.31, -.16]), and sexual desire ($b = -.22$, $SE = .05$, $t(646.40) = -4.39$, $p < .001$, 95% CI[-.32, -.12]), however, partners reported greater sexual desire ($b = .11$, $SE = .05$, $t(647.21) = 2.19$, $p = .029$, 95% CI[.01, .21]).

Mediation Analyses

To best test our key mediation models, we used the longitudinal data and tested whether sexual communal motivation at baseline is associated with the aggregates of self-determined reasons for engaging in sex during the 21-day daily experience study, and in turn sexual satisfaction, relationship satisfaction and sexual desire at the three-month follow-up, accounting for the corresponding outcomes at baseline (see Table 5 for total effects). After controlling for satisfaction and desire at baseline, the positive association between a person's sexual communal strength and relationship satisfaction at follow-up was trending in the expected direction ($p = .09$), and partners of people higher in sexual communal strength reported higher sexual satisfaction three months later.

Next, as predicted, people higher in sexual communal strength at baseline reported being sexually motivated for more autonomous reasons during the 21-day period, and in turn, reported higher sexual satisfaction ($b = .15$, $SE = .07$, $t(231.25) = 2.01$, $p = .046$, 95% CI[.00, .30]) and sexual desire ($b = .16$, $SE = .08$, $t(233.00) = 2.05$, $p = .042$, 95% CI[.01, .32]) three months later. Autonomous reasons for engaging in sex during the 21-day period significantly mediated the effect of sexual communal strength at baseline on sexual satisfaction and desire at follow up (see Table 5 for total, direct, and indirect effects).

Controlled reasons for engaging in sex during the 21-day period also significantly mediated the associations between baseline sexual communal strength and satisfaction at follow-

Table 5.

Total, Direct and Indirect Effects in Study 2

Effects	Daily autonomous reasons	Daily controlled reasons	Actor's follow-up relationship satisfaction	Partner's follow-up relationship satisfaction	Actor's follow-up sexual satisfaction	Partner's follow-up sexual satisfaction	Actor's Follow-up sexual desire	Partner's follow-up sexual desire
Sexual Communal Strength (effects mediated by actor's reasons)								
Total Effect	.32***(.08)	-.58***(.10)	.14[a](.08)	.13(.08)	.11(.10)	.26**(.10)	.11(.11)	.01(.10)
Direct Effect	—	—	.07(.19)	.04(.10)	.00(.11)	.12(.11)	.04(.12)	-.04(.11)
Indirect Effect (Autonomous)$_1$	—	—	[-.04, .04]	[-.02, .01]	**[.00, .11]**	[-.03, .02]	**[.00, .12]**	[-.02, .01]
Indirect Effect (Controlled)$_2$	—	—	**[.02, .15]**	**[.00, .07]**	**[.06, .22]**	[-.00, .07]	[-.04, .10]	[-.02, .05]
Sexual Communal Strength (effects mediated by partner's reasons)								
Total Effect	-.05(.08)	-.22*(.10)	.14[a](.08)	.13(.08)	.11(.10)	.26**(.10)	.11(.11)	.01(.10)
Direct Effect	—	—	.07(.19)	.04(.10)	.00(.11)	.12(.11)	.04(.12)	-.04(.11)
Indirect Effect (Autonomous)$_1$	—	—	[-.02, .06]	[-.01, .01]	[-.01, .09]	[-.04, .02]	[-.04, .06]	[-.04, .02]
Indirect Effect (Controlled)$_2$	—	—	**[.01, .14]**	**[.00, .08]**	**[.00, .14]**	**[.01, .11]**	[-.04, .11]	[-.02, .05]
Unmitigated Sexual Communion (effects mediated by actor's reasons)								
Total Effect	-.09(.06)	.37***(.08)	-.01(.06)	-.05(.06)	-.04(.07)	-.08(.07)	-.01(.07)	-.00(.07)
Direct Effect	—	—	.06(.07)	.02(.07)	.07(.08)	.05(.08)	.05(.08)	.02(.08)
Indirect Effect (Autonomous)$_1$	—	—	[-.02, .02]	[-.01, .03]	[-.04, .01]	[-.00, .05]	[-.05, .01]	[-.02, .03]
Indirect Effect (Controlled)$_2$	—	—	**[-.10, -.01]**	**[-.05, -.00]**	**[-.14, -.03]**	[-.05, .00]	[-.07, .03]	[-.04, -.10]
Unmitigated Sexual Communion (effects mediated by partner's reasons)								
Total Effect	.13(.06)	.18*(.08)	-.01(.06)	-.05(.06)	-.04(.07)	-.08(.07)	-.01(.07)	-.00(.07)
Direct Effect	—	—	.06(.07)	.02(.07)	.07(.08)	.05(.08)	.05(.08)	.02(.08)
Indirect Effect (Autonomous)$_1$	—	—	[-.03, .01]	[-.02, .02]	[-.04, .01]	[-.00, .05]	[-.02, .02]	[-.00, .06]
Indirect Effect (Controlled)$_2$	—	—	**[-.09, -.01]**	**[-.06, -.00]**	[-.09, .00]	**[-.08, -.00]**	[-.07, .02]	[-.04, .01]

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. Baseline relationship satisfaction, sexual satisfaction and sexual desire are controlled for in the mediation models.

$_1$Indirect effects of baseline sexual communal strength/sexual unmitigated communion → daily autonomous reasons for engaging in sex → follow-up relationship satisfaction/sexual satisfaction/sexual desire.

$_2$Indirect effects of sexual communal strength/sexual unmitigated communion → daily controlled reasons for engaging in sex → follow-up relationship satisfaction/sexual satisfaction/sexual desire.

Significant indirect effects are bolded.

*p<.05, ** p<.01. *** p<. 001. a = .09

up for both partners (see Table 5 for total, direct, and indirect effects). People higher in sexual communal strength and their partners reported less controlled reasons for engaging in sex, and in turn reported greater relationship satisfaction (b = .14, SE = .05, t(231.60) = 2.60, p = .010, 95% CI[.03, .25]) and sexual satisfaction (b = .22, SE = .06, t(230.29) = 3.73, p<.001, 95% CI[.11, .34]), but not sexual desire three months later. Partners who endorsed engaging in sex for less controlled reasons across the 21-day period reported greater relationship satisfaction (b = .12, SE = .08, t(233.76) = 2.29, p = .023, 95% CI[.02, .22]), but not sexual desire or sexual satisfaction at follow-up, although this latter effect trended in a positive direction (b = .11, SE = .06, t(238.93) = 1.95, p = .052, 95% CI[.00, .23]), but not sexual desire at follow-up.

Controlled reasons for engaging in sex during the 21-day period also significantly accounted for the associations between unmitigated sexual communion and satisfaction at follow-up for both partners (see Table 5 for total, direct, and indirect effects). People higher in unmitigated sexual communion endorsed more controlled reasons for engaging in sex across the three weeks and, in turn, reported lower sexual satisfaction and both partners reported lower relationship satisfaction, but not sexual desire three months later. Partners who endorsed engaging in sex for more controlled reasons during the daily period reported lower sexual satisfaction and both partners reported lower relationship satisfaction at follow-up.

In sum, Study 2 replicated and extended the cross-sectional and dyadic findings from Study 1 to show that people higher in sexual communal strength and their partners reported greater satisfaction and desire over time because they endorsed engaging in sex for more autonomous and less controlled reasons during the 21-day-period whereas people higher in unmitigated sexual communion and their partners reported lower satisfaction over time because they reported being sexually motivated for more controlled reasons. The mediating role of

controlled reasons for engaging in sex on satisfaction extended to partners of those higher in sexual communal *and* partners higher in unmitigated sexual communion over time. Consistent with Study 1, on days when partners endorsed more controlled reasons for engaging in sex, they reported greater daily sexual desire; however, this effect did not replicate over time.

General Discussion

Being motivated to meet a partner's needs is central to maintaining satisfaction and desire in relationships—especially in the sexual domain in which partners are more likely to rely on each other for sexual need fulfillment—but only when partner responsiveness does not come at the expense of attending to one's own needs. In two dyadic studies, we tested whether engaging in sex for self-determined reasons explains why people higher in sexual communal strength and unmitigated sexual communion and their partners fundamentally differ in their satisfaction and desire. We found that people higher in sexual communal strength endorsed more autonomous and less controlled reasons for engaging in sex and, in turn, reported greater overall satisfaction and desire, in addition to reporting greater satisfaction and desire three months later. In contrast, people higher in unmitigated sexual communion who endorsed engaging in sex for more controlled reasons, in turn, reported lower overall satisfaction and desire, and felt less satisfied over time.

The findings extended to partners as well in both studies. People higher in sexual communal strength had partners who felt less pressured or obligated to have sex, which accounted for both partners feeling more satisfied overall and over time. Unique to Study 2, partners of people higher in unmitigated sexual communion also endorsed more controlled reasons for engaging in sex across the 21-day period and, in turn, experienced lower satisfaction three months later.

Interestingly, people higher in sexual communal strength whose partners endorsed engaging in sex for less controlled reasons reported *lower* sexual desire overall in Study 1, which was the opposite of our predicted direction. The daily diary analyses in Study 2 further revealed that on days when partners endorsed being sexually motivated for more controlled reasons, people reported greater sexual desire during the 21-day-period. It is possible these potential indirect effects could be construed in the opposite direction instead; if one partner has lower desire, the other partner may feel less pressured to engage in sex, drawing on their communal motivation to meet their partner's sexual needs despite their lack of interest. It may be equally possible if one partner has higher sexual desire, the other partner feels more sexual pressure or obligation and, in turn, is less motivated to meet a partner's sexual needs. The longitudinal analyses in Study 2, which provided more appropriate tests of directionality, suggested that the mediating effect of a partners' controlled reasons on sexual desire did not replicate over time, but did for satisfaction, which appears to be more robust across both studies.

Theoretical Contributions and Implications

The current research is the first to our knowledge to integrate theories of communal motivation (Clark & Mills, 2012; Helgeson & Fritz, 1999) and Self-Determination Theory (Ryan & Deci, 2017) in the context of romantic relationships and sexuality. Although both sexual communal strength and unmitigated sexual communion involve being motivated to meet a partner's sexual needs, a distinguishing feature between the two forms of sexual motivation is the extent to which people balance being responsive with asserting their own sexual needs in the relationship (Muise & Impett, 2016). The current findings suggest that Self-Determination Theory provides a useful framework for explaining how partner responsiveness can be integrated with personal need fulfillment in the sexual domain. People higher in sexual communal strength

experienced greater satisfaction and desire because they genuinely chose to engage in sex with their partner rather than feeling compelled to engage in sex. Being motivated to meet a partner's sexual needs is internalized among those higher in sexual communal strength as their responsiveness more closely aligns with their "true" sense of self (Deci et al., 1994). In contrast, people higher in unmitigated sexual communion experienced poorer sexual and relationship quality because they felt pressured and obligated to have sex. Responsiveness that entails self-sacrificing is more inauthentic and externalized as people higher in unmitigated communion have their self-worth contingent on whether their partner's expectations are met (Knee et al., 2013).

The current studies further replicated and extended the existing literatures on sexual communal motivation and self-determined reasons for engaging in sex. Although previous work on sexual communal motivation has examined sexual goals and attentional cues during sex as mechanisms in daily experiences of couples (Muise et al., 2013; Impett et al., 2018), these are the first studies to identify the motivational processes distinguishing sexual communal strength and unmitigated sexual communion over time in a longitudinal design, which is more suitable for testing mediation (Preacher, 2015). Additionally, the existing research on self-determined reasons for engaging in sex has primarily drawn on cross-sectional and undergraduate samples of people in dating relationships (Gravel et al., 2016), whereas the current work applied dyadic and longitudinal methods to generalize these findings to community couples in long-term and committed relationships. Another unique contribution of the current research is that the mediating effects of self-determined reasons for engaging in sex extended to partners.

Although past work has demonstrated that partners of people higher in sexual communal strength experience greater satisfaction and desire (Impett et al., 2020), our studies are the first to show sexual communal strength influences a partner's motivational processes as well. Partners of

people higher in sexual communal strength found the lack of pressure or obligation to have sex to be particularly satisfying and experienced more desire because they felt encouraged to pursue sex for pleasure and meaning. These findings align with previous research showing that people higher in sexual communal strength are perceived as more responsive by their partners and, in turn, the partner reports greater satisfaction (Muise & Impett, 2015). One central aspect of partner responsiveness involves encouraging self-expression in a relationship through understanding, validating, and caring for a partner (Reis et al., 2004). In this sense, sexual communal strength may draw on elements of autonomy support in romantic relationships (Deci et al., 2006; Knee et al., 2013). In the context of sexuality, people with partners who are communally motivated to meet their sexual needs may feel more self-determined because their opinions and values related to sex are respected and their sense of sexual agency and choice is encouraged by their partner.

Partners of people higher in unmitigated sexual communion, in contrast, experienced more pressure and obligation to engage in sex, which left both partners feeling less satisfied. This may stem from partners being unsure of how to meet the needs of people higher in unmitigated communion who are known to be uncomfortable with self-disclosure and receiving support from others (Fritz & Helgeson, 1999). The resistance to being cared for by a partner could be construed as a way people higher in unmitigated communion exercise control in their relationship by allowing their partner to depend on them but not allowing themselves to depend on their partner (Helgeson & Fritz, 1999). Despite being motivated to meet a partner's sexual needs, people higher in unmitigated sexual communion restrict a partner from being responsive in return, which undermines rather than supports a partner's sense of autonomy.

Limitations and Future Directions

The present research is not without its limitations. First, the studies relied on self-report measures and people may be motivated to present their relationship and sex lives in a positive light, wanting to appear more sexually communal and autonomous rather than unmitigated and controlled. To account for this concern, we simultaneously controlled for sexual communal strength and unmitigated sexual communion as well as autonomous and controlled reasons for engaging in sex across all the mediational models tested. Doing so accounts for the shared variance and distinguishes the unique effects of both positively and negatively salient aspects of sexual motivation in relationships. These concerns can be further addressed by experimentally manipulating sexual communal motivation and self-determined reasons for engaging in sex to account for confounding factors and establish causal conclusions. Past experimental work has demonstrated that it is possible to increase sexual communal strength in hypothetical scenarios (Day et al., 2015) and perceive a partner as more sexually responsive (Balzarini et al., 2021), as well as foster greater autonomous motivation to help and accommodate in relationships (Kluwer et al., 2020; Weinstein & Ryan, 2010).

Although non-contingent responsiveness (i.e., meeting a partner's needs without the expectation of direct reciprocation) is an aspect of communal giving (Clark & Mills, 2012), the measure of sexual communal strength used in the current study does not fully capture this aspect and instead assesses a person's motivation to be responsive to their partner's sexual needs. Future research may want to consider a multifaceted measure of sexual communal strength that fully captures the non-contingent aspect of communal giving to better test its role in shaping sexual and relationship satisfaction. In addition, the current research was focused on contrasting different types of motivations for sexual responsiveness (sexual communal strength and unmitigated sexual communion) and did not consider more self-focused sexual motivation. In

their original theorizing of general and unmitigated forms of communion, Helgeson and Fritz (2000) contrasted communion with agency, suggesting that agency could also be unmitigated. Existing work on self-focused sexual motives demonstrates that agentic motivations can have divergent associations with sexual and relationship satisfaction with high sexual assertiveness being associated with higher sexual and relationship quality (e.g., Haavio-Mannila & Kontula, 1997; Greene & Faulkner, 2005) whereas sexual narcissism, which also taps into high sexual agency, is largely associated with lower satisfaction (e.g., Widman & McNulty, 2010). However, to our knowledge agentic and communal motivation in the sexual domain have not been compared. Future research may explore how motivations related to sexual responsiveness and sexual agency are differentially associated with sexual and relationship satisfaction.

Another important consideration with the current work is the generalizability of the findings as the studies predominantly consisted of White and cisgender participants in mixed-gender relationships. Given that the phenomenological experience of sexual motivation can be expressed differently for racial and sexual minorities (Frost et al., 2014), future research should aim to extend these findings with more diverse samples of couples. Participants also reported being in fairly satisfied relationships and their experiences may differ from couples who are less satisfied or those coping with a sexual issue. Building on previous work demonstrating the costs and benefits of sexual communal motivation among couples in which a woman experiences clinically low levels of sexual desire or pain during sex (Bockaj et al., 2019; Hogue et al., 2019; Muise et al., 2017, 2018), future research could examine self-determined reasons for engaging in sex in the context of couples coping with sexual dysfunction who may particularly struggle to derive pleasure and value from having sex and instead feel sexually pressured and obligated. Sexual motivation is a major catalyst for change that can be targeted in couples and sex therapy

(Hawton et al., 1986; Hall & Binik, 2020), such that partners can experience benefits by drawing on their motivation to be responsive to each other's sexual needs while navigating a sexual issue. Clinical interventions might draw on cognitive-behavioral techniques promoting more autonomous and less controlled reasons for engaging in sex to bolster sexual communal strength while keeping unmitigated sexual communion in check to help couples foster greater relationship and sexual quality.

The replication of these results across different relationship types and contexts is another avenue for future research. Although the current studies examined sexual motivation among primarily monogamous couples, past work has shown that people in consensually non-monogamous relationships also experience greater sexual need fulfillment as well as relationship and sexual satisfaction with their primary and secondary partners when they are more sexually communal (Muise et al., 2019) and self-determined (Wood et al., 2018, 2021). Future work could examine whether having a primary partner who is higher in sexual communal strength or unmitigated sexual communion influences the extent to which one feels sexually autonomous or controlled in another, concurrent relationship, and in turn, the corresponding associations with relational and sexual outcomes across relationships. In addition, given that our samples primarily consisted of long-term couples, it would also be worthwhile to apply this work to the early stages of a romantic relationship and determine how communal and self-determined forms of sexual motivation develop or evolve over the course of a relationship, with implications for the trajectories of their sexual and relationship well-being. Lastly, the dynamic between sexual communal motivation and self-determined reasons for engaging in sex may also be particularly salient during common situations in relationships that elicit sexual compliance (Impett & Peplau,

2003), such as rejecting a partner's sexual advances (Kim et al., 2020; Muise et al., 2017) or engaging in sex with a partner despite not being in the mood (Day et al., 2015).

Conclusion

By integrating communal and self-determined theories of sexual motivation in romantic relationships, the current research identified autonomous and controlled reasons for engaging in sex as mechanisms accounting for the divergent associations between sexual communal strength and unmitigated sexual communion with satisfaction and desire. The findings highlight that genuinely choosing to be responsive to a partner's sexual needs offers relationship and sexual benefits for both partners, whereas feeling compelled to be responsive to a partner's sexual needs by sacrificing one's own needs can backfire with costs to both partner's relationship and sexual well-being.

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Supplementary Materials for Paper 1

Pilot Study

In a pilot study, we conducted an initial test of whether sexual communal motivation (i.e., sexual communal strength and unmitigated sexual communion) is associated with self-determined reasons for engaging in sex (i.e., autonomous and controlled) and, in turn, relationship satisfaction, sexual satisfaction and sexual desire in a cross-sectional sample of people in romantic relationships. Additionally, we conducted confirmatory factor analyses to compare models in which sexual communal strength and unmitigated sexual communion are distinct constructs versus facets of the same construct.

Participants and Procedure

Participants were recruited through Prolific Academic, an online crowdsourcing platform. Eligible participants were sexually active, in a romantic relationship for at least 6 months, and 18 years of age or older. Based on a recommendation of sample sizes approximating $N = 250$ for stable correlation estimates (Schönbrodt & Perugini, 2013), we recruited 267 participants, oversampling to account for potential data exclusions. We excluded participants who did not meet the eligibility criteria ($n = 4$), provide consent ($n = 1$), demonstrate proficiency with English ($n = 12$) or pass three out of five attention checks using the Conscientious Responders Scale ($n = 2$; Marjanovic et al., 2014). The final sample consisted of 248 participants (97 men, 147 women, 1 trans-identified as female, 1 person had an identity that was not listed, 2 missing data). Participants ranged in age from 18 to 70 years ($M = 32.18$, $SD = 10.27$). Participants reported their ethnic/racial background as White (85.5%), Black (1.2%), East Asian (1.2%), South Asian (.4%), multi-ethnic/racial (.4%), or indicted that it was not listed (7.3%) with some missing data (.8%). Participants identified as heterosexual (84.7%), bisexual (8.9%), asexual (2.4%), lesbian

(1.2%), pansexual (1.2%), queer (1.2%), in addition to missing data (.4%). Participants were married (40.3%), dating (24.2%), living together (23.8%), common-law (5.2%), engaged (5.2%), or indicated their relationship status was not listed (1.2%). The average relationship length reported by participants was 8.16 years (*SD* = 7.99).

Participants were initially pre-screened on Prolific based on the eligibility criteria. After confirming their eligibility and providing informed consent, participants completed a 25-minute online survey. Participants were then debriefed and compensated £2.08 ($2.90 USD, $3.62 CAD) for their participation.

Measures

Sexual communal motivation. ***Sexual communal strength*** was assessed with the Sexual Communal Strength Scale (SCSS; Muise et al., 2013), which included six items (e.g., "How far would you be willing to go to meet your partner's sexual needs?"; *M* = 2.76, *SD* = .62; α = .75, ω = .75), rated on a 5-point scale (0 = *not at all,* 4 = *extremely)*. ***Unmitigated sexual communion*** was assessed with the Unmitigated Sexual Communion Scale (USCS; Hogue et al., 2018), which included seven items (e.g., "I always place my partner's sexual needs above my own."; *M* = 3.10, *SD* = .67; α = .71, ω = .73) rated on a 5-point scale (1 = *strongly disagree,* 5= *strongly agree).*

Self-determined reasons for engaging in sex. The Sexual Motivation Scale (SMS; Gravel et al., 2016) was used to measure self-determined reasons for engaging in sex. Participants rated the extent to which they were motivated to engage in sex for ***autonomous reasons*** (e.g., "Because sex is exciting."; 12 items; *M* = 5.33, *SD* = 1.22; α = .94, ω = .94) and ***controlled reasons*** (e.g., "To prove to myself that I am a good lover.";12 items; *M* = 2.62, *SD* =

1.12; α = .88, ω = .82), on a 7-point scale (1 = *Does not correspond at all*, 7 = *Corresponds completely*).

Relationship satisfaction. Relationship satisfaction was measured using the Couple Satisfaction Index (CSI; Funk & Rogge, 2007). The CSI consists of thirty-two items (e.g., "In general, how often do you think that things between you and your partner are going well?"; *M* = 4.00, *SD* = .84; α = .97, ω = .96) rated on 5-point scales with anchors tailored to specific items (e.g., 0 = *never,* 5 = *All the time*).

Sexual satisfaction. Sexual satisfaction was measured with the Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1995). Participants' sexual satisfaction with their partner was rated with five bipolar items on a 7-point scale (e.g., My sex life is "very bad" to "very good"; *M* = 5.75, *SD* = 1.28; α = .96, ω = .96).

Sexual desire: Sexual desire was measured with the partner-focused dyadic subscale of the Sexual Desire Inventory-2 (SDI-2; Spector et al., 1996; Moyano et al., 2017). Participants rated their sexual desire for their partner with seven items (e.g., "When you have sexual thoughts, how strong is your desire to engage in sexual behaviour with a partner?"; *M* = 5.75, *SD* = 1.28; α = .90, ω = .90) on 9-point scales with anchors tailored to specific items (e.g., 0 = *no desire*, 8 = *strong desire*).

Data analytic plan

We analyzed the data using SPSS 27. In line with our pre-registered analytic plan (https://osf.io/p2e5s), we initially explored the descriptive statistics and bivariate correlations among sexual communal strength, unmitigated sexual communion, autonomous and controlled reasons for engaging in sex, relationship satisfaction, sexual satisfaction, and sexual desire (see

Table 1). To test the indirect effects of sexual communal strength and unmitigated sexual communion on relationship and sexual outcomes through autonomous and controlled reasons for engaging in sex, we conducted mediation analyses using Hayes' (2013) SPSS macro PROCESS (Model 6) with 95% bias corrected confidence interval (CIs) based on 20,000 bootstrap samples. Significant indirect effects were present if 95% CIs did not contain zero. All predictor variables were mean centered prior to analyses. Sexual communal strength and unmitigated sexual communion were entered simultaneously as predictors and autonomous and controlled reasons for engaging in sex were entered as simultaneous mediators across the models tested.

Following Wang and Eastwick's (2020) guidelines for testing the incremental validity and distinctiveness of two constructs, we specified a one-factor model with items for sexual communal strength and unmitigated sexual communion loading on the same factor and compared the model fit to a two-factor model specifying sexual communal strength and unmitigated sexual communion as two separate factors. We performed confirmatory factor analyses with maximum likelihood estimation using the lavaan package in R and used standard fit indices to evaluate and compare model fit.

Confirmatory Factor Analyses

When comparing a two-factor model (see factor loadings in Table 2) in which sexual communal strength and unmitigated sexual communion were specified as separate factors ($\chi2(64) = 199.25$, $p < .001$, CFI = .84, TLI = .81, RMSEA = .09, 90% CI[.08, .11], SRMR= .08) fit significantly better than a one-factor model of sexual communal motivation ($\chi2(78) = 245.39$, $p < .001$, CFI = .80, TLI = .75, RMSEA = .11, 90% CI[.09, .12], SRMR= .08); $\chi^2_{diff} =$

Table 1.

Correlations in Study 1

	1	2	3	4	5	6	7
1. Sexual Communal Strength	–	–	–	–	–	–	–
2. Unmitigated Sexual Communion	.59***	–	–	–	–	–	–
3. Autonomous Reasons	.58***	.22***	–	–	–	–	–
4. Controlled Reasons	-.20**	.18**	-.17**	–	–	–	–
5. Relationship Satisfaction	.34***	.16*	.26***	-.39***	–	–	–
6. Sexual Satisfaction	.37***	.14*	.41***	-.39***	.70***	–	–
7. Sexual Desire	.64***	.37***	.69**	-.23***	.37***	.55***	–

Note. *p <.05, **p <.01, *** p <.001.

Table 2.

Confirmatory Factor Analyses in Pilot Study

	One-Factor Model	Two-Factor Model	
	f_1	f_1	f_2
1. How far would you be willing to go to meet your partner's sexual needs?	0.65	0.70	
2. How readily can you put the sexual needs of your partner out of your thoughts?	-0.30	-0.30	
3. How high a priority for you is meeting the sexual needs of your partner?	0.81	0.89	
4. How easily could accept not meeting your partner's sexual needs?	-0.57	-0.57	
5. How likely are you to sacrifice your own needs to meet the sexual needs of your partner?	0.64	0.59	
6. How happy do you feel when satisfying your partner's sexual needs?	0.47	0.53	
7. I always place my partner's sexual needs above my own	0.57		0.60
8. For me to be happy with my sex life, I need my partner to be happy.	0.55		0.51
9. I won't be able to sleep if I think my partner is not sexually satisfied	0.61		0.67
10. It is impossible for me to satisfy my own sexual needs if they interfere with the needs of my partner.	0.38		0.43
11. I can't say no when my partner asks me to meet a sexual need of theirs	0.51		0.57
12. Even when exhausted, I make sure I meet my partner's sexual needs.	0.73		0.80
13. I often worry about my partner being unsatisfied with our sex life.	0.04		0.06

48.01, p < .001). The AIC and BIC of these models also indicated that the two-factor model, AIC = 8349.6, BIC = 8444.3, fit the data better than the one-factor model, AIC = 8397.1, BIC = 8488.3, providing evidence in support of the distinctiveness between sexual communal strength and unmitigated sexual communion.

Results

First, we tested whether sexual communal strength and unmitigated sexual communion were associated with satisfaction and desire (see total effects in Table 3). Consistent with past research, people who scored higher in sexual communal strength reported higher relationship satisfaction, sexual satisfaction, and sexual desire. And, unmitigated sexual communion was significantly associated with lower sexual desire, but not associated with relationship satisfaction nor sexual satisfaction.

Next, consistent with our predictions, people higher in sexual communal strength reported being more sexually motivated for autonomous reasons (see total effects in Table 3) and in turn, reported higher sexual satisfaction (b = .29, SE = .07, $t(236) = 3.94$, $p < .001$, 95% CI[.14, .43]) and sexual desire (b = .61, SE = .06, $t(235) = 9.38$, $p < .001$, 95% CI[.48, .73]), but not relationship satisfaction. Autonomous reasons for engaging in sex significantly mediated the respective associations between sexual communal strength and sexual satisfaction and desire (see direct and indirect effects in Table 3).

Controlled reasons for engaging in sex also significantly mediated the associations between sexual communal strength and satisfaction and desire (see total direct and indirect effects in Table 2). People higher in sexual communal strength also reported less controlled reasons for engaging in sex, and in turn, reported lower relationship satisfaction (b = -.28, SE =

Table 3.

Total, Direct, and Indirect Effects in Study 1

Effects	Autonomous Sexual Motives	Controlled Sexual Motives	Relationship Satisfaction	Sexual Satisfaction	Sexual Desire
Sexual Communal Strength					
Total Effect	1.37***(.13)	-.89***(.16)	.53***(.10)	.93***(.15)	1.60***(.15)
Direct Effect	–	–	.20(.13)	.19(.18)	.65***(.16)
Indirect Effect (Autonomous)[1]	–	–	[-.05, .23]	**[.18, .63]**	**[.56, 1.13]**
Indirect Effect (Controlled)	–	–	**[.14, .38]**	**[.09, .25]**	**[.00, .27]**
Sexual Unmitigated Communion					
Total Effect	-.36**(.12)	.81***(.12)	-0.1(10)	-.23(.14)	-.06**(.14)
Direct Effect	–	–	.15(.10)	.18(.14)	.28*(.13)
Indirect Effect (Autonomous)	–	–	[-.07, .01]	**[-.20, -.03]**	**[-.39, -.06]**
Indirect Effect (Controlled)	–	–	**[-.34, -.14]**	**[-.48, -.18]**	**[-.24, -.00]**

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside brackets are upper and lower limits of 95% bias corrected confidence intervals based on 20,000 bootstrapping samples.

[1] Indirect effects of Sexual communal strength/Sexual unmitigated communion ⟶ Autonomous reasons for engaging in sex ⟶ Relationship satisfaction/Sexual satisfaction/Sexual desire

[2] Indirect effects of Sexual communal strength/Sexual unmitigated communion ⟶ Controlled reasons for engaging in sex ⟶ Relationship satisfaction/Sexual satisfaction/Sexual desire

Significant indirect effects are bolded. *p <.05, **p <.01, *** p <.001.

.05, $t(231) = -5.87$, $p < .001$, 95% CI[-.37, -.19]), sexual satisfaction ($b = -.39$, $SE = .07$, $t(236) = -5.60$, $p < .001$, 95% CI[-.53, -.25]), and sexual desire ($b = -.15$, $SE = .06$, $t(235) = -2.34$, $p = .012$, 95% CI[-.27, -.02]).

In contrast to sexual communal strength, people higher in unmitigated sexual communion endorsed less autonomous reasons for engaging in sex (see total effects in Table 2), and in turn, reported lower sexual satisfaction and sexual desire, but not relationship satisfaction. Autonomous reasons for engaging in sex significantly mediated the associations between unmitigated sexual communion and sexual satisfaction and desire(see direct and indirect effects in Table 2).

Controlled reasons for engaging in sex also significantly mediated the associations between Unmitigated sexual communion and satisfaction and desire. (See total, direct, and indirect effects in Table 2). People higher in unmitigated sexual communion endorsed more controlled reasons for engaging in sex, and in turn, reported lower relationship satisfaction, sexual satisfaction, and sexual desire.

Moderation Analyses

We conducted exploratory moderation analyses to examine whether relationship duration or gender interacted with either sexual communal motivation or self-determined reasons for engaging in sex to predict relationship satisfaction, sexual satisfaction, and sexual desire. There were no significant interactions between relationship duration and sexual communal motivation nor self-determined reasons for engaging in sex on relationship and sexual outcomes. Out of 12 possible interactions between gender and sexual communal motivation or self-determined reasons for engaging in sex on relationship satisfaction, sexual satisfaction or sexual desire, there were 4 significant interactions. To test for simple slopes, gender was dummy coded as men and

women. The findings below summarize the significant interactions as well as the corresponding simple effects.

There was a significant interaction between gender and sexual communal strength on sexual desire (b = .75, SE = .26, t = 2.83, p = .005, 95% CI [.23, 1.27]). Simple slopes analyses revealed that women who were higher in sexual communal strength reported significantly higher sexual desire (b = 1.75, SE = .15, t = 11.57, p < .001, 95% CI [1.45, 2.05]). Although men who were higher in sexual communal strength also reported higher sexual desire (b = 1.00, SE = .22, t = 4.61, p = .000, 95% CI [.57, 1.43]), the effect was stronger among women.

There was a significant interaction between gender and controlled reasons for engaging in sex on relationship satisfaction (b = -.29, SE = .09, t = -3.23, p <.001, 95% CI [-.47, -.11). Women who endorsed more controlled reasons for engaging in sex reported lower relationship satisfaction (b = -.44, SE = .06, t = -7.11, p < 001, 95% CI [-.56, -.32]) . Although men who endorsed more controlled reasons for engaging in sex also reported lower relationship satisfaction (b = -.15 , SE = .07, t = -2.25, p = .025, 95% CI [-.28, .02]), the effect was stronger among women.

There was a significant interaction between gender and controlled reasons for engaging in sex on sexual satisfaction (b = -.53, SE = .13, t = -3.94, p <.001, 95% CI [-.79, -.26]). Women who endorsed more controlled reasons for engaging in sex reported lower sexual satisfaction (b = -.70, SE = .09, t = -7.73, p < 001, 95% CI [-.88, -.52]) whereas for men, controlled reasons for engaging in sex was marginally associated with lower sexual satisfaction (b = -.17 , SE = .10, t = -1.75, p = .082, 95% CI [-.37, .02]).

There was a significant interaction between gender and controlled reasons for engaging in sex on sexual desire (b = -.72, SE = .15, t = -4.68, p <.001, 95% CI [-1.03, -.42). Women who endorsed more controlled reasons for engaging in sex reported lower sexual desire (b = -.69, SE = .10, t = -6.58, p < 001, 95% CI [-.90, -.48]) whereas for men, controlled reasons for engaging in sex was not significantly associated with sexual desire (b = .034 , SE = .11, t = .30, p = .765, 95% CI [-.19, .26]).

Study 1

Controlling for Approach and Avoidance Sexual Goals

Past research has shown that people higher in sexual communal strength report greater satisfaction because they endorse more approach sexual goals (i.e., engaging in sex to please a partner and enhance intimacy) but not avoidance sexual goals (i.e., engaging in sex to avert experiencing stress and anxiety or disappointment from a partner; Hogue et al., 2018; Muise et al., 2013). We were interested in whether self-determined reasons for engaging in sex accounted for the associations between sexual communal motivation and satisfaction and desire while controlling for sexual goals. In Study 1, in addition to our key measures of interest for the current study, we included measures of approach sexual goals (6 items; e.g., “To experience pleasure with my partner”, M = 5.28, SD = .84, α = .80 , ω = .80) and avoidance sexual goals (6 items; e.g., “To prevent my partner from becoming upset”, M = 4.09, SD = 1.23 ; α = .94, ω = .94; Impett et al., 2008). When we reran the main mediation analyses controlling for approach and avoidance sexual goals reported by people and their partners, the effects reported in the paper generally remained significant. The association between a person’s autonomous reasons for engaging in sex and their relationship satisfaction became marginal after controlling approach and avoidance sexual goals (b = .09, SE = .05, t(156.30) = 1.89, p = .061, 95% CI[-.00, .19]).

The association between a partner's controlled reasons for engaging in sex and a person's sexual desire also became marginal after accounting for sexual goals (b = .14, SE = .07, t(186.57) = 1.93, p = .055, 95% CI[-.00, .28]). Although the actor and partner effects for approach and avoidance sexual goals on relationship and sexual satisfaction were not significant after accounting for self-determined reasons for engaging in sex in the models, a person's approach sexual goals was positively associated with sexual desire (b = .55, SE = .11, t(183.63) = 4.98, p < .001, 95% CI[.33, .76]) and there was a negative association between a person's avoidance sexual goals and their sexual desire (b = -.26, SE = .08, t(185.20) = -3.32, p < .001, 95% CI[-.41, -.10]).

Moderation Analyses

We conducted exploratory moderation analyses to examine whether relationship duration or gender interacted with both partners' sexual communal motivation or self-determined reasons for engaging in sex to predict relationship satisfaction, sexual satisfaction, and sexual desire. Out of 24 possible moderations by relationship duration, there was a single significant interaction between relationship duration and person's sexual communal strength on sexual satisfaction (b = -.00, SE = .00, t = 2.20, p = .029, 95% CI [-.00, -.01]). To test for simple slopes, relationship duration was dummy coded one standard deviation above and below the mean to reflect those in long- and short-term relationships respectively. In long-term relationships, people who were higher in sexual communal strength reported higher sexual satisfaction (b = .91, SE = .16, t = 5.60, p < .001, 95% CI [.58, 1.23]). Although sexual communal strength was also significantly associated with higher sexual satisfaction in short-term relationships (b = .35, SE = .17, t= 2.07, p = .039, 95% CI [.02, .69]), the effect was stronger than in long-term relationships.

Out of 24 possible moderations by gender, there was a single significant interaction between gender and a partner's sexual communal strength on relationship satisfaction (b = .32, SE = .12, t = 2.58, p = .011, 95% CI [.07, .56]). Simple slopes analyses revealed that males with partners higher in sexual communal strength reported significantly higher relationship satisfaction (b = .66, SE = .17, t = 4.33, p < .001, 95% CI [.36, .96]), whereas a partner's sexual communal strength was not significantly associated with relationship satisfaction among women (b = .031, SE = .17, t = .183, p = .855, 95% CI [-30, .36]).

Study 2

Moderation Analyses

We conducted exploratory moderation analyses to examine whether relationship duration or gender interact with either partner's sexual communal motivations at baseline or self-determined reasons for engaging in sex at the daily level to predict daily relationship satisfaction, sexual satisfaction, and sexual desire. Out of 24 possible moderations by relationship duration, there was a single significant interaction between relationship duration and a partner's sexual communal strength at baseline on daily relationship satisfaction (b = -.00, SE = .001, t = -2.09, p = .037, 95% CI [-.01, .00]). Simple slopes analyses revealed that, in short-term relationships, people with partners higher in sexual communal strength reported greater daily relationship satisfaction (b = .31, SE = .10, t [222.68] = 3.18, p = .002, 95% CI [.12, .51]), whereas in longer-term relationships, a partner's sexual communal strength was not significantly associated with daily relationship satisfaction (b = -.01, SE = .11, t [217.18] = -.06, p = .983, 95% CI [-.22, .20]).

Out of 24 possible interactions between gender and either partner's sexual communal motivation or self-determined reasons for engaging in sex on daily relationship satisfaction, sexual satisfaction or sexual desire, there were 4 significant moderations by gender.

There was a significant interaction between gender and a person's unmitigated sexual communion on daily sexual desire (*b* = 35, *SE* = .14, *t* = 2.49, p = .013, 95% CI [.07, .63]). Women who were higher in unmitigated sexual communion reported greater daily sexual desire (*b* = .11, *SE* = .10, *t* = 1.02, p = .309, 95% CI [-.10, .31]), whereas men who were higher in unmitigated sexual communion reported lower daily sexual desire (*b* = -.07, *SE* = .08, *t* = -.88, p = .378, 95% CI [-.22, .09]); however, neither association was significant.

There was a significant interaction between gender and a partner's unmitigated sexual communion on daily sexual desire (*b* = -38, *SE* = .14, *t* = -2.72, p = .007, 95% CI [-.66, -.11]). Women who had a partner higher in unmitigated sexual communion reported lower daily sexual desire (*b* = -.12, *SE* = .10, *t* = -1.22, p = .225, 95% CI [-.31, .07]), whereas men who had a partner higher in unmitigated sexual communion reported greater daily sexual desire (*b* =.09, *SE* = .08, *t* = 1.08, p = .280, 95% CI [-.07, .25]); however, neither association was significant.

There was a significant interaction between gender and a partner's autonomous reasons for engaging in sex across the 21-day period on daily sexual satisfaction (*b* = 26, *SE* = .10, *t* [207.40] = 2.52., p = .013, 95% CI [.06, .46]). Women with partners who endorsed more daily autonomous reasons for engaging in sex during the 21-day period reported greater daily relationship satisfaction (*b* = .22, *SE* = .07, *t* [129.13] = 2.97, p = 004, 95% CI [.07, .37]) In contrast, for men, a partner's autonomous reasons for engaging in sex during the 21-day period were not significantly associated with daily sexual satisfaction (*b* = -.06, *SE* = .06, *t* [150.45] = -.96, p = .340, 95% CI [-.18, .06]).

There was a significant interaction between gender and a partner's-controlled reasons for engaging in sex across the 21-day period on daily sexual desire (*b* = 27, *SE* = .10, *t* [637.77] = 2.86, p = .005, 95% CI [.08, .45]). Women with partners who endorsed more controlled reasons

for engaging in sex during the 21-day period reported greater daily sexual desire (*b* = .18, *SE* = .07, *t* [122.79] = 2.71, p = 008, 95% CI [.05, .31]). For men, a partner's controlled reasons for engaging in sex were not significantly associated with daily sexual desire (*b* = -.07, *SE* = .06, *t* [101.50] = -1.13, p = .263, 95% CI [-.18, .05]).

We also conducted exploratory moderation analyses to examine whether relationship duration or gender interact with either partner's sexual communal motivations at baseline or self-determined sexual motives at the daily level to predict relationship satisfaction, sexual satisfaction, and sexual desire after three months while controlling for outcomes at baseline. Out of 24 possible moderations by relationship duration, there were no significant interactions. However, out of 24 possible moderations by gender, there were 4 significant interactions.

There was a significant interaction between gender and a person's unmitigated sexual communion on relationship satisfaction after three months (*b* = .25, *SE* = .12, *t* = 2.12, p = .035, 95% CI [.02, .49]). Women who were higher in unmitigated sexual communion reported greater relationship satisfaction three months later (*b* = .14, *SE* = .09, *t* = 1.61, p = .108, 95% CI [-.03, .32]), whereas men who were higher in unmitigated sexual communion reported lower relationship satisfaction three months later (*b* = -.11, *SE* = .08, *t* = -1.35, p = .178, 95% CI [-.27, .05]); however, neither association was significant.

There was a significant interaction between gender and a partner's sexual communal strength on relationship satisfaction three months later (*b* = -.35, *SE* = .15, *t* = -2.30, p = .022, 95% CI [-.66, -.05]). Men with partners higher in sexual communal strength reported greater relationship satisfaction three months later (*b* = .33, *SE* = .11, *t* = 2.95, p = .003, 95% CI [.11, .55]). For women, the association between a partner's higher in sexual communal strength and

relationship satisfaction three months later was not significant (b = .027, SE = .11, t = -.24, p = .811, 95% CI [-.25, .20]).

There was a significant interaction between gender and a partner's sexual communal strength on relationship satisfaction three months later (b = .25, SE = .12, t = 2.06, p = .040, 95% CI [.11, .49]). Men with partners higher in unmitigated sexual communion reported lower relationship satisfaction three months later (b = -.21, SE = .09, t = -2.35, p = .020, 95% CI [-.38, -.03]). For women, the association between a partner's unmitigated sexual communion and relationship satisfaction three months later was not significant (b = .04, SE = .08, t = .51, p = .609, 95% CI [-.12, .21]).

There was a significant interaction between gender and a person's sexual communal strength on sexual desire three months later (b = -.37, SE = .18, t = -2.04, p = .042, 95% CI [-.73, -.01]). Men who were higher in sexual communal strength reported marginally greater sexual desire three months later (b = .26, SE = .13, t = 1.95, p = .052, 95% CI [-.00, .53]). Women who were higher in sexual communal strength reported lower sexual desire three months later (b = -.11, SE = .14, t = -.75, p = .454, 95% CI [-.40, .18]), but the association was not significant.

Analyses with and without amotivation items

The omission of the amotivation items from the controlled subscales for the most part did not significantly change the findings in both studies, with one exception. In Study 2, a partner's sexual communal strength was significantly associated with less controlled reasons for engaging in sex across the 21-day period (b = -.22, SE = .10, t[233.04], = -2.21, p = .028, CI[-.42, -.03]); however, after omitting the amotivation items of the controlled subscales, the association was no longer significant (b = -.21, SE = .12, t[239.45], = -1.71, p = .088, CI[-.45, -.03]). The

corresponding mediational models with this association specified did not have significant indirect effects.

Using Self-Determination Theory as a Framework for Understanding the Associations Between Sexual Communal Motivation and Desire and Satisfaction in Romantic Relationships: An Experimental Study

Ariel Shoikhedbrod[1], Natalie O. Rosen[2], Serena Corsini-Munt [3], & Amy Muise[1]

[1]Department of Psychology, York University, Canada

[2]Departments of Psychology and Neuroscience and Obstetrics and Gynaecology, Dalhousie University, Canada

[3] School of Psychology, University of Ottawa, Canada

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Abstract

Communal theories of sexual motivation suggest that sexual and relationship well-being comes from balancing responsiveness to a partner's sexual needs with asserting one's own sexual needs (i.e., high *sexual communal strength*); however, sexual responsiveness that involves self-neglect (i.e., high *unmitigated sexual communion*) can be costly for well-being. One explanation offered for the divergent outcomes between sexual communal strength and unmitigated sexual communion is the extent to which people are *autonomous* in their sexual motivation (i.e., pursue sex for pleasure and meaning) versus *controlled* (i.e., pursue sex out of pressure and obligation). In a pre-registered experimental study of people in romantic relationships ($N = 515$), we examined the causal differences in sexual communal motivation on desire and satisfaction and the mediating role of self-determined reasons (i.e., autonomous versus controlled) for engaging in sex. We found that people experimentally oriented toward higher sexual communal strength endorsed more autonomous reasons for engaging in sex, and in turn, reported greater desire and satisfaction than those oriented toward higher unmitigated sexual communion or those in a control condition. In contrast, people oriented toward higher unmitigated sexual communion endorsed more controlled reasons for engaging in sex than those in the control condition, however, controlled reasons did not significantly mediate the associations with desire and satisfaction. By capturing the process through which people balance being responsive to their partner's needs with asserting their own sexual needs in a self-determined manner, these findings can inform future interventions targeting sexual motivation to promote desire and satisfaction in romantic relationships.

Key words: Self-Determination Theory, Sexual Communal Motivation, Sexual Desire, Sexual Satisfaction, Relationship Satisfaction.

Using Self-Determination Theory as a Framework for Understanding the Associations between Sexual Communal Motivation and Desire and Satisfaction in Romantic Relationships: An Experimental Study

Responsiveness is a defining feature of satisfying romantic relationships that involves partners attending to and being motivated to meet each other's needs and feeling understood, validated, and cared for (Reis et al., 2004). One relationship domain that is particularly sensitive to responsiveness is sexuality (Muise et al., 2023; Vowels et al., 2022), given that most long-term couples are sexually monogamous with partners exclusively relying on each other to get their sexual needs met (Levine et al., 2018). Indeed, the motivational processes involved in being responsive to a partner's sexual needs are a unique way that relationships contribute to overall health and well-being (Diamond & Huebner, 2012). However, people who are motivated to meet a partner's sexual needs must simultaneously navigate how to assert their own sexual needs in a relationship, which is also central for maintaining sexual and relationship well-being (Alvardo et al., 2020). Theories of communal motivation have offered one approach to conceptualizing sexual responsiveness and sexual assertiveness by contrasting sexual communal strength (i.e., being motivated to be responsive of a partners' sexual needs while still asserting your own needs and boundaries) with unmitigated sexual communion (i.e., responsiveness toward a partners' sexual needs that entails self-neglect; Muise et al., 2023). While past research has typically examined individual differences between people higher in sexual communal strength versus unmitigated sexual communion on sexual and relational outcomes, no work has causally tested how sexual responsiveness can differ based on sexual assertiveness as theory would suggest. Insights from Self-Determination Theory suggest that people higher in sexual communal strength benefit because they pursue sex for more autonomous reasons (i.e., pleasure and meaning) that

promote personal need fulfillment, whereas people higher in unmitigated sexual communion might incur costs because they are motivated by controlled reasons (i.e., pressure and obligation) that undermine their own sexual needs (Shoikhedbrod et al., 2023). In the current study, we used an experimental paradigm to test the casual differences between sexual communal strength and unmitigated sexual communion on sexual desire and sexual and relationship satisfaction through the mediating role of self-determined reasons for engaging in sex.

Sexual Communal Motivation

In line with theories of communal relationships (Clark & Mills, 2012), when partners are responsive and motivated to meet each other's needs, referred to as communal strength (Mills et al., 2004), they report greater personal and relationship well-being (Le et al., 2018). More recently, this work has been extended to the sexual domain by examining the role of sexual communal strength—the motivation to be responsive to a partner's sexual needs —in maintaining sexual well-being and relationship quality (Muise et al. 2023). Across studies, people higher in sexual communal strength report greater sexual desire, sexual satisfaction and relationship satisfaction (Balzarini et al., 2021; Day et al., 2015; Impett et al., 2019; Muise et al., 2013; 2019a; Muise & Impett, 2015; Shoikhedbrod et al., 2023; Tirone & Katz, 2020; Vance et al., 2022). These benefits extend to partners as people higher in sexual communal strength are perceived by their partner as more responsive to their sexual needs (Muise & Impett, 2015), and both partners report greater relationship and sexual satisfaction (Muise & Impett, 2015; Impett et al., 2019; Shoikhedbrod et al., 2023). Even in clinical studies of couples coping with sexual dysfunctions such as low sexual desire or pain during sex, partners who are more motivated to be responsive to each other's sexual needs report lower sexual distress and pain, and greater

personal, sexual, and relationship well-being, relative to those who are less communally motivated (Hogue et al., 2018; Muise et al., 2017a; 2018).

However, there are limits to the benefits of sexual communal motivation when being motivated to meet a partner's needs involves neglecting one's own needs. In a study of college-age women in dating relationships with men, despite greater sexual desire reported among women higher in sexual communal strength, they were also less assertive in their sexual refusal when their partner was sexually coercive (Tirone & Katz, 2020). The extent to which sexual responsiveness with a partner involves self-neglect has been conceptualized as unmitigated sexual communion (for a review see Muise et al., 2023). After accounting for sexual communal strength, unmitigated sexual communion is associated with lower sexual desire, sexual satisfaction, and relationship satisfaction in community samples of couples (Impett et al., 2019; Shoikhedbrod et al., 2023). The deleterious effects of unmitigated sexual communion are further pronounced among clinical samples of couples coping with sexual issues. In a cross-sectional study of women coping with low sexual desire and their partners, women who were higher in unmitigated sexual communion report greater sexual distress (Hogue et al., 2019). Similarly, in a daily diary study of women coping with pain during sex and their partners, women reported worse sexual functioning, greater pain, anxiety and depression and both partners report lower relationship satisfaction when women attend to their partner's sexual needs at the expense of their own (Muise et al., 2017a; 2018). Although sexual communal strength and unmitigated sexual communion both involve responsiveness to a partner's needs, they differ in the extent to which this responsiveness is paired with assertiveness of one's own needs, and in turn, they have different implications for well-being.

Mediating Role of Self-Determined Reasons for Engaging in Sex

While research on sexual communal motivation has established associations with sexual and relationship well-being when people are motivated to be responsive to partner's sexual needs (Muise et al., 2023), less attention has been given as to why there are such divergent outcomes reported between people higher in sexual communal strength and unmitigated sexual communion. Theories of sexual communal motivation suggest that people higher in sexual communal strength get their own sexual needs met through the process of being responsive to their partner's sexual needs whereas people higher in unmitigated sexual communion are sexually responsive for their partner at the expense of asserting their own sexual needs (Muise et al., 2023). A growing body of research applying Self-Determination Theory (Ryan & Deci, 2017), a leading theory of motivation, to sexuality can provide insights into how responsiveness can either be integrated with or separated from personal need fulfillment in romantic relationships. Self-Determination Theory suggests people are inherently motivated to internalize social values and behaviours, including being responsive to a partner's needs, into their core sense of self (Knee et al., 2013). When people enjoy and value engaging in sex with their partner for *autonomous reasons* that align with their true self, they experience optimal outcomes across personal, sexual, and relationship domains. In contrast, when people feel pressured or obligated to have sex with a partner for *controlled reasons* that are predicated on self-neglect, they experience negative outcomes for themselves, their sex life, and their relationship (Brunell & Webster, 2013; Gravel et al., 2016, 2019; 2020; Jenkins, 2003; McClung et al., 2024; Pecore et al., 2023; Shoikhedbrod et al., 2023; Vrangalova, 2015; Wongsomboon et al., 2022; Wood et al., 2018; 2021).

Shoikhedbrod and colleagues (2023) applied Self-Determination Theory specifically to sexual communal motivation in a series of dyadic, cross-sectional, and longitudinal studies.

Across studies, people higher in sexual communal strength were more likely to endorse engaging in sex for autonomous reasons (i.e., pleasure and meaning) and in turn, reported greater sexual desire and sexual and relationship satisfaction whereas people higher in unmitigated sexual communion were more likely to endorse controlled reasons for engaging in sex (i.e., pressure and obligation) and in turn, reported lower desire and satisfaction. Similarly, partners of people higher in sexual communal strength reported greater autonomous reasons for engaging in sex, and in turn, both partners reported greater sexual desire, sexual satisfaction, and relationship satisfaction compared to partners of people higher in unmitigated sexual communion who reported greater controlled reasons, and in turn, both partners reported lower sexual and relationship satisfaction. Other mechanisms have been proposed to explain the associations between sexual communal motivation and desire and satisfaction, such as attending to positive versus negative cues during sex or engaging in sex for approach versus avoidance goals (Impett et al., 2019; Muise et al., 2013); however, self-determined reasons for engaging in sex explain the differences between sexual communal strength and unmitigated sexual communion on desire and satisfaction over and above other explanations (Shoikhedbrod et al., 2023).

Despite growing interest in sexual communal motivation, most research has been correlational, precluding causal conclusions about the associations between sexual communal motivation, self-determined reasons for engaging in sex and sexual and relationship well-being. Some preliminary work has examined the causal role of sexual communal strength on sexual and relationship satisfaction. In a scenario-based study, people who were oriented toward sexual communal strength by being asked to describe what they do to meet their partner's sexual needs, compared to a control group who were not given a prompt, reported anticipating that they would feel more sexually and relationally satisfied in an imagined situation where they had less desire

for sex than their partner (Day et al., 2015). Another study manipulated perceptions of sexual communal strength by randomly assigning participants to list two versus ten ways that a partner was attentive to their sexual needs in the past month. Listing only two ways reflected high perceived sexual communal strength and ten reflected low perceived sexual communal strength based on the premise that recalling a greater number of examples should be more difficult and lead participants to perceive that their partner is not as responsive to their needs (Balzarini et al., 2021). People oriented to perceive their partner as high in sexual communal strength reported greater sexual and relationship satisfaction than those in the low partner sexual communal strength condition. An experimental paradigm would allow for causally distinguishing sexual communal strength from unmitigated sexual communion, to enhance understanding of the distinct sexual motives they serve and the corresponding implications for desire and satisfaction in romantic relationships. Such findings are also important for informing possible interventions aimed at promoting sexual and relationship well-being in romantic relationships.

Current Research

In the current research, a pre-registered experimental study (https://osf.io/27n5s/?view_only=0b01f98199274517bbabd1f98c3261a5), we tested whether orienting people toward sexual communal strength, unmitigated sexual communion, or a control condition would be associated with reported differences in autonomous and controlled reasons for engaging in sex, and in turn, their current feelings of sexual desire, sexual satisfaction, and relationship satisfaction. We predicted that people in the sexual communal strength condition would report more autonomous and less controlled reasons for engaging in sex relative to those in the unmitigated sexual communion and control conditions, and in turn, greater desire and satisfaction. In contrast, we predicted that people in the unmitigated sexual communion condition

would report more controlled and less autonomous reasons for engaging in sex relative to those in the sexual communal strength and control conditions, and in turn, lower desire and satisfaction. The data and syntax for the study are available on the Open Science Framework (https://osf.io/zv4tp/?view_only=e6590d57f5ab4577b0408158fa119ee6),

Participants

Participants in relationships were recruited through Prolific Academic, an online crowd sourcing platform, in June 2021. Eligible participants were sexually active, in a romantic relationship for at least six months, and 18 years of age or older. A pre-registered monte carlo power analysis was conducted using estimates from past research (Shoikhedbrod et al., 2023), which indicated that 500 participants were needed to detect a small to medium effect from a pilot study (η_p^2 = .048) with 80% power (Schoemann et al., 2017). To account for our pre-registered exclusion criteria, we oversampled by 20% and recruited 601 participants. We excluded participants who provided incomplete responses (n = 13), indicated that they did not understand the instructions or were suspicious of the feedback on open-ended responses directly after the manipulation (n = 65) and at the end of the study (n = 6), as well as those who asked to exclude their responses (n = 2). The final sample consisted of 515 participants (393 women, 118 men, 1 individual identifying as a transwoman, 1 individual identifying as non-binary, and 2 who did not specify their gender) ranging in age from 18 to 68 years old (M = 36.00, SD = 11.34). Participants reported their ethnic/racial identity as Black (1.9%), East Asian (2.1 %), Latin American (.4 %), multi-ethnic/racial (2.5%), South Asian (1.7%), White (90.9%), and “not listed” (.4%). Participants identified as asexual (.8%), bisexual (8.7%), gay (.8%), heterosexual (85.8%), lesbian (1.9%), pansexual (1.0%), queer (.6%), and “not listed” (.4%). Participants were common-law (4.5%), dating (16.7%), engaged (5.6%), living together (26.2%), married (46.2%),

or indicated “not listed” (.8%). The average relationship length reported by participants was 11.11 years (*SD* = 9.50).

Procedure

After confirming their eligibility and providing informed consent, participants were told that the purpose of this online survey was to learn more about the experiences of people in romantic relationships. Participants were randomly assigned to one of three conditions: a sexual communal strength feedback condition (*n* = 159), an unmitigated sexual communion feedback condition (*n* = 157), and a control condition with no feedback provided (*n* = 199). For those in a feedback condition, participants were told that research suggests people can be grouped into different categories based on the questionnaires asked in the beginning of the survey, and their responses will be computed to provide feedback about their relationship later in the study. All participants completed a battery of questionnaires used for the feedback, which included measures of sexual communal strength, unmitigated sexual communion, sexual assertiveness, relationship satisfaction, sexual satisfaction, and sexual desire. Participants in the feedback conditions were then redirected to a loading screen while their results were being calculated by an ostensible algorithm, which was adapted from a false feedback manipulation used in previous research (Balzarini et al., 2021; Maxwell et al., 2017). To use language that was more accessible to participants for experimentally manipulating and orienting them toward sexual communal motivation, participants received feedback about their levels of “sexual responsiveness” and “sexual assertiveness” with their partner. Unbeknownst to participants, the feedback they received was false and did not reflect their actual scores on baseline measures. People in the sexual communal strength and unmitigated sexual communion conditions both received feedback

suggesting that they were highly responsive to their partner's sexual needs, but their levels of sexual assertiveness were manipulated.

In the *sexual communal strength condition,* participants were told that they are generally motivated to learn about and meet their partner's sexual needs as their score was high on sexual responsiveness (86th percentile), which meant that only 14% of people who completed similar questions reported being more responsive to their partner's sexual needs. Participants were also told that they care about and are effective at communicating their own sexual needs to their partner, which was reflected in their high score on sexual assertiveness (78th percentile). Visual diagrams of their scores on distributions were provided to explain and accentuate the percentiles (see supplementary materials for feedback stimuli). Taken together, participants were further told their scores suggest they are responsive to their partner's sexual needs without necessarily sacrificing their own sexual needs.

In the *unmitigated sexual communion condition*, participants were told that they scored high on sexual responsiveness in the same manner as those in the sexual communal strength condition. However, they were also told that they struggle with caring about and communicating their own sexual needs to their partner and scored low on sexual assertiveness (36th percentile), which meant that 64% of people who completed similar questions reported being more assertive about expressing their own sexual needs. Participants were then informed their scores suggest they are responsive to their partner's sexual needs but might also sacrifice their own sexual needs.

After the manipulation, participants completed an open-ended question asking if the feedback they received was clear and what the results said about their levels of sexual responsiveness and assertiveness with an option to write "I don't know" if they were unsure. If a

participant indicated they were unsure, misidentified the feedback, or indicated that the feedback was false, their responses were excluded from the analyses. Participants then responded to a set of questions measuring their autonomous and controlled reasons for engaging in sex, sexual desire, sexual satisfaction, and relationship satisfaction after the manipulation. At the end of the study, participants responded to a set of pre-registered suspicion and attention checks ("What do you think this study is about?"; "Do you have any comments about this study in general"; "How much attention did you pay to this questionnaire while completing it?"; "Would you say you completed this study honestly?". Participants who indicated suspicion about the feedback or demonstrated inattentive responding, as described in the participant section, were excluded from analyses. Participants were debriefed at the end of the study and were asked to provide final consent to use the data given the deception, with those indicating "no" excluded from analyses. The survey took approximately 15 minutes to complete, after which participants were compensated £1.25 ($2.15 CAD, $1.70 USD) for the study.

Pilot Study

A pilot study was conducted to test the sexual communal motivation manipulation (N = 150 participants were recruited from Prolific). After receiving the feedback, people responded to one-item manipulation checks measuring their sexual responsiveness ("To what extent are you responsive to your partner's sexual needs?") and sexual assertiveness ("To what extent are you assertive with your own sexual needs?"), using a 7-point scale (1 = *Not at all*, 7 = *Extremely*). There were significant effects of condition on sexual responsiveness, $F(2,147) = 3.22$, $p = .043$, $\eta_p^2 = .042$, and sexual assertiveness, $F(2,147) = 25.55$, $p <. 001$, $\eta_p^2 = .26$. Post-hoc analyses revealed that people in the sexual communal strength condition ($M = 5.96$, $SD = .96$) reported significantly more sexual responsiveness ($t = .50$, $SE = .21$, $p = .045$) than the control condition

(*M* = 5.46, *SD* = 1.20). As expected, there were no significant differences in sexual responsiveness between people in the sexual communal strength and unmitigated sexual communion conditions (*M* = 5.86, *SD* = .96; *t* = .10, *SE* = .21, *p* =.873). People in the sexual communal strength condition (*M* = 5.14, *SD* = 1.31) reported significantly more sexual assertiveness than those in the unmitigated sexual communion (*M* = 3.29, *SD* = 1.32; *t* = 1.85, *SE* = .26, *p* < .001) and control (*M* = 3.29, *SD* = 1.32; *t* =.62, *SE* = .26, *p* = .051) conditions as expected. People in the unmitigated sexual communion condition also reported less sexual assertiveness than those in the control condition (*t* = -1.23, *SE* =.27, *p* <.001). These findings suggest that the manipulation was successful in shifting people's feelings of sexual responsiveness and assertiveness as intended.

People in the sexual communal strength and unmitigated sexual communion conditions also responded to one item questions gauging the believability of the feedback for sexual responsiveness (e.g., "The feedback accurately captured my levels of sexual responsiveness" and sexual assertiveness (e.g., "The feedback accurately captured my levels of sexual assertiveness"). The effects of condition on the accuracy of the sexual responsiveness feedback, *F*(1,98) = .0.43, *p* = .836, and the accuracy of the sexual assertiveness feedback *F*(1, 98) = .2.24, p = .137, were not significant. People in the sexual communal strength and unmitigated sexual communion conditions did not statistically differ on the extent to which they believed the feedback as expected. The average scores in both conditions were relatively high for both sexual responsiveness (*M* = 5.55, *SD* = 1.46; *M* = 5.49, *SD* = 1.39) and sexual assertiveness (*M* = 5.25, *SD* = 1.53; *M* = 4.76, *SD* = 1.80), suggesting that overall, the feedback was believable.

Measures

Self-determined reasons for engaging in sex were measured after the manipulation with a truncated version of the Sexual Motivation Scale (Gravel et al., 2016; Shoikhedbrod et al., 2023), which consisted of five items for *autonomous reasons* (e.g., "Because I feel that having sex is meaningful; M = 5.20, SD = .96; α = .73) and four items for *controlled reasons* (e.g., "To prove to myself that I am a good lover", M = 3.07, SD = 1.30; α = .73). Participants were prompted to rate how important their self-determined reasons for engaging in sex are on a 7-point scale (1= *Not at all* to 7 = *Extremely*).

Sexual desire was measured after the manipulation with a single item (Muise et al., 2019; "I feel a great deal of sexual desire for my partner right now."; M = 4.68, SD = 1.75). Participants rated their sexual desire on a 7-point scale (1= *Not at all* to 7 = *Extremely*).

Sexual satisfaction was measured after the manipulation with the Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1995). Participants' sexual satisfaction with their partner was rated with five bipolar items on a 7-point scale (e.g., My sex life is "very bad" to "very good"; M = 5.37, SD = 1.28; α = .95)

Relationship satisfaction was measured after the manipulation with the short-form version of the Couple Satisfaction Index (CSI; Funk & Rogge, 2007). The CSI consisted of 4 items (e.g., "In general, how satisfied are you with your relationship?; M = 4.10, SD = .97; α = .96). rated on 6-point scales with anchors tailored to specific items (e.g., 0 = *Not at all,* 5 = *completely*).

Data Analyses

We analyzed the data using SPSS 27. We initially explored the descriptive statistics and bivariate correlations among the primary variables (see Table 1). To test the total, direct, and indirect effects of the sexual communal motivation condition on desire and satisfaction through

Table 1.

Bivariate Correlations

	1	**2**	**3**	**4**	**5**
1. Autonomous Reasons	—				
2. Controlled Reasons	.00	—			
3. Sexual Desire	.52***	-.11*	—		
4. Sexual Satisfaction	.52***	-.29***	.63***	—	
5. Relationship Satisfaction	.33***	-.25***	.53***	.68***	—

Note. *p<.05, ** p<.01. *** p<. 001

autonomous and controlled reasons for engaging in sex, we conducted mediation analyses using Hayes's (2012) SPSS macro—PROCESS (Model 6) with 95% bias corrected confidence interval (CIs) based on 20,000 bootstrap samples. To properly account for the multicategorical nature of our experimental condition within a mediational model, we used the procedure specified by Hayes & Preacher (2014) to dummy code our multicategorical independent variable with different reference groups. In one set of comparisons, the unmitigated sexual communion condition was specified as the reference group and coded as 0, the control condition as 1, and the sexual communal strength condition as 2. In another set of comparisons, the control condition was adjusted to be the reference group and coded as 0, the unmitigated sexual communion condition as 1, and the sexual communal strength condition as 2. This coding process allows for testing all possible comparisons between conditions within the same mediation models. Three separate models were specified for sexual desire, sexual satisfaction, and relationship satisfaction as outcome variables. To account for outliers, we pre-registered data exclusions for participants whose responses exceeded 2.5 standard deviations on sexual desire (n = 0), sexual satisfaction (n = 14), and relationships satisfaction (n = 14)[5]. Autonomous and controlled reasons for engaging in sex were entered as parallel mediators in all the models tested. Significant indirect effects were present if 95% CIs did not contain zero. We also explored whether gender and relationship duration moderated the effect of condition on desire and satisfaction. The associations largely remained consistent for women and men and people in short-term and long-term relationships (see supplementary materials).

Results

[5] Given the variation in sample size across the outcomes after the pre-registered data exclusions, the a and b paths differ slightly in the mediation models. As such, separate effects are presented in the results sections for models corresponding to sexual desire, sexual satisfaction, and relationship satisfaction.

Effects of Condition on Desire and Satisfaction

First, we tested for differences between condition on desire and satisfaction (see mean group differences in Table 2 and Figure 1). People in the sexual communal strength condition reported significantly higher sexual desire than those in the control condition (b = .67, SE = .18, t(508) = 3.63, p < .001, 95% CI[.31, 1.03]) and marginally higher sexual desire than people in the unmitigated sexual communion condition (b = .37, SE = .19, t(508) = 1.91, p = .057, 95% CI[-.01, .75]), however the difference in sexual desire between those in the unmitigated sexual communion and control conditions was not significant. People in the sexual communal strength condition reported significantly higher sexual satisfaction than those in the unmitigated condition (b = .31, SE = .15, t(495) = 2.10, p = .036, 95% CI[.02, .59]), however, sexual satisfaction among those in the control condition did not significantly differ from those in the sexual communal strength nor unmitigated sexual communion conditions. There were no significant differences in relationship satisfaction across conditions between people in the sexual communal strength, unmitigated sexual communion and control conditions despite the effects being in the predicted direction.

Mediation Analyses

Next, we explored whether the differences between conditions on desire and satisfaction were mediated by self-determined reasons for engaging in sex (see total, direct, and indirect effects in Table 3). People in the sexual communal strength condition reported significantly more autonomous reasons for engaging in sex than those in the control condition (b = .27, SE = .10, t(508) = 2.69, p = .007, 95% CI[.07, .47]), and in turn, reported greater sexual desire *(*b = .91, SE = .07, t(506) = 13.33, p < .001, 95% CI[.78, 1.05]), sexual satisfaction *(*b = .70, SE = .05, t(493) = 14.16, p < .001, 95% CI[.60, .80]) and relationship satisfaction *(*b = .34, SE = .04, t(492) =

Table 2.

Mean level Differences Between Condition Groups on Outcomes

	SCS		USC		CON	
	M	*SD*	*M*	*SD*	*M*	*SD*
Sexual Desire	5.10	1.50	4.74	1.60	4.52	1.82
Sexual Satisfaction	5.56	0.10	5.24	0.10	5.39	0.09
Relationship Satisfaction	4.19	0.08	4.10	0.08	4.07	0.07
Autonomous Reasons	5.37	0.91	5.17	0.86	5.08	1.07
Controlled Reasons	3.04	1.27	3.25	1.31	2.96	1.31

Note. SCS = Sexual Communal Strength Condition, USC = Unmitigated Sexual Communion Condition, CON = Control Condition

Table 3.

Total, Direct and Indirect Effects for Mediation Model

Effects	Sexual Desire	Sexual Satisfaction	Relationship Satisfaction
USC (Reference group) vs. SCS			
Total Effect	.37[a](.19)[-.01, .75]	.31*(15)[.02,.59]	.10(.11)[.11, .32]
Direct Effect	.16(.17)[-.17, .49]	.12(.12)[-.11, .36]	.00(.10)[-.19, .20]
Indirect Effect (Autonomous)$_1$	**.18(.09)[.00, .36]**	.13(.07)[-.01, .27]	.07(.93)[-.00, .14]
Indirect Effect (Controlled)$_2$	.03(.03)[-.02, .09]	.03(.03)[-.03,.14]	.03(.03)[-.02, .09]
CON (Reference Group) vs. SCS			
Total Effect	.67***(.18)[.31, 1.03]	.18(.14)[-.10, .45]	.16(.10)[-.05, .37]
Direct Effect	.43**(.16)[.12, .74]	.04(.11)[-.18, .26]	.09(.10)[-.10, .28]
Indirect Effect (Autonomous)$_1$	**.25(.09)[.07, .45]**	**.17(.07)[.03, .31]**	**.09(.04)[.02, .17]**
Indirect Effect (Controlled)$_2$	-.01(.02)[-.06, .03]	-.03(.05)[-.11, .05]	-.02(.03)[-.08, .03]
CON (Reference Group) vs. USC			
Total Effect	.30[b](.18)[-.07, .66]	.13(.14)[-.40, .14]	-.06(.10)[-.15, .27]
Direct Effect	.27[c](.16)[-.04, .58]	-.09(.11)[-.31, .13]	.08(.10)[-.10, .27]
Indirect Effect (Autonomous)$_1$	.07(.09)[-.11, .26]	.04(.07)[-.10, .17]	.03(.03)[-.04, .10]
Indirect Effect (Controlled)$_2$	-.04(.03)[-.17, .00]	-.08(.04)[-.17, .00]	-.05(.03)[-.11, .00]

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are standard error terms; numbers inside brackets are upper and lower limits of 95% bias corrected confidence intervals based on 20,000 bootstrapping samples. SCS = Sexual Communal Strength Condition, USC = Unmitigated Sexual Communion Condition, CON = Control Condition, *p < .05, ** p < .01, *** p < .001, a = .057, b = .109, c = .091. Significant indirect effects are bolded.

7.93, $p < .001$, 95% CI[.25, .42]). Autonomous reasons for engaging in sex significantly mediated the differences between the sexual communal strength and control conditions on sexual desire (Indirect Effect =.25, 95% CI [.07, .45]), sexual satisfaction (Indirect Effect =.17, 95% CI [.03, .31])., and relationship satisfaction (Indirect Effect =.09, 95% CI [.02, .17]). See Figure 2 for a diagram of the mediation model.

People in the sexual communal strength condition also reported marginally more autonomous reasons for engaging in sex than those in the unmitigated sexual communion condition ($b = .20$, $SE = .11$, $t(508) = 1.85$, $p = .064$, 95% CI[-.01, .41]), and in turn, reported greater sexual desire *(*$b = .70$, $SE = .05$, $t(493) = 14.16$, $p < .001$, 95% CI[.60, .80]) but not sexual nor relationship satisfaction. Autonomous reasons for engaging in sex significantly mediated the differences between the sexual communal strength and unmitigated sexual communion condition on sexual desire (Indirect Effect =.17, 95% CI [.03, .31]).

People in the unmitigated sexual communion condition reported marginally more controlled reasons for engaging in sex than those in the control condition ($b = .25$, $SE = .14$, $t(506) = 1.79$, $p = .074$, 95% CI[-.02, .52]), and in turn, reported lower sexual desire ($b = -.16$, $SE = .05$, $t(506) = -3.19$, $p = .001$, 95% CI[-.26, -.06]), sexual satisfaction ($b = -.29$, $SE = .04$, $t(493) = -7.95$, $p < .001$, 95% CI[-.36, -.22]) and relationship satisfaction ($b = -.19$, $SE = .03$, $t(492) = -6.30$, $p < .001$, 95% CI[-.25, -.13]); however, the indirect effects were not significant.

Discussion

While being responsive to a partner's sexual needs is one way people maintain desire and satisfaction within romantic relationships, responsiveness in relationships can be beneficial or costly depending on whether it is paired with asserting one's own sexual needs. In the current experimental study, we tested the causal differences between sexual communal strength and

unmitigated sexual communion on desire and satisfaction and the mediating role of self-determined reasons for engaging in sex. People who were oriented toward being higher on both sexual responsiveness and sexual assertiveness (i.e., sexual communal strength condition) were more motivated to inherently enjoy and value sex (i.e., higher autonomous reasons for sex), and in turn, felt more sexually satisfied than people oriented toward being higher on sexual responsiveness but lower on sexual assertiveness (i.e., unmitigated sexual communion condition). In addition, relative to people who received no feedback (i.e., control condition), people in the sexual communal strength condition were more autonomously motivated to engage in sex and in turn, reported greater sexual desire, sexual satisfaction, and relationship satisfaction. In contrast, people in the unmitigated sexual communion condition felt more pressured and obligated to have sex (i.e., more controlled reasons for sex) relative to those in the control condition. However, engaging in sex for controlled reasons did not significantly account for differences in desire and satisfaction across the experimental conditions, suggesting that autonomous sexual motivation may be the more viable mechanism accounting for the causal associations.

Theoretical Contributions

By experimentally distinguishing the benefits of sexual communal strength from the costs of unmitigated sexual communion, this study uniquely contributes to the literature on sexual communal motivation. Although theory suggests that people higher in sexual communal strength and unmitigated sexual communion share responsive features but fundamentally differ on their capacity to be sexually assertive (Muise et al., 2023), there has been no empirical work up to this point capturing this theoretical nuance. Adopting an experimental design that held sexual responsiveness constant while manipulating the levels of sexual assertiveness aligned with the

theoretical distinctions in sexual communal motivation. These findings highlight the importance of balancing being responsive to a partner's sexual needs with asserting one's own sexual needs for sexual desire and sexual and relationship satisfaction. The current research also demonstrates that, in addition to individual differences in sexual communal motivation, sexual communal strength and unmitigated sexual communion can be construed as malleable motivational processes that are subject to manipulation. While past research has manipulated sexual communal strength and established causal associations with sexual and relationship satisfaction (Day et al., 2015), the current work suggests the unique value of manipulating both sexual communal strength and unmitigated sexual communion to delineate the boundaries of when being responsive to a partner's sexual needs comes at the expense of asserting one's own sexual needs.

The current work provides novel evidence supporting the mediating role of self-determined reasons for engaging in sex on the associations between sexual communal motivation and desire and satisfaction. The findings are consistent with past research demonstrating that people higher in sexual communal strength and unmitigated sexual communion report divergent associations with desire and satisfaction over time as a function of feeling autonomously motivated to have sex (Shoikhedbrod et al., 2023). The current study further establishes the casual link between sexual communal motivation and self-determined reasons for engaging in sex, which in turn, is associated with desire and satisfaction. Interestingly, only autonomous reasons for engaging in sex accounted for the differences between sexual communal strength condition and the unmitigated sexual communion and control conditions, respectively, on desire and satisfaction. It may be that orienting people to view themselves as a sexually responsive and assertive partner relative to a responsive partner lacking assertiveness or receiving no feedback

elicits internal sources of sexual motivation rooted in personally enjoying and finding meaning in sex rather than being influenced by externally motivated elements of pressure and obligation.

Limitations and Future Directions

The study is not without its limitations. The experimental design is limited in its use of a one-time false feedback manipulation in that it is not clear whether orienting people toward different types of sexual communal motivation would persist in the long-term. Expanding the sexual communal motivation manipulation into a scalable intervention that promotes sexual communal strength and attenuates unmitigated sexual communion and then tracking changes in desire and satisfaction over time would provide a more ecologically valid way of shifting people's sexual motivation in their relationship. Indeed, past research has shown that providing people in romantic relationships with brief psychoeducational materials on sexual motivation can promote relationship and sexual satisfaction over time (Muise et al., 2018). Additionally, given that one's own sexual communal motivation has been shown to influence partners' sexual and relationship outcomes (Impett et al., 2019; Muise & Impett, 2015; Shoikhedbrod et al., 2023), it is important for future experimental work to include both partners. Past research demonstrated that is possible to orient people to perceive their partner as sexually communal, which was associated with feeling more sexually and relationally satisfied (Balzarini et al., 2021).

It is important to also qualify that while sexual communal motivation was manipulated, self-determined reasons for engaging in sex were not. Additionally, self-determined reasons as mediators and desire and satisfaction as outcomes were assessed at the same time, confounding the temporal precedence needed to clearly establish mediation. The current findings could be extended with a manipulated mediation design (Pirlott & MacKinnon, 2016). By manipulating autonomous reasons for engaging in sex as a mediator, future research can further establish its

casual role in distinguishing the benefits of sexual communal strength from the costs of unmitigated sexual communion. While boosting autonomous sexual motivation among people higher in unmitigated sexual communion may buffer the negative outcomes they report, people higher in sexual communal strength may continue to report greater desire and satisfaction irrespective of whether autonomous reasons for engaging in sex are enhanced.

Another important consideration in future research is identifying when and for whom enhancing sexual communal strength and attenuating unmitigated sexual communion would be particularly important. For instance, among anxiously attached people who struggle with getting their needs for intimacy met, perceiving their partner as sexually responsive buffers them against the lower relationship quality and sexual satisfaction they typically report relative to people lower in attachment anxiety (Raposo & Muise, 2021). People with sexually communal partners are also buffered against lower relationship and sexual satisfaction when they have unmet sexual ideals (i.e., attributes they prefer in a sexual partner), such that they may value their partner being responsive to their needs despite not possessing their ideal attributes (Balzarini et al., 2021). For couples facing a major adjustment in their relationship that can strain desire and satisfaction, such as navigating the transition to parenthood, both partners can maintain higher sexual satisfaction when one partner is sexual responsive (Muise et al., 2017b). And with more pronounced issues such as clinically low levels of sexual desire or pain during sex, couples report less distress and more optimal personal, sexual, and relationship outcomes when partners are responsive to each other's sexual needs without neglecting their own sexual needs in the process (Hogue et al., 2019; Muise et al., 2017a, 2018). These findings highlight the potential value of tailoring sexual communal motivation interventions to various individual differences

and situations in which people would benefit from integrating greater sexual partner responsiveness with personal sexual need fulfillment.

The malleability of sexual communal motivation demonstrated in this experimental study may also pose valuable insights for clinical practice. The theoretical framework of balancing being responsive to a partner's sexual needs with asserting one's own sexual needs in a relationship can be applied to sex therapy through psychoeducation about these constructs as well as being embedded into existing therapeutic modalities. For instance, systems-based approaches to couples and sex therapy have advocated for the value of partners regulating their emotions and tolerating the uncertainty associated with effectively balancing responsiveness with assertiveness (Schnarch, 2009). Clinicians might also use cognitive-behavioral interventions to monitor and shift thoughts and behaviours that are consistent with being sexually communal while promoting sexual assertiveness through communication skills training (Jangi et al., 2023). Future research should look to further demonstrate the role of self-determined sexual motivation as a mechanism for change in promoting desire and satisfaction among couples presenting with sexual problems in therapy. There has also been a growing body of evidence in support of clinical health interventions informed by Self-Determination Theory targeting health-promoting behaviours (e.g., dieting, exercise) through supporting autonomous motivation (Teixeira et al., 2021), which have been successfully adapted to couples as well (Gorin et al., 2022). One important caveat to consider for clinical implications is that the current sample consisted of people in relationship with relatively high levels of desire and satisfaction whereas it may be more difficult to shift sexual motivation among more distressed and less satisfied couples. Replicating and extending these findings with a motivational intervention for couples coping with a sexual issue will allow clinicians and researchers to better understand how to optimize the

self-determined qualities of sexual communal motivation and promote sexual and relationship well-being.

Conclusion

In satisfying romantic relationships, sexual responsiveness plays a key role in maintaining sexual desire and sexual and relationship satisfaction, which contribute to overall health and quality of life (Diamond & Huebner, 2012). However, when being responsive to a partner's sexual needs comes at the expense of asserting one's own needs, sexual responsiveness may no longer provide the same benefits and can instead be costly to one's well-being. The current experimental study on sexual communal motivation demonstrated that being oriented toward both high sexual responsiveness and assertiveness led people to be more autonomously motivated to engage in sex and in turn to feel more desire and satisfied with their sex life and relationship relative to those oriented toward being sexually responsive but not assertive or received no feedback at all. By capturing the process through which people balance being responsive to their partner's needs with asserting their own sexual needs in a self-determined manner, these findings can inform future interventions targeting sexual motivation to promote need fulfillment between partners, and in turn, desire and satisfaction.

Compliance with Ethical Standards

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for review (REB e2021- 135). Informed consent was obtained from all individual participants included in the study

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Figures

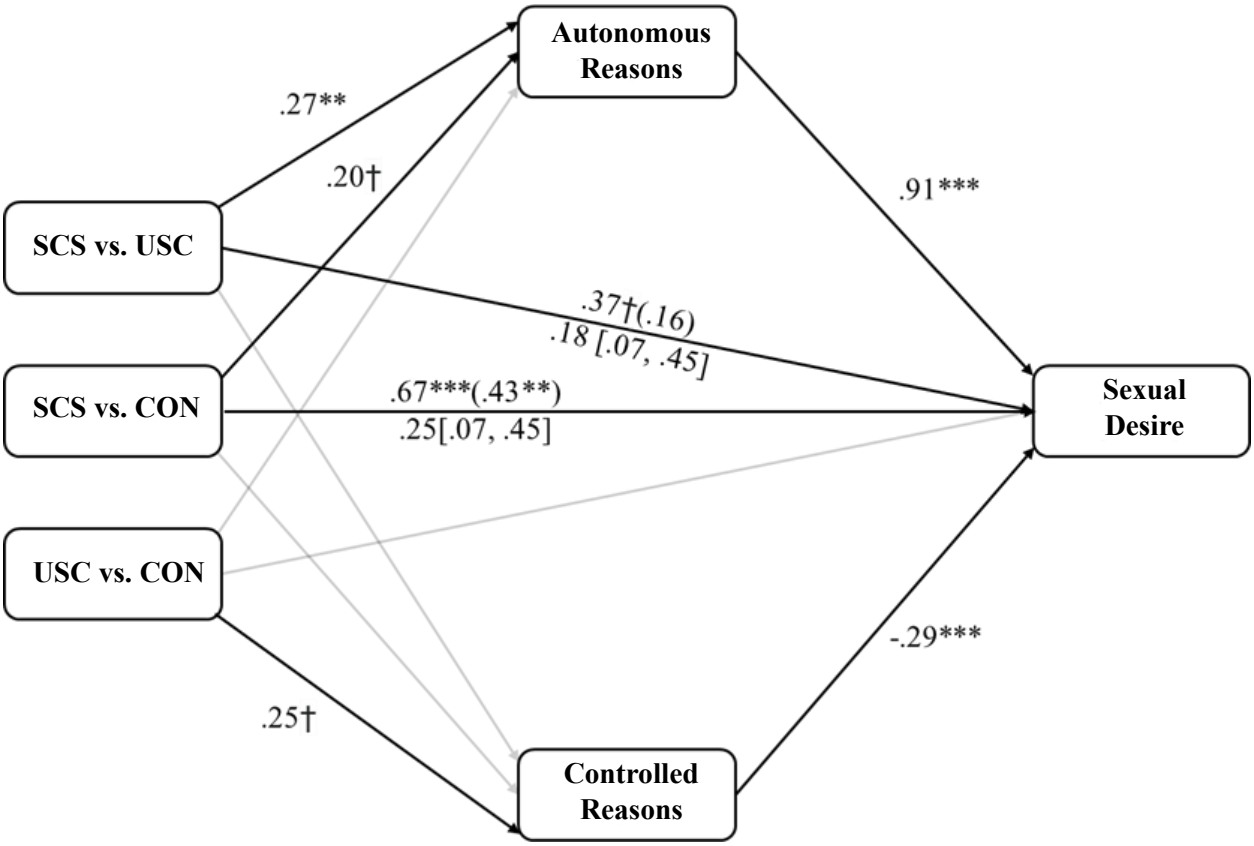
Figure 1.

Bar Graphs of Differences Between Conditions on Outcomes

Note. Given that outcome variables were measured on different scales, the variables were standardized with z scores for comparison. The significant differences highlighted in brackets refer to total effects in the PROCESS models where the experimental condition is coded as a multicategorical variable. SCS = Sexual Communal Strength Condition, USC = Unmitigated Sexual Communion Condition, CON = Control Condition, $p < .05$ = *, $p < .10$ = †

Figure 2.

Mediation Model for Sexual Desire



Note. Only significant paths are specified in the model as black lines, grey lines represent nonsignificant paths. $p < .05$ = *, $p < .10$ = †

Supplementary Materials for Paper 2

Sexual Communal Motivation Manipulation Materials

Sexual Communal Strength Condition

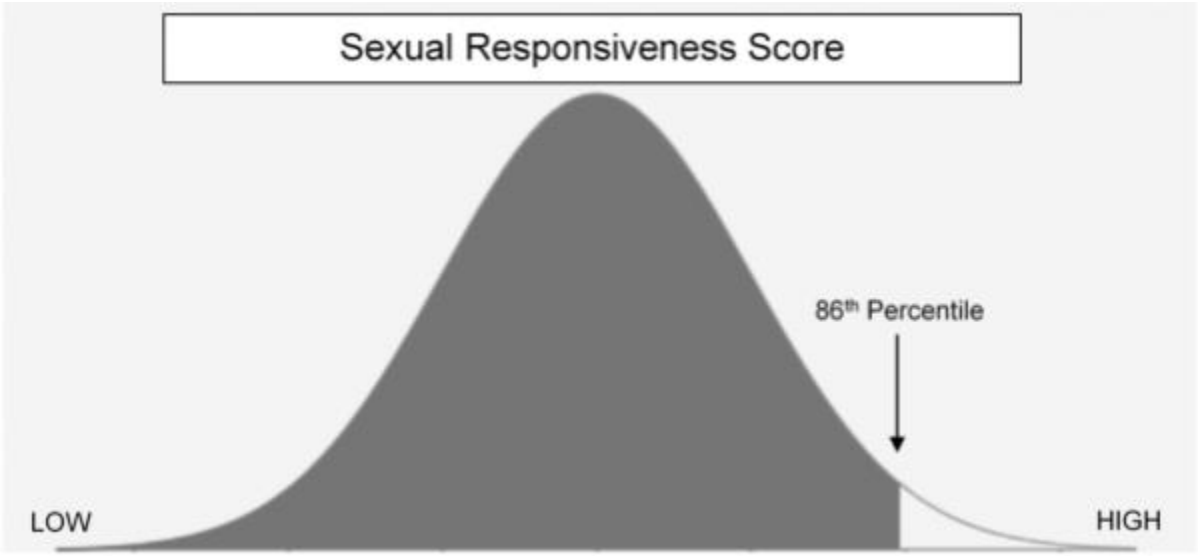
Based on the questionnaires you completed about yourself and your partner, we have used the Partner Responsiveness and Assertiveness Model to calculate some statistics on your relationship with your partner. This information is based on our past research on sexual and relationship motives among couples.

Our algorithm indicated that you are **responsive to your partner's needs during sex.** This suggests that you are generally motivated to learn about and attend to your partner's sexual needs. In fact, in comparison to other people who have taken this questionnaire, **your score was high: 86%** (see diagram below). This means that only 14% of individuals who completed similar questions reported being more responsive to their partners' sexual needs than you.

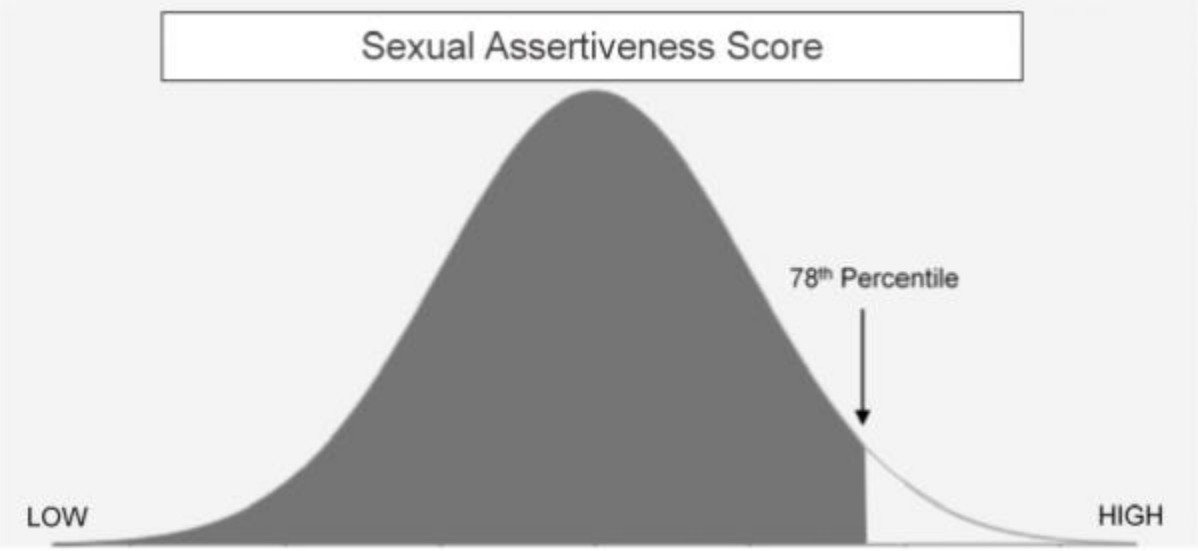
Our algorithm also indicated that you are **assertive with your own needs during sex.** This suggests that at times you effectively value and communicate your sexual needs to your partner. In fact, in comparison to other people who have taken this questionnaire, **your score was high: 78%** (see diagram below). This means that only 22% of individuals who completed similar questions reported being more assertive with their sexual needs than you.

According to our model, your high responsiveness and high assertiveness scores suggest that you are **responsive to your partner's sexual needs without necessarily sacrificing your own sexual needs.**

Below are the results for this test. Please note there is one more section of the survey to complete—you may begin the final questionnaire whenever are finished reading the results.



This is where you fall among others who have taken our survey on being motivated to meet your partner's sexual needs



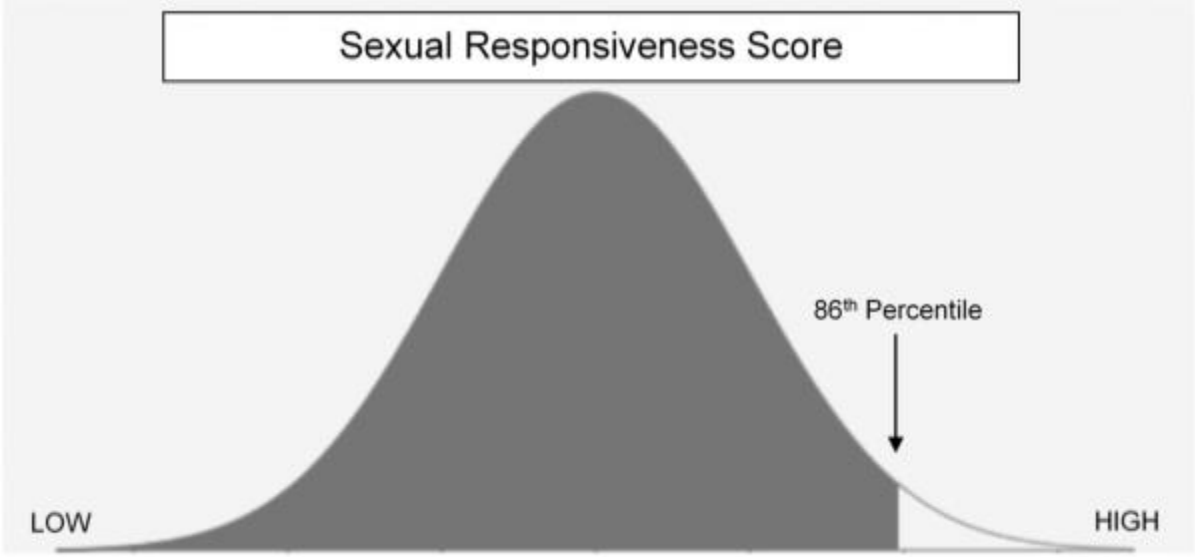
Unmitigated Sexual Communion Condition

Based on the questionnaires you completed about yourself and your partner, we have used the Partner Responsiveness and Assertiveness Model to calculate some statistics on your relationship with your partner. This information is based on our past research on sexual and relationship motives among couples.

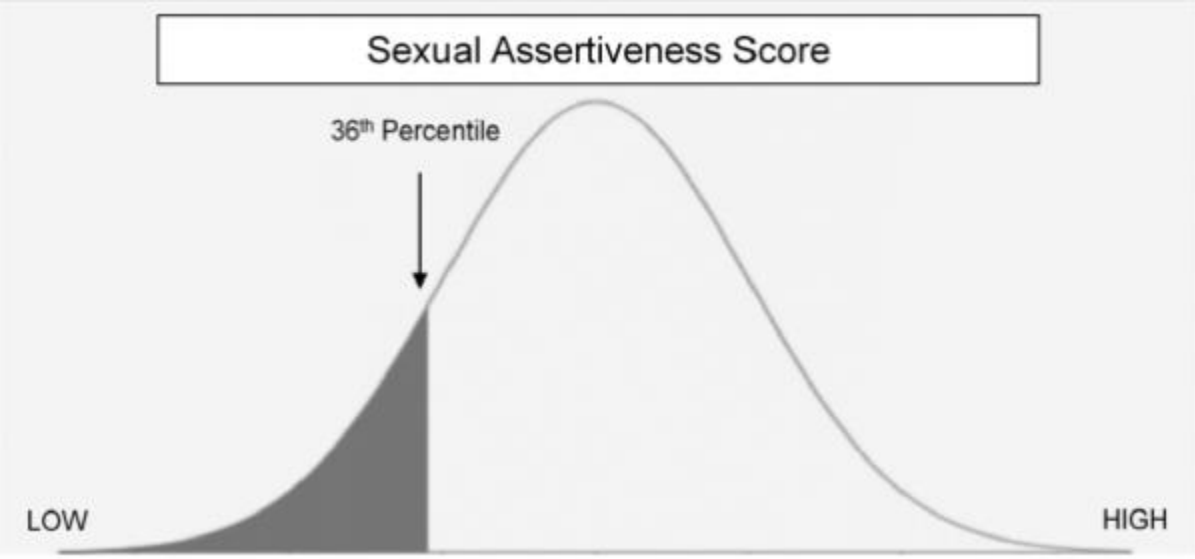
Our algorithm indicated that you are **responsive to your partner's needs during sex.** This suggests that you are generally motivated to learn about and attend to your partner's sexual needs. In fact, in comparison to other people who have taken this questionnaire, **your score was high: 86%** (see diagram below). This means that only 14% of individuals who completed similar questions reported being more responsive to their partners' sexual needs than you.

Our algorithm also indicated that you are **not very assertive with your own needs during sex.** This suggests that at times you struggle to value and communicate your own sexual needs to your partner. In fact, in comparison to other people who have taken this questionnaire, **your score was low: 36%** (see diagram below). This means that 64% of individuals who completed similar questions reported being more assertive to their partners' sexual needs than you.

According to our model, your high responsiveness and low assertiveness scores suggest that you are **responsive to your partner's sexual needs, but might also sacrifice your own sexual needs.**



This is where you fall among others who have taken our survey on being motivated to meet your partner's sexual needs



This is where you fall among others who have taken our survey on how much you voice your own sexual needs

Moderation Analyses

We conducted exploratory moderation analyses to examine whether relationship duration or gender interacted with condition to predict sexual desire, sexual satisfaction and relationship satisfaction after the manipulation. There were no significant moderations by relationship duration. Out of 9 possible interactions between gender and condition, there was a single significant moderation. The difference between the sexual communal strength and unmitigated

sexual communion conditions on sexual satisfaction was moderated by gender (b = .91, SE = .36, t = 2.56, p = .011, 95% CI [.21, 1.61]). Men in the sexual communal strength condition reported significantly higher sexual satisfaction than men in the unmitigated sexual communion condition (b = .93, SE = .31, t = 2.95, p =.003, 95% CI [1.55, .31]) whereas the difference between conditions on sexual satisfaction was not significant for women (b = .02, SE = .31, t = 2.95, p =.003, 95% CI [.34, -.31]).

When a Partner Supports Your Sexual Autonomy: Perceived Partner Sexual Autonomy Support, Need Fulfillment, and Satisfaction in Romantic relationships

Ariel Shoikhedbrod[1], Cheryl Harasymchuk[2], Emily A. Impett[3], & Amy Muise[1]

[1]Department of Psychology, York University, Canada

[2]Department of Psychology, Carleton University, Canada

[3]Department of Psychology, University of Toronto Mississauga, Canada

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Abstract

Sexual need fulfillment is central to well-being in romantic relationships. Self-Determination Theory suggests that perceiving a romantic partner as autonomously supportive is linked with greater well-being through supporting the fulfillment of basic psychological needs. The current research examines whether there are unique associations with need fulfillment and sexual and relationship satisfaction when people perceive their partner as autonomously supportive in the sexual domain. Across three multi-method studies (*N*=786), we developed a measure of perceived partner sexual autonomy support and demonstrated that perceiving sexual autonomy support from a partner in general, during sex, and over time were associated with greater sexual need fulfillment as well as sexual and relationship satisfaction for both partners over and above the association with general perceived autonomy support and perceived partner responsiveness during sex. Sexual need fulfillment also accounted for the positive associations between perceived partner sexual autonomy support and satisfaction across studies.

Keywords: perceived partner sexual autonomy support, romantic relationships, sexuality, need fulfillment, perceived partner sexual responsiveness.

When a Partner Supports your Sexual Autonomy: Perceived Partner Sexual Autonomy Support, Need Fulfillment, and Satisfaction in Romantic Relationships

Support provision in the form of being responsive to a romantic partner's needs has long been implicated in close relationship functioning (Reis et al., 2004), with emerging work extending these need-supportive functions to the sexual domain of relationships (for a review see Muise et al., 2023). In fact, the supportive processes involved in couples' sexual interactions can serve as key mechanisms through which relationships are associated with overall health and well-being (for a review see Diamond & Huebner, 2012). A central aspect of sexual need fulfillment within relationships is feeling that one can authentically express their sexual needs (Sprecher & Cate, 2004), which is more likely when a person perceives their partner as supportive of their needs (Merwin & Rosen, 2020). In the current research, we draw on Self-Determination Theory (Ryan & Deci, 2017) to understand the unique role that *perceived partner sexual autonomy support*—perceiving a partner as supportive of one's ability to freely choose and act on their sexual preferences and interests— serves for fulfilling sexual needs and feeling satisfied within romantic relationships.

Need Fulfillment and Perceived Autonomy Support in Relationships

According to Self-Determination Theory, well-being is predicated on the fulfillment of three basic psychological needs, the need for autonomy (i.e., experiencing a sense of psychological agency and choice), the need for competence (i.e., experiencing a sense of effectiveness and mastery), and the need for relatedness (i.e., feeling close and connected to others; Ryan & Deci, 2017). Being in a satisfying romantic relationship is one way people fulfill their basic psychological needs (La Guardia & Patrick, 2008). Although relationship science has typically emphasized the need for relatedness and feeling cared for by a romantic partner, there is

increasing evidence in support of integrating needs for autonomy and competence within one's relationship as well (Hadden & Girme, 2020). Across cross-sectional, daily experience, and dyadic studies, overall need fulfillment as well as the fulfillment of each independent need was associated with greater individual well-being, felt security, and relationship quality for both partners (Patrick et al., 2007).

Self-Determination Theory further suggests that perceiving a partner as autonomously supportive—feeling that a partner acknowledges their perspective, provides choice and options, and encourages self-initiation—can promote need fulfillment within relationships (La Guardia & Patrick, 2008). Past work demonstrates that both perceived and enacted autonomy support uniquely contributing to greater relationship quality (Carbonneau et al., 2019; Deci et al., 2006), and that perceptions of support from a partner tend to be more reliable at predicting key relationship outcomes than the actual support provided (Reis et al., 2004). In hypothetical scenarios and observed conversations between couples, autonomy support was perceived by participants and independent coders as more effective than controlling strategies (i.e., eliciting pressure and thwarting autonomy) in promoting disclosure from a romantic partner and was associated with greater felt security and relationship satisfaction (Kil et al., 2021). Research on goal pursuit and need fulfillment among couples has shown that people who perceive their partner as autonomously supportive report greater progress on a shared relationship goal (e.g., engaging in exercise together) because they construe the goal progress as fulfilling their basic psychological needs (Chua et al., 2021). The benefits of perceived autonomy support in relationships have been demonstrated across various health contexts including goal progress for dieting, exercise, and smoking cessation (Labuda et al., 2023; Ng et al., 2014; Williams et al., 2006) as well as in clinical health populations such as people coping with chronic pain and their

partners (e.g., Martire et al., 2013; Uysal et al., 2017). One area of health that may be especially sensitive to the supportive elements of relationships is the sexual domain (Diamond & Huebner, 2012), in which partners are often motivated to support one another in fulfilling their sexual needs (Muise et al., 2023).

Perceived Autonomy Support in the Context of Sexuality

Although no work to our knowledge has examined perceived partner autonomy support in the sexual domain, a small but growing body of research suggests that perceived partner sexual responsiveness (i.e., feeling sexually understood, validated, and cared for by a partner) is associated with sexual and relationship satisfaction (e.g., Balzarini et al., 2021; Muise et al., 2013; Muise & Impett, 2015; Raposo & Muise, 2021; for a review see Muise et al., 2023). Notwithstanding the importance of perceiving a partner as responsive to one's sexual needs, there may be unique benefits associated with perceived partner sexual autonomy support. For instance, people may feel empowered to assert their own needs when they notice a partner acknowledging their sexual preferences and interests, providing them with sexual options to choose from, and encouraging them to express and pursue their sexual interests and desires. Feeling autonomously supported in the sexual domain might allow for the expression of sexual preferences and interests that more closely align with one's authentic self (La Guardia & Patrick, 2008).

The existing research applying Self-Determination Theory to sexuality has largely been focused on the motivational processes behind why people engage in sex, such as for autonomous reasons (i.e., deriving intrinsic pleasure and meaning from sex) versus controlled reasons (i.e., feeling pressured or obligated to have sex; e.g., Gravel et al., 2020). Across different methods (i.e., cross-sectional, longitudinal, daily experiences) and relationship types (i.e., causal,

established, consensually non-monogamous), research has shown that people who endorsed more self-determined reasons for engaging in sex (i.e., more autonomous and less controlled) reported better sexual functioning, less sexual distress, and greater sexual satisfaction and desire, in addition to greater personal and relational well-being (Brunell & Webster, 2013; Gravel et al., 2016, 2018, 2020; Shoikhedbrod et al., 2023; Wood et al., 2018, 2021). Dyadic studies have further demonstrated that the fulfillment of sexual needs for autonomy, competence, and relatedness within relationships accounts for why engaging in sex for self-determined reasons is associated with sexual, relational, and personal well-being for both partners (Brunell & Webster, 2013; Wood et al., 2021). These findings suggest that the satisfaction people derive from feeling sexually autonomous in their relationship is a dyadic process through which both partners support each other's sexual need fulfilment.

Sexuality research has historically alluded to the need for sexual autonomy as a unifying construct for sexual functioning and satisfaction (Weinberg et al., 1983). Sexual autonomy may serve a critical function in allowing people to pursue the sexual experiences they desire as well as decline undesired sexual requests. The ability to exercise one's sexual autonomy within a romantic relationship, however, is inherently contingent on another person, at least for partnered sexual experiences. Studies have shown that women are more likely to actively refuse sexual initiations when they perceive their partners will not react negatively (Morokoff et al., 1997), and having a partner who is understanding about sexual disinterest is associated with greater sexual and relationship satisfaction (Muise et al., 2017). While Self-Determination Theory suggests there are individual differences in how autonomous people feel across situations with others (Prentice et al., 2019), autonomy can also be understood as a process that varies within people and is expressed differently as a function of how autonomously supported by others one feels in

a particular situation or moment (La Gaurdia & Ryan, 2007). This variability should extend to the sexual domain where perceptions of a partner's sexual responsiveness and a person's own sexual need fulfillment have been shown to vary between and within people in daily life (Brunell & Webster, 2013; Muise & Impett, 2015).

Feeling autonomously supported allows people to pursue opportunities within their social environment that directly fulfill their need for autonomy as well as indirectly seek out ways of fulfilling competence and relatedness needs on their own terms (Deci & Ryan, 2014). In this sense, perceived autonomy support enhances well-being by fulfilling all three basic psychological needs (Ryan & Deci, 2017). Past research has shown that as people exercise greater sexual autonomy within a supportive relationship, they feel more sexually confident and connected with a partner as well, contributing to their overall sense of sexual need fulfillment (Brunell & Webster, 2013; Smith, 2007; Wood et al., 2021). The process of fulfilling one's sexual needs from perceiving a partner as autonomously supportive would allow both partners to feel satisfied with their sex life as well as their relationship more broadly. Self-Determination Theory can offer an interpersonal framework for understanding how perceiving a partner as autonomously supportive in the sexual domain can contribute to sexual and relationship satisfaction through fulfilling sexual needs in romantic relationships.

Overview of Current Research

The aim of the current research was to examine the role of perceived partner sexual autonomy support in romantic relationships. Although past work has demonstrated that perceiving a romantic partner as autonomously supportive serves key need-fulfilling functions for well-being (e.g., La Guardia & Patrick, 2008), no research to our knowledge has examined perceived autonomy support from a partner in the specific domain of sexuality. Our first aim was

to develop and validate a novel measure of perceived partner sexual autonomy support. We examined perceived partner sexual autonomy support both as an individual difference that varies between people cross-sectionally and over time as well as a process that varies within people in daily life and when couples engage in sex. Our second aim was to test our predictions that perceiving sexual autonomy support from a romantic partner will be associated with greater sexual and relationship satisfaction for both partners, and that these associations will be mediated by sexual need fulfillment. To demonstrate the unique elements of perceiving a partner as autonomously supportive in the sexual domain, we also tested the effects of perceived partner sexual autonomy support on satisfaction above and beyond general perceived autonomy support in relationships and perceived partner sexual responsiveness. We tested these predictions in three studies using cross-sectional, dyadic, daily diary, and longitudinal methods. All the data and syntax are available to access on the Open Science Framework (https://osf.io/3gewx/?view_only=37df64e8099641b590bc335477d5beb6).

Study 1

The main objective of Study 1 was to validate a novel measure of Perceived Partner Sexual Autonomy Support (PPSAS) in a cross-sectional sample of people in romantic relationships. Using Confirmatory Factor Analysis (CFA), we expected a one-factor model to present a good fit to the data. To establish convergent validity, we examined whether the PPSAS was associated with more autonomous and less controlled reasons for engaging in sex as well as greater sexual need fulfillment for autonomy, competence, and relatedness. For predictive validity, we examined whether PPSAS was associated with greater sexual and relationship satisfaction. For incremental validity, we tested whether PPSAS was associated with satisfaction

over and above the effects of general perceived autonomy support (i.e., how autonomously supported people feel across their interpersonal relationships).

Participants and Procedure

Participants were recruited through Prolific Academic, an online crowdsourcing platform. Eligible participants were sexually active, in a romantic relationship for at least six months, and 18 years of age or older. Based on sample size recommendations approximating N=250 for stable correlation estimates (Schönbrodt & Perugini, 2013) and N=150 for CFA (Muthén & Muthén, 2002), we recruited 267 participants, oversampling to account for potential data exclusions. We excluded participants who did not meet the eligibility criteria (n=4), provide consent (n=1), demonstrate proficiency with English (n=12) or pass attention checks (n=2). The final sample consisted of 248 participants. A sensitivity power analysis using G*Power (Faul et al., 2007) with α = .05 showed that we had 80% power to detect a small to medium effect (f^2=.039). Participant demographics are reported in Table 1. After confirming their eligibility and providing informed consent, participants completed a 25-minute online survey and were compensated £2.08 ($2.90 USD, $3.62 CAD).

Measures

Perceived partner sexual autonomy support was measured with an adapted version of the Important Other Climate Questionnaire (Williams et al., 2006). The wording of the original items measuring perceived autonomy support from important others for engaging in health behaviors was adjusted to reflect perceiving autonomously supportive features of a romantic partner within the specific context of their sexual relationship. Participants responded to six

Table 1

Comparison of Sample Characteristics Across Studies

Characteristic	Study 1		Study 2		Study 3	
	M or *n*	*SD* or %	*M* or *n*	*SD* or %	*M* or *n*	*SD* or %
Age (years)	32.2	10.3	32.6	7.5	32	9.1
Relationship duration (years)	8.2	7.9	7.8	5.1	8.0	7.0
Race						
White	85.5		70.7		63.1	
Black	1.2		0.7		4.5	
Asian	1.6		16.0		16.0	
Hispanic	0.0		1.7		3.3	
Multi-racial/Cultural	0.4		7.1		6.6	
Identities not listed	7.3		3.8		6.5	
Relationship status						
Dating	24.2		21.1		2.5	
Cohabitating	23.8		22.8		25.0	
Common Law	5.2		29.6		22.1	
Married	40.3		48.3		48.4	
Status not listed	1.2		0.0		2.0	
Sexual orientation						
Bisexual	8.9		8.2		16.8	
Lesbian/gay	1.2		6.5		4.5	
Heterosexual	84.7		82.7		67.2	
Orientation not listed	6.4		1.4		11.7	
Gender						
Man	39.1		47.6		44.7	
Woman	59.3		50.7		49.6	
Non-binary	.4		.3		4.5	
Gender not listed	1.2		1.3		.8	

Note. Percentages may not add up to 100% due to a small amount of missing data. Categories are collapsed when applicable to enable comparisons across studies.

items (e.g., “My partner provides me choices and options sexually”, “I feel sexually understood by my partner”, “My partner conveys confidence in my sexual abilities”, “My partner encourages me to ask questions about our sex life”, “My partner listens to how I would like to do things sexually”, and “My partner tries to understand how I see things about sex before suggesting a new way to do things”) on a 7-point scale (1=*strongly disagree*, 7=*strongly agree*). We use these items to confirm the final measure below.

Sexual need fulfillment was measured with an adapted version of the Need Satisfaction-Relationship Domain Scale (Brunell & Webster, 2013; La Guardia et al., 2000). Participants responded to three items each for autonomy sexual need fulfillment (e.g., “When I engage in sexual activity with my current partner…I feel free to be who I am”; M=5.90, SD=1.09; α=.70 , ω=.70), sexual competence need fulfillment (e.g., “…I feel very capable and effective”; M=5.68, SD=1.24; α=.80, ω=.80) and sexual relatedness need fulfilment (e.g., “…I feel a lot of closeness and intimacy”; M=6.10, SD=1.14; α=.85, ω=.85). All nine items (M=5.90, SD=1.03; α=.90, ω=.90) were measured on a 7-point scale (1=*Not at all true*, 7=*Very true*).

Sexual satisfaction was measured with the Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1995). Participants’ sexual satisfaction with their partner was rated with five bipolar items on a 7-point scale (e.g., My sex life is “very bad” to “very good”; M=5.75, SD=1.28; α=.96, ω=.96).

Relationship satisfaction was measured with the relationship satisfaction subscale from the Perceived Relationship Quality Components Inventory (PRQC; Fletcher et al., 2000), which consisted of three items (e.g., “How satisfied are you with your relationship?”; M=5.87, SD=1.04; α=.94, ω=.94) rated on a 7-point scale (1=*Not at all*, 7=*Extremely*).

Self-determined sexual motivation was measured with the Sexual Motivation Scale (SMS; Gravel et al., 2016). Participants rated the extent to which they were motivated to engage in sex for ***autonomous reasons*** (e.g., "Because sex is exciting"; 12 items; *M*=5.33, *SD*=1.22; α=.94, ω=.94) and ***controlled reasons*** (e.g., "To prove to myself that I am a good lover"; 12 items; *M*=2.62, *SD*=1.12; α=.88, ω=.82), on a 7-point scale (1=*Does not correspond at all*, 7=*Corresponds completely*).

General perceived autonomy support was measured with the autonomy support subscale of the Interpersonal Behaviours Questionnaire (Rocchi et al., 2017). Participants responded to four items (e.g., "The people in my life support the choices that I make for myself"; *M*=5.64, *SD*=1.05; α=.90, ω=.90) on a 7-point Likert scale (1=*Do not agree*, 7=*Completely agree*).

Results

Confirmatory Factor Analysis

We performed CFA with maximum likelihood estimation using the lavaan package in R to confirm the one-factor structure of the PPSAS based on our pre-registered analytic plan (https://osf.io/tqbc9/?view_only=c566ff015d85401b9a177126c4b7502d). Given that we adapted an existing measure of perceived autonomy support, our primary goal for conducting a CFA was to confirm the factor structure of the items in this novel context of perceiving a partner as autonomously supportive in the sexual domain. We evaluated model fit using standard fit criteria including the Comparative Fit Index (CFI) ≥ 0.90, Tucker-Lewis Index (TFI) ≥ 0.90, Root Mean Square Error of Approximation (RMSEA) ≤ 0.06, and a standardized root mean square residual (SRMR) ≤ 0.08 (Hu & Bentler, 1999). The 6-item one-factor model for the PPSAS items did not fit the data well based on the robust fit indices ($\chi 2(15)=494.03$, $p<.001$, CFI=0.96, TFI=0.93,

RMSEA=0.12 CI 90% [0.07, 0.17], SRMR=0.04). The factor loadings ranged from 0.66 and 0.87 (see Table 2). The six-item scale had acceptable reliability estimates (α=0.89, ω=.89).

Recent theoretical developments in the measurement of autonomy support suggest that commonly used measures of perceived autonomy support in the literature tend to capture need support more generally, often conflating autonomously supportive elements with competence support and relatedness support (Rocchi et al., 2017). After examining the item wording of the PPSAS, we identified two items that appear more theoretically consistent with perceiving sexual competence support ("My partner conveys confidence in my sexual abilities") and sexual relatedness support ("I feel sexually understood by my partner") rather than sexual autonomy support from a partner. For scale purification purposes (Wieland et al., 2017), we decided to omit the two items and perform a CFA on the remaining four items to determine whether doing so would improve the fit of the proposed one-factor model. The 4-item one factor model fit the data well (χ2(6)=228.60, p<.001, CFI=0.99, TFI=0.99, RMSEA=0.05, CI 90% [0.00, 0.19], SRMR=0.02). The factor loadings ranged from 0.69 and 0.85 (see Table 2). The abbreviated scale also demonstrated acceptable reliability estimates (α=0.84, ω=.84). A chi-square difference test further confirmed that the four-item PPSAS model fit the data significantly better than the six-item model (χ^2 (7)=28.73, p<.001). The four-item PPSAS (*M*=5.23, *SD*=1.23) is the final measure.

Measurement Invariance

We tested whether the PPSAS was invariant (equivalent) across gender (men versus women) to ensure that tests of group differences between men and women were valid, rather than due to scale related artifacts (Chen, 2007). We used the semTools package in R to test

Table 2.

Factor Loadings of the PPSAS

	6-item Scale	4-Item Scale
Items	f_1	f_1
1. My partner provides me choices and options sexually.	0.78	0.69
2. I feel sexually understood by my partner.	0.87	—
3. My partner conveys confidence in my sexual abilities	0.70	—
4. My partner encourages me to ask questions about our sex life	0.74	0.76
5. My partner listens to how I would like to do things sexually	0.81	0.85
6. My partner tries to understand how I see things about sex before suggesting a new way to do things.	0.66	0.72

measurement invariance by gender to determine whether the one-factor PPSAS model applies equally to both men and women. A CFI decrease of ≤ 0.01 from less constrained to more constrained models would indicate evidence of measurement invariance between nested models (Cheung & Rensvold, 2002). We found evidence for three levels of measurement invariance across participant gender—configural (construct), metric (factor loading), and scalar (item intercept)—indicating that men's and women's means on the PPSAS can be compared (see Table 3). Men and women did not significantly differ in perceived partner sexual autonomy support (b = 0.03, SE = .16, $t(235) = 0.16$, p = .871, 95% CI[-.29, .34]).

Convergent Validity

Next, we examined the associations between PPSAS, sexual motivation and sexual need fulfillment. The bivariate correlations among all study variables are shown in Table 4. As expected, the PPSAS was associated with more autonomous reasons (r =. 31, p <.001) and less controlled reasons (r=-.28, p <.001) for engaging in sex. The PPSAS was also positively associated with overall sexual need fulfillment (r =. 61, p <.001) as well as with each sexual need for autonomy (r =. 60, p <.001), competence (r =. 46, p <.001), and relatedness (r =. 57, p <.001). Partial correlations further revealed that the PPSAS was positively associated with fulfillment of sexual autonomy (r =. 32, p <.001) and sexual relatedness (r =. 25, p <.001) but not sexual competence (r=-.00, p=.949). For additional analyses, we also tested the associations between the PPSAS and other measures of sexual motivation (i.e., sexual communal strength, unmitigated communion, sexual desire) and relationship processes (i.e., relationship need fulfillment, attachment) to further established convergent validity (see Online Supplementary Materials; OSM).

Table 3

Measurement Invariances by Gender in Study 1

	$\chi 2$(df)	RMSEA	CFI	ΔCFI
Configural	6.895(4)	0.077	0.992	–
Metric	8.905(7)	0.047	0.995	0.003
Vector	12.207(10)	0.030	0.994	0.001

Table 4

Bivariate Correlations in Study 1

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Perceived Partner Sexual Autonomy Support	—											
2. Perceived General Autonomy Support	.29***	—										
3. Autonomous Reasons for Engaging in Sex	.31***	.20*	—									
4. Controlled Reasons for Engaging in Sex	-.28***	-.25***	-.17**	—								
5. Total Sexual Need Fulfillment	.61***	.45***	.40***	-.53***	—							
6. Autonomy Sexual Need Fulfillment	.60***	.46***	.31***	-.47***	.88***	—						
7. Competence Sexual Need Fulfillment	.46***	.36***	.41***	-.47***	.89***	.67***	—					
8. Relatedness Sexual Need Fulfillment	.57***	.38***	.33***	-.46***	.89***	.69***	.68***	—				
9. Sexual Satisfaction	.58***	.34***	.41***	-.39***	.69***	.57***	.61***	.65***	—			
10. Relationship Satisfaction	.49***	.35***	.29***	-.37***	.58***	.50***	.49***	.56***	.68***	—		
11. Gender (W =1, M = 2)	-.01	-.07	.15*	.09	-.08	-.10	-.05	-.06	.03	.12	—	
12. Relationship Length	-.07	.02	.06	.03	-.05	-.07	-.02	-.05	-.02	.02	-.14	—

Note. * p<.05, ** p<.01, *** p<.001.

Convergent Validity

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Predictive and Incremental Validity

In terms of PPSAS predicting broader sexual and relationship outcomes, PPSAS was positively associated with sexual (r=.58, p<.001) and relationship satisfaction (r= .49, p<.001) as expected. Multiple linear regression models also demonstrated that PPSAS was uniquely associated with sexual and relationship satisfaction above and beyond general autonomy support perceived across interpersonal relationships. After controlling for general perceived autonomy support, people who reported perceiving more sexual autonomy support from their partner than others endorsed greater sexual (b=.55, SE=.06, t(245)=9.96, p<.001, 95% CI[.44, .66]) and

relationship (b=.36, SE=.05, t(245)=7.46, p<.001, 95% CI[.26, .45]) satisfaction.[6] Although Study 1 consisted of cross-sectional data, we tested and found preliminary support for our predicted indirect effects of PPSAS on sexual and relationship satisfaction via sexual need fulfillment (see OSM). We also conducted exploratory moderation analyses by gender and relationship duration. Largely, the effects were consistent for people in shorter and longer relationships and for men and women (see OSM).

Brief Discussion

The findings from Study 1 provided an initial validation of a 4-item Perceived Partner Sexual Autonomy Support Scale. Consistent with previous research applying Self-Determination Theory to sexuality (e.g., Brunell & Webster, 2013), people who perceived their partner as more (vs. less) autonomously supportive in the sexual domain reported greater sexual need fulfilment (across autonomy, competence, and relatedness needs) as well as more self-determined reasons for engaging in sex. People who reported greater perceived partner sexual autonomy support also reported experiencing greater sexual and relationship satisfaction, even after accounting for general perceived autonomy support across one's interpersonal relationships.

Study 2

In a 21-day daily experience study of both members of couples, we sought to extend the findings from Study 1 to the sexual experiences of couples in their daily lives. While Study 1 identified individual differences in overall perceptions of partner sexual autonomy support, in the current study we aimed to capture within-person fluctuations of perceived partner sexual

[6] Although we pre-registered analyses for the main effects of PPSAS on subjective general well-being and life satisfaction, we primarily focused on sexual and relational outcomes across studies. The associations between PPSAS and general well-being and life satisfaction can instead be found on the OSM.

autonomy support specifically on days when couples had sex. We examined whether perceived partner sexual autonomy support during sex is uniquely associated with daily sexual need fulfillment as well as sexual and relationship satisfaction after accounting for perceived partner sexual responsiveness during sex. We sought to test our proposed mediation model in a daily context by examining whether people who perceive more sexual autonomy support from a partner during sex endorse greater sexual need fulfillment, and in turn, report greater sexual and relationship satisfaction on those days.

Participants and Procedure

Couples were recruited using online advertisements (e.g., Reddit) across Canada as part of a larger study. To be eligible, both partners had to agree to participate, be 18 years or older, fluent in English, in a relationship with each other for at least two years, and spend five out of seven nights together per week. We aimed to recruit at least 150 couples to account for attrition. The final sample consisted of 284 participants (*N*=142 couples). Participant demographics are listed in Table 1. A sensitivity analysis using G*Power (Faul et al., 2007), indicated that a sample of 142 couples (N=284) accommodated the detection of a minimum unstandardized slope of .58 for the association between perceived partner autonomy support during sex and daily sexual satisfaction, with 80% power and α=.05. This analysis corrected the sample size for non-independence in the data by taking the number of repeated assessments within partners (i.e., 21 days) and the observed standard deviations of both variables into account (ICC= .37; see Wiley & Wiley, 2019).

Couples were pre-screened over the phone to confirm their eligibility. After providing their informed consent, each member of the couple was provided with an individualized link to complete a 60-minute baseline survey. Starting on the following day, each partner was sent a 15-

minute survey for 21 consecutive days, which they were instructed to complete separately before bed each night. Participants completed an average of 19.43 (out of 21) daily entries. While couples responded to daily surveys, the current analyses focus on days when couples had sex as we only assessed PPSAS on sex days. Three months after completing their final daily survey, participants were sent a 20-minute follow up survey. Each partner was paid up to $65 CAD in Amazon gift cards for participating with payment prorated depending on the number of daily surveys completed and the completion of the follow-up survey.

Measures

For the daily measures, we used brief versions of scales with only one to five items to increase efficiency and minimize participant attrition (Matthews et al., 2022). The items at the daily level were measured on 7-point-scales. ***Sexual satisfaction*** at the daily level was measured with the five-item GMSEX (M=4.94, SD=1.59). ***Relationship satisfaction*** at the daily level was measured with a single item, "How satisfied were you with your relationship today?" (M=5.99, SD=1.17, 1=*Not at all*, 7= *Extremely*). ***Perceived partner sexual autonomy support*** was measured only on sex days with two items ("My partner listened to how I would like to do things sexually", "My partner provided me choices and options sexually"; M=5.63, SD=1.22) from the four item PPSAS used in Study 1 (1= *Not at all*, 7=*Very much*). We chose the most face valid items from the PPSAS that adapted best to a daily context. ***Perceived partner sexual responsiveness*** was measured only on sex days with a single item (e.g., "During sex, my partner was responsive to my needs"; M=6.16, SD=.93, 1=*Not at all*, 7=*Very much*). ***Sexual need fulfillment*** was assessed on sex days with a shortened version of the sexual need fulfillment scale used in Study 1 (M=6.02, SD=.93, α=.87, ω =.87), which consisted of three items starting with the prompt "When I engage in sexual activity with my current partner…" (sexual autonomy,

"I felt free to be who I am", *M*=6.10 , *SD*=1.07; sexual competence, "I felt very capable and effective", *M*=5.90 , *SD*=1.08; sexual relatedness, "I felt a lot of closeness and intimacy"; *M*=6.05 , *SD*=1.01, 1=*Not at all true*, 7 = *Very true*). .

Data Analysis

We analyzed the data with multilevel modeling using mixed models in SPSS 27 based on our pre-registered analytic plan (https://osf.io/542st/?view_only=beb2fb1d1f4a4e02b779f9048d02efba). To account for the non-independence of the dyadic over time data, we ran two-level cross-classified models in which partners were nested within couples, and partners and days were crossed to account for both partners completing daily surveys on the same days (Kenny et al., 2006). To test both actor (i.e., own) effects and partner effects, our analyses were guided by the Actor Partner Interdependence Model (APIM; Cook & Kenny, 2005). We modeled separate random intercepts and slopes for each partner within the dyad but treated the partners as indistinguishable and utilized compound symmetry matrices for the random effects to constrain the two partners to have the same parameters. Random slopes were modeled for time-varying predictors, but covariances between random effects were not modeled. If models failed to converge or random variances were unable to be computed, we removed those random slopes. To avoid confounding between- and within-person variance, daily predictor variables were aggregated and person-mean centered (Raudenbush et al., 2004; Zhang et al., 2009). Between-dyad variability represented 33% of the total variance in perceived autonomy support during sex (ICC=.33), meaning that perceived partner autonomy support during sex varies between people in addition to the remaining variance accounting for variability within people. While our key effects of interest were the within-person associations, we report the daily aggregated effects of perceived partner autonomy support

during sex on daily sexual and relationship satisfaction in the OSM. Given that perceived partner sexual autonomy support and sexual need fulfillment were only assessed on days when sexual activity occurred, the analyses only included sexually active days (992 total days). The bivariate correlations among all variables are shown in Table 5.

We conducted multilevel mediation analyses guided by APIM (Lederman et al., 2011), testing whether perceived partner sexual autonomy support during sex predicted greater sexual and relationship satisfaction on those days through greater sexual need fulfillment, following guidelines for a 1-1-1 mediation model (Zhang et al., 2009). To compute indirect effects, we used the Monte Carlo Method for Assessing Mediation (Selig & Preacher, 2008) based on 20,000 resamples and 95% Confidence Intervals (CI), with a significant indirect effect present if the CI did not contain zero. We conducted exploratory moderation analyses by gender and relationship duration; however, effects were consistent for people in shorter and longer relationships and for men and women.

Although the primary aim of Study 2 was examining the within-person effects of perceived partner autonomy support during sex on daily relationship and sexual satisfaction as well as the mediating role of sexual need fulfillment, we further examined the effects on satisfaction over time three months later in line with our pre-registration. The findings are reported in the OSM.

Results

Within-person associations

As predicted, we found that on days when actors perceived more autonomy support from their partner during sex than they typically did (i.e., than their own average), they reported

Table 5.

Bivariate Correlations in Study 2

Variable	1	2	3	4	5	6	7	8	9	10
1. Perceived Partner Autonomy Support During Sex	**.28*** **									
2. Perceived Partner Responsiveness During Sex	.54***	**.36*** **								
3. Overall Sexual Need Fulfillment During Sex	.61***	.56***	**.30*** **							
4. Autonomy Sexual Need Fulfillment During Sex	.60***	.52***	.89***	**.22*** **						
5. Relatedness Sexual Need Fulfillment During Sex	.54***	.47***	.88***	.70***	**.23*** **					
6. Competence Sexual Need Fulfillment During Sex	.47***	.49***	.88***	.66***	.66***	**.17*** **				
7. Daily Sexual Satisfaction	.45***	.74***	.47***	.47***	.36***	.43***	**.41*** **			
8. Daily Relationship Satisfaction	.38***	.56***	.59***	.53***	.52***	.50***	.50***	**.51*** **		
9. Gender (W = 1, M= 2)	-.13***	-.12***	-.04**	-.08***	-0.03	0.01	-.09***	-.12***	—	
10. Relationship Duration	-.06***	-.09***	0	-.04**	.03*	0	-.12***	-0.01	.04**	—

Note. * p<.05, ** p<.01, *** p<.001. Correlations between partners are bolded on the diagonal.

greater daily sexual (*b*=.26, *SE*=.02, *t*(591.88)=10.96, *p*<.001, 95% CI[.30, .45]) and relationship satisfaction (*b*=.17, *SE*=.03, *t*(612.09)=6.54, *p*<.001, 95% CI[.12, .22]), and their partners also reported greater daily sexual (*b*=.09, *SE*=.02, *t*(591.88)=3.70, *p*<.001, 95% CI[.04, .14]), and relationship satisfaction (*b*=.08, *SE*=.03, *t*(611.96)=3.03, *p*=.003, 95% CI[.03, .13). After controlling for perceived partner responsiveness during sex, actors who reported perceiving more autonomy support from their partner during sex still endorsed greater daily sexual (*b*=.12, *SE*=.03, *t*(576.89)=4.49 , *p*<.001 , 95% CI[.07, .18]) and relationship (*b*=.12, *SE*=.03, *t*(601.50)=4.04 , *p*<.001 , 95% CI[.06, .18]) satisfaction; however, their partner no longer reported significantly greater sexual (*b*=.03, *SE*=.03, *t*(576.89)= .913 , *p* = .362 , 95% CI[-.03, .08]) and relationship satisfaction (*b*=-.00, *SE*=.03, *t*(601.50)= -.060 , *p*= .952 , 95% CI[-.06, .06]).

Mediation Analyses

Next, on days when actors endorsed perceiving more sexual autonomy support from their partner during sex than their own average they reported greater need fulfillment during sex, as did their partners (see Figure 1; total effects in Table 6). In turn, on days when people reported greater need fulfillment during sex, they reported greater sexual (*b*=.43, *SE*=.03, *t*(565.65)=12.33, *p*<.001, 95% CI[.36, .50]) and relationship satisfaction (*b*=.22, *SE*=.03, *t*(611.69)=5.52, *p*<.001, 95% CI[.14, .30]), and their partner also reported greater sexual (*b*=.08, *SE*=.03, *t*(565.65)=2.24, *p*=.025, 95% CI[.01, .15]) and relationship satisfaction (*b*=.09, *SE*=.04, *t*(611.99)=2.34, *p*=.018, 95% CI[.02, .17]). Sexual need fulfillment significantly mediated the effect of perceived partner autonomy support during sex on people's daily reports of sexual and relationship satisfaction as well as their partner's sexual and relationship satisfaction (see Table 6 for total, direct, and indirect effects). The mediation model generally held when need fulfillment

Table 6

Mediation Models in Study 2

Effects	Sexual Need Fulfillment	Actor's Sexual Satisfaction	Partner's Sexual Satisfaction	Actor's Relationship Satisfaction	Partner's Relationship Satisfaction
Perceived Partner Sexual Autonomy Support (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.34(.04)***	.26(.03)***	.09(.02)***	.17(.03)***	.08(.03)**
Direct Effect		.11(.03)***	.03(.03)	.09(.03)**	.03(.03)
Indirect Effect		**[.11, .18]**	**[.00, .01]**	**[.05, .10]**	**[.00, .02]**
Perceived Partner Sexual Autonomy Support (mediated by Partner's Sexual Need Fulfillment)					
Total Effect	.08(.04)**	.26(.03)***	.09(.02)***	.17(.03)***	.08(.03)**
Direct Effect		.11(.03)***	.03(.03)	.09(.03)**	.03(.03)
Indirect Effect		**[.00, .05]**	**[.01, .06]**	**[.01, .06]**	**[.01, .03]**

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. *$p < .05$, ** $p < .01$, *** $p < .001$.

for sexual autonomy, competence and relatedness were separately examined as mediators as well as when perceived partner sexual responsiveness was included as a covariate (see OSM).

Brief Discussion

Study 2 replicated and extended the cross-sectional findings from Study 1. On days when people perceived their partner as autonomously supportive during sex, both partners reported feeling more satisfied with their sex life and relationship. After accounting for perceived partner responsiveness during sex, the associations between perceiving a partner as autonomously supportive during sex and satisfaction remained for people but not their partners. Sexual need fulfillment for autonomy, competence and relatedness accounted for greater satisfaction reported among people who perceived their partner as autonomously supportive during sex at the daily level.

Study 3

In Study 3, we aimed to replicate and extend the findings from Studies 1 and 2 with a comprehensive multi-part dyadic study. Going beyond the initial cross-sectional findings from Study 1, in the current study, we sought to demonstrate how individual differences in perceived partner sexual autonomy support at baseline are associated with both partners' relationship and sexual satisfaction in general and over time as well as how within-person differences in daily life are associated with daily sexual and relationship satisfaction. To provide a more sensitive test of the temporal sequence in our mediation model, we examined whether perceived partner sexual autonomy support at baseline is associated with greater sexual need fulfillment during the 21-day period, and in turn sexual and relationship satisfaction three months later. We also assessed perceived partner sexual autonomy support everyday as opposed to just on sex days, as perceived partner sexual autonomy support should also be important on days

when sex does not occur such as perceiving a partner as supportive of one's autonomy to decide not to engage in sex (Muise et al., 2017). Having reports of perceived sexual autonomy support everyday allows us to isolate the daily associations with sexual and relationship satisfaction more accurately by controlling for outcomes the previous day. We also examined whether engaging in sex or not on a given day moderates these associations to test whether perceived partner autonomy support is important on sex days as well as days when sex does not occur. On sex days specifically, we sought to replicate the effects of perceived partner sexual autonomy support on satisfaction while controlling for perceived partner responsiveness during sex as well as testing our mediation models at the daily level.

Participants and Procedure

Couples were recruited using online advertisements (e.g., Reddit) across Canada as part of a larger study. To be eligible, both partners had to agree to participate, be 18 years or older, fluent in English, in a relationship with each other for at least two years, and spend five out of seven nights together per week. The final sample consisted of 244 participants at baseline (*N*=122 couples), 236 participants at the daily level, and 230 participants at follow up. Using the same approach as Study 1, a sensitivity analysis using G*Power (Faul et al., 2007), indicated that a sample of 122 couples (N=244) accommodated the detection of a minimum unstandardized slope of .33 for the association between daily perceived partner autonomy support and sexual satisfaction, with 80% power, α=.05, and ICC=.19. Participant demographics are described in Table 1. Couples engaged in the same procedure as Study 2.

Between-Person Measures

Perceived partner sexual autonomy support was measured at baseline with the 4-item PPSAS from Study 1 (*M*=5.03, *SD*=1.59; α=.89, ω=.89). ***Sexual satisfaction*** was measured with

the GMSEX at baseline (*M*=5.75, *SD*=1.28; α=.96, ω=.96) and three months later at follow up (*M*=5.41, *SD*=1.49; α=.93, ω=.93). ***Relationship satisfaction*** was measured with the relationship satisfaction subscale from the PRQC at baseline (*M*=5.56, *SD*=1.30; α=.83, ω=.84) and follow up (*M*=5.92, *SD*=1.14; α=.96, ω=.96). All baseline measures were assessed on the same 7-point scales from Study 1.

Within-Person Measures

Perceived partner sexual autonomy support was measured daily with two items adapted from Study 2 to reflect perceptions of sexual autonomy support from a partner everyday as opposed to exclusively during sex ("I felt like my partner gave me choices and options about our sex life today"; "I felt like my partner listened to my preferences about our sexual relationship today".; *M*=5.03, *SD*=1.59, *r*=.85). Participants responded to the items on a 7-point scale (1= *not at all*, 7=*very much*). ***Sexual satisfaction*** was measured daily with a single item from the GMSEX. Participants rated their daily sexual satisfaction on a 7-point scale ("Today, my sex life with my partner was:", 1=*Unsatisfying*, 7=*Satisfying; M*=4.23, *SD*=1.41). ***Relationship satisfaction*** was measured daily with the single item from Study 2 (*M*=5.77, *SD*=0.87). ***Perceived partner sexual responsiveness during sex*** **(***M*=6.08, *SD*=1.06) and ***sexual need fulfillment*** (*M*=5.97, *SD*=.94; α=.86, ω=.86) were measured with the same items from Study 2 and only on days when couples engaged in sexual activity (905 sexually active days).

Results

Perceived Partner Sexual Autonomy Support Over Time

We analyzed the data with multilevel modeling using mixed models in SPSS 27 based on our pre-registered analytic plan (https://osf.io/yb6jc/?view_only=32dd4889852d4fce837905cc06e167c5). We ran two-level

models to test the associations between perceived partner sexual autonomy support at baseline and both partner's sexual and relationship satisfaction at baseline as well as three months later, controlling for satisfaction at baseline. We also conducted exploratory moderation analyses by gender and relationship duration. Largely, the effects were consistent for people in shorter and longer relationships and for men and women (see OSM). Bivariate correlations among variables are shown in Table 7.

Actors who perceived more sexual autonomy support from their partner than other participants at baseline reported greater baseline sexual (b=.45, SE=.04, t(213.13)=11.17, p<.001, 95% CI[.37, .53]) and relationship (b=.14, SE=.03, t(235,76)=4.31, p<.001, 95% CI[.07, .20]) satisfaction, and their partners reported greater baseline sexual (b=.14, SE=.04, t(214.71)=3.43, p<.001, 95% CI[.06, .22]) and relationship satisfaction (b=.10, SE=.03, t(235.93)=3.13, p=.002, 95% CI[.04, .16]). However, actors' perceived partner sexual autonomy support at baseline was not significantly associated with either partner's sexual or relationship satisfaction three months later.

We then conducted multilevel mediation analyses guided by APIM (Ledermann et al., 2011), to test whether perceived partner sexual autonomy support at baseline is associated with relationship and sexual satisfaction three months later through sexual need fulfillment aggregated over the 21-day period for both partners. Despite the lack of total effects of perceived partner sexual autonomy support at baseline and satisfaction over time, we found that actors' perceived partner sexual autonomy support at baseline predicted changes in sexual satisfaction from

Table 7.

Bivariate Correlations in Study 3

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.Baseline Perceived Partner Sexual Autonomy Support	**.20*** **														
2.Baseline Sexual Satisfaction	.59***	**.57*** **													
3.Baseline Relationship Satisfaction	.29***	.48***	**.39*** **												
4.Daily Perceived Partner Sexual Autonomy Support	.58***	.55***	.47***	**.14*** **											
5.Daily Perceived Partner Sexual Responsiveness	.31***	.37***	.30***	.47***	**.09*** **										
6.Daily Overall Sexual Need Fulfillment	.33***	.34***	.31***	.46***	.74***	**.26*** **									
7.Daily Autonomy Sexual Need Fulfillment	.35***	.36***	.27***	.45***	.74***	.90***	**.18*** **								
8.Daily Relatedness Sexual Need Fulfillment	.21***	.25***	.27***	.40***	.54***	.87***	.65***	**.20*** **							
9.Daily Competence Sexual Need Fulfillment	.33***	.31***	.30***	.38***	.72***	.90***	.76***	.67***	**.23*** **						
10.Daily Sexual Satisfaction	.42***	.55***	.47***	.67***	.34***	.33***	.28***	.31***	.29***	**.55*** **					
11.Daily Relationship Satisfaction	.33***	.44***	.59***	.53***	.39***	.54***	.47***	.49***	.49***	.52***	**.44*** **				
12.Follow up Sexual Satisfaction	.61***	.84***	.37***	.44***	.60***	.61***	.60***	.39***	.64***	.34***	.54***	**.39*** **			
13.Follow up Relationship Satisfaction	.25***	.49***	.45***	.27***	0.1	.11*	0.05	.14**	.12*	.19***	.53***	.58***	**.49*** **		
14.Gender (W = 1, M = 2)	-.21***	-0.01	-.07***	-.17***	-.05**	-0.03	-.09***	.04**	-.04*	-0.01	-.08***	-0.09	-0.01	—	
15.Relationship Length	-.15***	-.07***	-.07***	-.19***	-0.02	-0.03	-0.03	-0.02	-0.02	-.11***	-.04**	.19***	0.09	-0.01	—

*Note. * p<.05, ** p<.01, *** p<.001.* Correlations between partners are bolded on the diagonal.

baseline to the follow-up (but not changes in relationship satisfaction) via a significant indirect effect on sexual need fulfillment aggregated over the diary. (See Table 8 for total, direct, and indirect effects).

After accounting for sexual satisfaction at baseline, people who perceived more sexual autonomy support from their partner than other participants at baseline reported greater sexual need fulfillment over the course of the 21-day period (b=.20, SE=.04, t(203.50)=5.06, p<.001, 95% CI[.12, .28]), and, in turn, reported greater sexual satisfaction three months later. The association between perceived partner sexual autonomy support at baseline and sexual satisfaction three months later was also significantly mediated by sexual autonomy, sexual competence, and sexual relatedness (see OSM). However, the mediation model over time predicting sexual satisfaction revealed a suppression effect in which, when background sexual satisfaction was controlled, there was a negative (albeit non-significant) effect of perceived partner sexual autonomy support on follow-up sexual satisfaction and the positive link between partner sexual autonomy support and sexual satisfaction at follow-up was completed accounted for by sexual need fulfillment. When baseline sexual satisfaction was not controlled, we found the predicted pattern of results with a positive association between partner autonomy support and sexual satisfaction over time.

Perceived Partner Sexual Autonomy Support in Daily Life

We used the same analytic approach as in Study 2 to test our within-person predictions involving daily perceptions of partner sexual autonomy support on sexual and relationship satisfaction. In this study, the between-dyad variability represented 42% of the total variance in daily perceived partner sexual autonomy support (ICC=.42). While our key effects of interest were the within- person associations, we report the daily aggregated effects of perceived partner

Table 8.

Mediation Models Over Time in Study 3

Effects	Daily Sexual Need Fulfillment	Follow-up Actor's Relationship Satisfaction	Follow-up Partner's Relationship Satisfaction	Follow-up Actor's Sexual Satisfaction	Follow-up Partner's Sexual Satisfaction
Baseline Perceived Partner Sexual Autonomy Support (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.20(.04)***	.01(.04)	.02(.04)	.03(.06)	.06(.05)
Direct Effect		-.01(.04)	.03(.04)	-.03(.06)	.04(.05)
Indirect Effect		[-.01, .02]	[-.00, .00]	**[.03, .01]**	[-.01, .01]
Baseline Perceived Partner Sexual Autonomy Support (mediated by Partner's Sexual Need Fulfillment)					
Total Effect	-.01(.04)	.01(.04)	.02(.04)	.03(.06)	.06(.05)
Direct Effect		-.01(.04)	.03(.04)	-.03(.06)	.04(.05)
Indirect Effect		[-.01, .02]	[-.01, .00]	[-.04, .03]	[-.03, .03]

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. Significant indirect effects are bolded, reflecting when CIs do not include zero. * $p < .05$, ** $p < .01$, *** $p < .001$. *a = .056*

sexual autonomy support on daily sexual and relationship satisfaction in the OSM. To isolate the daily effects, we examined whether perceived partner sexual autonomy support was associated with both partners' daily sexual and relationship satisfaction while controlling for the previous day's satisfaction. As predicted, after accounting for satisfaction the previous day, we found that on days when actors perceived greater sexual autonomy support from their partner than they typically did across the 21-day period, they reported greater daily sexual (b=.54, SE=.01, t(3477.74)=36.22, p<.001, 95% CI[.51, .57]) and relationship (b=.19, SE=.01, t(3494.45)=15.81, p<.001, 95% CI[.17, .22]) satisfaction, and their partners also reported greater daily sexual (b=.21, SE=.01, t(3480.45)=13.87, p<.001, 95% CI[.18, .23]) and relationship (b=.08, SE=.01, t(3498.20)=6.49, p<.001, 95% CI[.13, .19) satisfaction.

We then tested whether sexual activity moderated the associations between daily perceived partner sexual autonomy support and sexual and relationship satisfaction. Sexual activity was dummy coded as sex day = 1, non-sex day = 0. For significant interactions, we explored the simple effects of perceived partner sexual autonomy support on satisfaction for sex days and non-sex days respectively (for all interactions, see OSM). We found a significant interaction between sexual activity and actors' perceived partner sexual autonomy support on sexual satisfaction (b= .15, SE=.04, t(3976.44)=4.13, p=.006, 95% CI[.08, .22]). Actors who perceived more sexual autonomy support from their partner reported greater sexual satisfaction on days when they did not engage in sex (b= .33, SE=.02, t(3874.63)=10.00, p<.001, 95% CI[.30, .44]), but the association was stronger on sex days (b= .40, SE=.04, t(3020.97)=18.96, p<.001, 95% CI[.30, .36]).

To replicate our mediation model on sex days, we ran the same analyses as in Study 2 examining whether sexual need fulfillment mediated the associations between perceived partner

autonomy support during sex and daily sexual and relationship satisfaction. Actors who endorsed perceiving more sexual autonomy support from their partner on days when they had sex reported greater sexual need fulfillment, and their partner did as well (see total effects in Table 9). In turn, on days when actor's reported greater sexual need fulfillment, they reported greater sexual (b=.44, SE=.05, t(625.33)=9.22, p<.001, 95% CI[.35, .54]) and relationship (b=.30, SE=.05, t(626.66)=6.45, p<.001, 95% CI[.21, .39]) satisfaction. Sexual need fulfillment significantly mediated the effect of perceived partner sexual autonomy support on both partners' daily reports of sexual and relationship satisfaction (see Table 9 for total, direct, and indirect effects). The mediation models generally held when need fulfillment for sexual autonomy, competence and relatedness were separately examined as mediators (see OSM). The daily effects and mediation models on sex days further held while controlling for perceived partner responsiveness during sex (see OSM).

Brief Discussion

Study 3 provided a more comprehensive replication and extension of Studies 1 and 2. People who perceived more partner sexual autonomy support than others at baseline reported that their sexual needs were fulfilled across the daily period, and in turn, felt more satisfied over time. Everyday perceptions of partner sexual autonomy support were also linked to greater sexual and relationship satisfaction for both partners, even after accounting for satisfaction on the previous day. The effect of perceived partner sexual autonomy support on sexual satisfaction was stronger on days when couples engaged in sex than when they did not, and on sex days, the

Table 9.

Within-Person Mediation Models in Study 3

Effects	Daily Sexual Need Fulfillment	Daily Actor's Relationship Satisfaction	Daily Partner's Relationship Satisfaction	Daily Actor's Sexual Satisfaction	Daily Partner's Sexual Satisfaction
Perceived Partner Sexual Autonomy Support (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.36(.02)***	.20(.03)***	.02(.03)	.39(.03)***	.07(.03)
Direct Effect		.07(.03)*	.00(.03)	.20(.03)***	-.04(.03)
Indirect Effect		**[.07, .15]**	[-.00, .01]	**[.12, .20]**	[-.00, .01]
Perceived Partner Sexual Autonomy Support (mediated by Partner's Sexual Need Fulfillment)					
Total Effect	.05(.02)*	.20(.03)***	.02(.03)	.39(.03)***	.07(.03)
Direct Effect		.07(.03)*	.00(.03)	.20(.03)***	-.04(.03)
Indirect Effect		[-.03, .04]	**[.00, .03]**	[-.01, .06]	**[.00, .05]**

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. Significant indirect effects are bolded, reflecting when CIs do not include zero. * $p < .05$, ** $p < .01$, *** $p < .001$.

associations held controlling for perceived partner sexual responsiveness and were mediated through sexual need fulfillment as in the other studies.

General Discussion

Across three multi-method studies, we examined the unique effects of perceiving a partner as autonomy supportive in the sexual domain on sexual need fulfillment and satisfaction in romantic relationships. In Study 1, we developed a novel measure of Perceived Partner Sexual Autonomy Support (PPSAS) and established its validity. In line with Self-Determination Theory, perceiving a partner as autonomously supportive in the sexual domain was associated with fulfilling sexual needs for autonomy, competence, and relatedness as well as engaging in sex for self-determined reasons. Perceived partner sexual autonomy support was further associated with greater sexual and relationship satisfaction over and above generally perceiving autonomy support in relationships. In Study 2, on days when people perceived their partner as autonomously supportive during sex, both partners reported greater sexual and relationship satisfaction and greater satisfaction for oneself after accounting for perceived partner responsiveness during sex. In Study 3, we found that perceived partner sexual autonomy support was associated with sexual and relationship satisfaction both on days when sex occurred and days without sex; however, the effects tended to be stronger on sex days. Across studies, we found evidence that sexual need fulfillment accounted for the positive associations between perceived partner sexual autonomy support and satisfaction during sex and over time.

Theoretical Implications

Past research on Self-Determination Theory has predominantly focused on the individual experience of feeling sexually autonomous in terms of people's personal reasons for engaging in sex and fulfilling one's own sexual needs (Brunell & Webster, 2013; Shoikhedbrod et al., 2023;

Wood et al., 2021), which did not investigate the interpersonal role of perceiving sexual autonomy support from a romantic partner. While previous research has shown the sexual and relational benefits of perceiving a partner as responsive to one's sexual needs (Balzarini et al., 2021; Muise et al., 2013; Muise & Impett, 2015; Raposo & Muise, 2021), our work suggests that perceived sexual autonomy support is uniquely associated with need fulfillment and satisfaction above and beyond the influence of perceived partner sexual responsiveness. The perception of sexual autonomy support from a partner specifically may allow people to freely express themselves sexually and intrinsically pursue the sexual experiences they desire within their relationship. The satisfaction people report from feeling autonomously supported in the sexual domain extended to their partners as well, further highlighting the dyadic processes behind sexual need fulfillment among couples, although partner effects were less robust. This work extends Self-Determination Theory by showing that perceptions of sexual autonomy support from a partner were associated with greater satisfaction above and beyond perceiving autonomy support across one's interpersonal relationships. Sexuality is a unique domain through which perceiving autonomy support allows people to feel sexually free, skillful, and connected with their partner, and in turn, experience greater satisfaction with not only their sexual experiences but also their relationship more generally.

The current research further demonstrated that the satisfaction derived from perceiving a partner as autonomously supportive in the sexual domain can meaningfully vary between people as well as within people, fluctuating in daily life. By examining trait influences of perceived partner sexual autonomy support in Studies 1 and 3 as well as leveraging ecologically valid daily diary methods to separate between-subject from within-subject variance in Studies 2 and 3, we see that both people who generally see their partner as more autonomously supportive in the

sexual domain and on days when people see their partner as more autonomously supportive than they typically are play a role in need fulfillment and satisfaction. These findings also suggest that there are situations in daily life that foster perceptions of partner sexual autonomy support, highlighting the capacity for promoting sexual need fulfillment in satisfying relationships.

The studies also provided support for sexual need fulfillment as one reason for the positive associations between perceived partner sexual autonomy support and sexual and relationship satisfaction. These findings are consistent with Self-Determination Theory and past research demonstrating that need fulfillment is a central mechanism accounting for the benefits of perceiving a partner as autonomously supportive in general (Chua et al., 2021), as well as in the sexual domain specifically (Brunell & Webster, 2013; Wood et al., 2018; 2021). In the specific case of the mediated path over time in Study 3, the direct effect, while nonsignificant, was negative despite the significant indirect effect being positive, suggesting a potential case of suppression. The association between perceiving more sexual autonomy support from a partner at baseline and greater sexual satisfaction three months later may be undercut by the positive influence of sexual need fulfillment aggregated across the 21-day period. However, this suppression effect was not consistent with other mediation models across studies. Additionally, partners who were perceived as autonomously supportive in the sexual domain also reported greater sexual need fulfillment, and in turn, sexual and relationship satisfaction, which is consistent with past research demonstrating the mutuality of autonomy support within relationships (Deci et al. 2006). That is, people who perceive their partner as autonomously supportive in the sexual domain are likely to provide sexual autonomy support in return, reflecting a dyadic process through which partners benefit from supporting each other's sexual needs.

Limitations, Future Directions, and Implications

Despite the strengths of this research, there are limitations. The studies were based on self-report measures, and responses may be susceptible to retrospective and social desirability biases. One way we attempted to mitigate these biases was through utilizing daily experience methods that capture how these dynamics unfold in daily life and close in time to the occurrence of couples' sexual experiences. However, these correlational findings still preclude causal conclusions that could be tested in future work through manipulating perceived partner sexual autonomy support, drawing on previous experimental work on perceived partner sexual responsiveness (Balzarini et al., 2021). Additionally, although the current research examined the effects of perceiving sexual autonomy support from a partner over time and accounted for perceived partner sexual autonomy support the previous day in the daily analyses, future research examining an intervention aimed at promoting perceived partner sexual autonomy support and tracking changes in satisfaction over time would provide a more sensitive test of directionality.

While we focused on perceptions of partner sexual autonomy support, it is not clear whether a person's perceptions are aligned with their partner's reports of providing sexual autonomy support and the implications that may have for satisfaction. In a daily experience study examining how accurate and biased perceptions of partner autonomy support are for behaviors promoting physical health (e.g., exercising, eating healthy), people's perceptions of receiving support accurately corresponded with their partner's reports of providing support, however, people also projected their own reports of support provision onto their perceptions of support received from their partner (Labuda et al., 2023a). These findings are consistent with people being simultaneously accurate and biased with similar relationship-oriented constructs (Fletcher & Kerr, 2010; Labuda et al., 2023). Additionally, people were, on average, more likely to

underperceive a partner's daily autonomy support of their health behaviors, which was associated with greater negative affect as well as lower positive affect, autonomy, and relationship satisfaction (Labuda et al., 2023). The indirect features of autonomy support, while intended to accommodate a partner's needs, can be misinterpreted by partners, and inadvertently result in negative consequences for relationships. By assessing daily reports of enacted partner sexual autonomy support in addition to perceptions, future research can examine whether perceptions of autonomy support match actual reports from a partner in the sexual domain.

Although we demonstrated that perceived partner sexual autonomy support is also relevant to sexual satisfaction on days when sex did not occur, non-sex days likely vary in the extent to which sex is relevant on a particular day. For example, some non-sex days might involve sexual initiation and rejection or conversations about the couples' sex life, whereas other non-sex days might involve no discussion or consideration of sex. We were not able to assess these differences in the current study, but an important direction for future research is to assess perceptions of a partner's autonomy support when partners decline one another's sexual advances or have a sexual conversation. Indeed, many couples avoid communicating about sex because it is more anxiety-provoking than non-sexual discussions (Rehman et al., 2017), and are instead more likely to follow established sexual scripts and routines (MacNeil & Byers, 2009). Perceiving sexual autonomy support from a partner may attenuate the threat associated with talking about sex in the relationship and allow partners to openly discuss their sexual needs. Past research examining observed conversations between couples showed that autonomy support was perceived by participants as more effective than controlling strategies in eliciting disclosure from a partner and associated with greater relationship satisfaction (Kil et al., 2021), and this may extend to the sexual domain.

Beyond demonstrating the role that perceived partner sexual autonomy support plays in maintaining sexual and relationship satisfaction overall, future research would benefit from more specifically identifying behavioral correlates of perceiving a partner as autonomously supportive in the sexual domain. A central feature of perceived partner sexual autonomy support is feeling empowered by a partner to assert one's sexual needs in a relationship, which would be reflected in initiating desired sexual activities as well as refusing unwanted sexual advances. Past research has typically examined people's responses to sexual initiation and rejection from a partner (Byers & Heinlein, 1989; Kim et al. 2020), overlooking the role that partners play in supporting one's choice to initiate or refuse sex. Perceived partner sexual autonomy support in this sense can be a key predictor of sexual frequency in relationships that shapes patterns of sexual initiation and rejection.

In understanding how people perceive their partner as supportive of their sexual autonomy, it is important to consider how partners could be perceived as controlling instead and the interpersonal processes involved in thwarting their sense of sexual autonomy (Rocchi et al., 2017). The role of interpersonal control is particularly relevant to the study of sexuality in relationships with the high prevalence of sexual compliance (Impett & Peplau, 2003; O'Sullivan & Allgeier, 1998), in which people may feel pressured to engage in unwanted but consensual sex with their partner for relationship-maintenance reasons. Future research should look to contrast the effects of perceived partner sexual autonomy support and perceived partner sexual control on sexual and relationship satisfaction.

Self-Determination Theory suggests that perceiving a partner as autonomously supportive should also correspond to the fulfillment of all three basic psychological needs; however, the items in the PPSAS were designed to measure perceiving support for one's sexual

autonomy more specifically relative to competence and relatedness. Perceiving autonomy support may take some precedent in the context of sexuality in which people need to feel encouraged to initially act on and create opportunities for themselves to then develop sexual competence and foster sexual relatedness (Ryan & Deci, 2017). Additionally, the features of feeling sexually understood, validated and cared for by a partner that underlie perceived partner sexual responsiveness, which we demonstrated as distinct from perceived partner sexual autonomy support, may instead overlap with perceiving a partner as supportive of one's needs for sexual relatedness. However, there has been no work to our knowledge that has examined the role of perceiving a partner as supportive of one's competence in the sexual domain. In staying with a growing body of research distinguishing the effects of perceived autonomy support from competence and relatedness support across interpersonal relationships (Rocchi et al., 2017), it would be informative for future work to validate a more comprehensive scale that separately accounts for how perceived sexual competence and relatedness support from partners can specifically cultivate sexual skills and intimacy in relationships.

Our community samples also limit generalizability. Participants reported feeling fairly satisfied in their relationships, which may more broadly reflect a self-selection bias in relationship science (Park et al., 2021). Similarly, the demographics of samples recruited for couples research tend to lack diversity along various social, economic, and cultural dimensions (McGorray et al., 2023; Williamson et al., 2022). Despite efforts to recruit a more diverse sample in Study 3, participants across studies predominantly identified as heterosexual and white. Future research would merit examining whether the benefits of perceived sexual autonomy support extend to couples from diverse backgrounds. Expanding from community samples, it would also be worthwhile to validate the perceived partner sexual autonomy support in clinical health

populations. Previous research has demonstrated that perceived autonomy support is linked to greater psychosocial well-being and physical health outcomes among people coping with chronic pain and their partners (Martire et al., 2013; Uysal et al., 2017). Perceived autonomy support from a partner in the sexual domain may be especially beneficial to couples coping with sexual dysfunction such as genito-pelvic pain or clinically low sexual desire (Rosen & Bergeron, 2019). When people coping with sexual dysfunction perceive their partner as supportive of their sexual autonomy, they may feel freer to express their sexual preferences and feel more control over their sexual concerns, which may mitigate sexual distress and instead foster greater well-being.

Perceived sexual autonomy support could also be targeted in clinical interventions. In a systematic review of health interventions informed by Self-Determination Theory, Teixeira et al. (2020) classified key autonomously supportive techniques including but not limited to identifying sources of pressure, reframing with non-controlling informational language (i.e., "could" instead of "should"), and providing clients with a sense of choice to self-initiate and experiment with engaging in health-related behavior for change. These clinical techniques could be implemented within a couples-based framework as evidenced by a previous weight-loss intervention for couples informed by Self-Determination Theory (Gorin et al, 2020). The principles of perceiving a partner as autonomously supportive in the sexual domain could be a focus of clinicians in sex therapy to improve the lives of couples coping with sexual dysfunctions and foster greater sexual need fulfillment between partners.

Conclusion

Sexual need fulfillment is a key avenue through which romantic relationships foster well-being. The current studies suggest that perceiving a romantic partner as autonomously supportive in the sexual domain is one way people can fulfill their sexual needs and have satisfying sex

lives and relationships. This research highlights the unique benefits of supportive processes between partners in the sexual domain by understanding how and why people feel more satisfied from perceiving their sexual needs as autonomously supported in their relationship.

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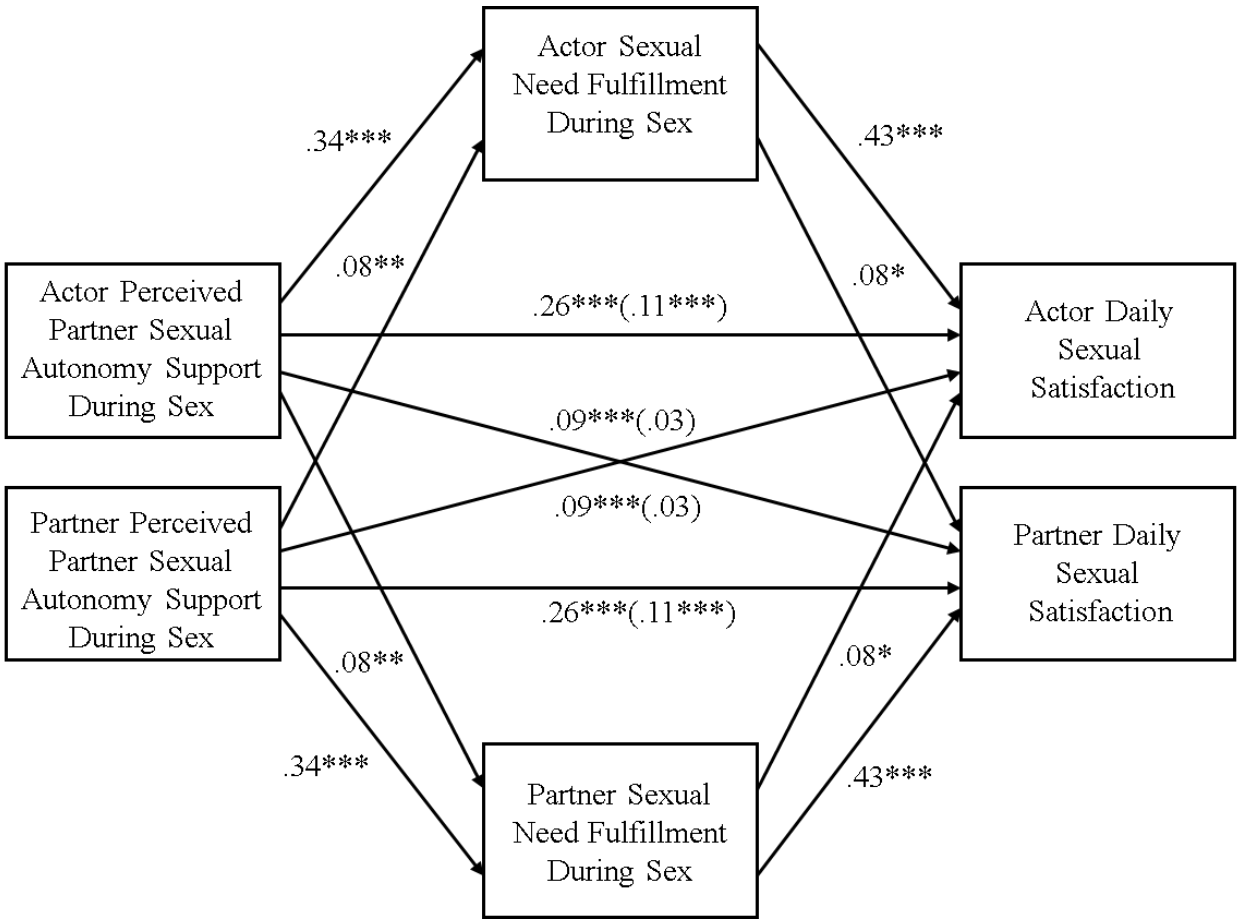
Figure 1.

Mediation Model in Study 2



Note. Actor Partner Interdependence Model (APIM) full mediation model in Study 2 where actor and partner sexual need fulfillment during sex mediates the associations between actor and partner perceived partner sexual autonomy support during sex and both partners' daily sexual satisfaction. Values in parentheses illustrate the direct effect after controlling for the mediator. Values are unstandardized coefficients. The model for relationship satisfaction follows a similar pattern (see Table 6)

Supplementary Materials for Paper 3

Study 1

Additional Tests of Convergent Validity

In addition to self-determined reasons for engaging in sex, we tested the associations between the PPSAS and sexual communal motivation. *Sexual communal strength* was assessed with the Sexual Communal Strength Scale (SCSS; Muise et al., 2013), which included six items (e.g., "How far would you be willing to go to meet your partner's sexual needs?"; M = 2.76, SD = .62; α = .75, ω = .75), rated on a 5-point scale (0 = *not at all,* 4 = *extremely)*. *Unmitigated sexual communion* was assessed with the Unmitigated Sexual Communion Scale (USCS; Hogue et al., 2018), which included seven items (e.g., "I always place my partner's sexual needs above my own"; M = 3.10, SD = .67; α = .71, ω = .73) rated on a 5-point Likert scale (1 = *strongly disagree,* 5= *strongly agree).* People who perceived their partner as autonomously supportive in the sexual domain reported greater sexual communal strength (r = .24, p < .001) but not unmitigated sexual communion (r = .03, p = .615). People higher in unmitigated sexual communion, who are motivated to meet their partner's sexual needs at the expense of their own, may not be particularly perceptive of autonomy support from their partner or may be less likely to have an autonomously supportive partner. In contrast, an autonomously supportive sexual environment may encourage people higher in sexual communal strength to attend to their own sexual needs while being motivated to be responsive to their partner's needs (Muise & Impett, 2016).

We also examined the associations between PPSAS and general need fulfillment within a romantic relationship. Relationship need fulfillment was measured with the Need Satisfaction-Relationship Domain Scale (La Guardia et al., 2000). Participants responded to nine items

reflecting need fulfillment in their romantic relationship (*M* = 5.98, *SD* = .94; α = .90, ω = .90) on a 7-point Likert scale (1=*Not at all true*, 7 = *Very true*). We examined the three item subscales measuring relational needs for autonomy (e.g., When I am with my current partner…I feel free to be who I am; *M* = 6.02, *SD* = 1.02; α = .79 , ω = .79), competence (e.g., …I feel very capable and effective; *M* = 5.87, *SD* = 1.06; α = .82, ω = .82) and relatedness (e.g., …I feel a lot of closeness and intimacy; *M* = 6.05, *SD* = 1.06; α = .82 , ω = .82). PPSAS was positively associated with overall relationship need fulfillment (*r* =. 55, *p* < .001) as well as relationship autonomy (*r* =. 50, *p* < .001), competence (*r* =. 45, *p* <. 001), and relatedness (*r* =. 53, *p* < .001) respectively. However, partial correlations revealed that the PPSAS was positively associated with relationship autonomy (*r* =. 19, *p* = .002) and relatedness (*r* =. 27, *p* <.001) but not competence (*r* = .01, *p* = .839).

Lastly, we examined the associations between PPSAS and attachment. Attachment was measured with the Experience in Close Relationship Scale – Short Form (ECR-SF; Wei et al., 2007). Participants responded to six items for attachment anxiety (e.g., "I need a lot of reassurance that I am loved by my partner"; *M* = 3,24, *SD* = 1.08; α = .71, ω = .72) and six items for attachment avoidance (e.g., "I try to avoid getting too close to my partner"; *M* = 2.04 , *SD* = .93; α = .84, ω = .84) using a 7-point scale (1= *strongly disagree,* 7 = *strongly agree)*. The PPSAS was negatively associated with attachment anxiety (*r* = -.21, *p* = .001) and avoidance (*r* = -.44, *p* <.001).

Mediation Models

To test the indirect effects of perceived partner sexual autonomy support on sexual and relationship satisfaction through sexual need fulfillment, we conducted mediation analyses using Hayes' (2012) PROCESS macro (Model 4) for R with 95% bias corrected confidence interval

(CIs) based on 20,000 bootstrap samples. Perceived partner sexual autonomy support and sexual need fulfillment were mean centered prior to analyses. Significant indirect effects were present if 95% CIs did not contain zero. We first established that perceived partner sexual autonomy support was associated with greater sexual and relationship satisfaction (see total effects in Table S1). Next, people who reported perceiving more sexual autonomy support from their partner endorsed more sexual need fulfillment (see total effects in Table S1), and in turn, reported greater sexual (b=.66, SE=.07, t(245)=9.49, p<.001, 95% CI[.53, .80]) and relationship (b=.46, SE=.07, t(245)=6.97, p<.001, 95% CI[.33, .58]) satisfaction. Sexual need fulfillment significantly mediated the respective associations between perceived sexual autonomy support and sexual and relationship satisfaction (see direct and indirect effects in Table S1). The mediation models held after controlling for general perceived autonomy support (see Table S1).

We further tested whether perceived partner sexual autonomy support mediated satisfaction through sexual autonomy, competence, and relatedness respectively. People who reported perceiving more sexual autonomy support from their partner endorsed more sexual autonomy (b = .51, SE = .04, t(246) = 6.97, p < .001, 95% CI[.43, .59]), and in turn, reported greater sexual (b = .41, SE = .07, t(245) = 5.68, p < .001, 95% CI[.27, .55]) and relationship (b = .46, SE = .06, t(245) = 6.97, p < .001, 95% CI[.33, .58]) satisfaction. People who reported perceiving more sexual autonomy support from their partner endorsed more sexual competence (b = .47, SE = .06, t(246) = 8.22, p < .001, 95% CI[.36, .58]), and in turn, reported greater sexual (b = .45, SE = .05, t(245) = 8.40, p < .001, 95% CI[.34, .55] and relationship (b = .28, SE = .05, t(245) = 8.74 , p < .001, 95% CI[.18, .34]) satisfaction. People who reported perceiving more sexual autonomy support from their partner endorsed more sexual relatedness (b = .53, SE = .05,

Table S1

Mediation Models in Study 1

Effects for Perceived Partner Sexual Autonomy Support	Sexual Need Fulfillment	Sexual Satisfaction	Relationship Satisfaction
Overall Model			
Total Effect	.51(.04)***	.60(.05)***	.41(.05)***
Direct Effect	—	.27(.05)***	.18(.05)**
Indirect Effect	—	.33(.05) [.24,.45]	.23(.03) [.15, .32]
Model Controlling for General Autonomy Support Across Relationships			
Total Effect	.43(.04)***	.54(.05)***	.36(.05)***
Direct Effect	—	.26(.06)***	.18(.05)**
Indirect Effect	—	.28(.05) [.18,.40]	.18(.04) [.10, .26]

Note. Numbers outside of parentheses are unstandardized coefficients, numbers inside of parentheses are standard error terms, numbers inside of brackets are upper and lower limits of 95% bias corrected confidence intervals based on 20,000 bootstrapping samples. *$p < .05$, **$p < .01$, ***$p < .001$.

$t(246) = 10.92$, $p < .001$, 95% CI[.43, .63]), and in turn, greater sexual ($b = .53$, $SE = .06$, $t(245) = 8.52$ $p < .001$, 95% CI[.41, .65]), and relationship ($b = .38$, $SE = .06$, $t(245) = 6,55$ $p < .001$, 95% CI[.26, .49] satisfaction. The associations between perceived sexual autonomy support and satisfaction were significantly mediated through fulfilling one's needs for sexual autonomy, sexual competence, and sexual relatedness respectively (see total, direct, and indirect effects in Table S2).

Additional Pre-registered Outcomes

We pre-registered analyses examining the associations between perceived partner sexual autonomy support and additional outcomes including personal well-being and sexual desire, which were not included in the primary manuscript due to space considerations. Personal well-being was measured with The Scales of General Well-Being (Longo et al., 2018). Participants responded to 14 items (e.g., "I feel happy"; $M = 3.94$, $SD = .84$; $\alpha = .93$, $\omega = .93$) on a 5-point scale (1= *Not True at all*, 5= *Very True*). Sexual desire was measured with the partner-focused dyadic subscale of the Sexual Desire Inventory-2 (SDI-2; Spector et al., 1996; Moyano et al., 2017). Participants rated their sexual desire for their partner with seven items (e.g., "When you have sexual thoughts, how strong is your desire to engage in sexual behavior with a partner?"; M = 5.75, SD = 1.28; $\alpha = .90$, $\omega = .90$) on 9-point scales with anchors tailored to specific items (e.g., 0 = *no desire*, 8 = *strong desire*).

Perceived partner sexual autonomy support was associated greater subjective well-being ($b = .18$, $SE = .03$, $t(246) = 6.60$, $p < .001$, 95% CI[.13, .24]), and this association held after controlling for general autonomy support across relationships ($b = .11$, $SE = .03$, $t(246) = 4.09$, $p < .001$, 95% CI[.06, .17]). Perceived partner sexual autonomy support was also associated with greater sexual desire ($b = .39$, $SE = .03$, $t(246) = 7.82$, $p < .001$, 95% CI[.29, .49]), and this

Table S2

Mediation Models Separated by Need Fulfillment for Autonomy, Competence and Relatedness in Study 1

Effects for Perceived Partner Sexual Autonomy Support	Sexual Satisfaction	Relationship Satisfaction
Mediated by Sexual Autonomy		
Total Effect	.60(.05)***	.41(.05)***
Direct Effect	.39(.06)***	.25(.06)***
Indirect Effect	[.14,.31]	[.09, .24]
Mediated by Sexual Competence		
Total Effect	.60(.05)***	.41(.05)***
Direct Effect	.39(.05)***	.28(.05)***
Indirect Effect	[.13,.30]	[.07, .20]
Mediated by Sexual Relatedness		
Total Effect	.60(.05)***	.41(.05)***
Direct Effect	.32(.06)***	.21(.05)***
Indirect Effect	[.19,.39]	[.12, .28]

Note. Numbers outside of parentheses are unstandardized coefficients, numbers inside of parentheses are standard error terms, numbers inside of brackets are upper and lower limits of 95% bias corrected confidence intervals based on 20,000 bootstrapping samples. *p < .05, **p < .01, ***p < .001

association held after controlling for general autonomy support across relationships (b = .36, SE = .05, $t(246) = 6.92$, $p < .001$, 95% CI[.26, .47]).

People who reported perceiving more sexual autonomy support from their partner endorsed more sexual need fulfillment, and in turn, reported greater sexual desire (b = .44, SE = .07, $t(245) = 6.31$, $p < .001$, 95% CI[.31, .59]). The associations between perceived partner sexual autonomy support and sexual desire were significantly mediated through sexual need fulfillment (see total, direct, and indirect effects in Table S3). Additionally, this mediation model held after controlling for general autonomy support across relationships (see Table S3)

Moderation by Gender and Relationship Duration

We examined whether the associations between PPSAS and satisfaction were moderated by either gender or relationship duration. While there were no significant moderations by relationship duration, there was a significant interaction between gender and PPSAS on relationship satisfaction (b=.28, SE=.10, $t(240)$=2.98, p=.003, 95% CI[.10, .47]). Although men higher on PPSAS reported greater relationship satisfaction (b=.24, SE=.07, $t(240)$=3.26, p<.001, 95% CI[.10, .39]), the effect was stronger for women (b=.53, SE=.06, $t(240)$=8.79, p<.001, 95% CI[.41, .64]).

Study 2

Aggregate Main Effects of Perceived Partner Autonomy Support During Sex on Daily Satisfaction

In addition to the within-person effects of perceived partner autonomy support during sex on daily sexual and relationship satisfaction reported in the main paper, we examined the aggregate effects of perceived partner autonomy support during sex across the 21-day period on

Table S3

Mediation Models with Sexual Desire in Study 1

Effects for Perceived Partner Sexual Autonomy Support	Sexual Need Fulfillment	Sexual Desire
Overall Model		
Total Effect	.54(.03)***	.39(.05)***
Direct Effect	—	.15(.06)*
Indirect Effect	—	.24(.07) [.12,.38]
Model Controlling for General Autonomy Support Across Relationships		
Total Effect	.45(.03)***	.36(.05)***
Direct Effect	—	.15(.06)*
Indirect Effect	—	.21(.06) [.03,.27]

Note. Numbers outside of parentheses are unstandardized coefficients, numbers inside of parentheses are standard error terms, numbers inside of brackets are upper and lower limits of 95% bias corrected confidence intervals based on 20,000 bootstrapping samples. *$p < .05$, **$p < .01$, ***$p < .001$.

satisfaction. We found that people who perceived more autonomy support from their partner during sex across the 21-day period reported greater daily sexual (b=.38, SE=.04, t(242.31)=9.94, p<.001, 95% CI[.30, .45]) and relationship satisfaction (b=.27, SE=.04, t(270.02)=7.28, p<.001, 95% CI[.20, .35]), but the associations with their partners' sexual satisfaction (b=.05, SE=.04, t(242.31)=1.43, p= .154, 95% CI[-.02, .13]) and relationship satisfaction (b=.06, SE=.04, t(270.06)=`.56, p=.120, 95% CI[-.01, .13) were not significant.

Within-Person Mediation Models Controlling for Perceived Partner Sexual Responsiveness

We tested whether the mediated effects of sexual need fulfillment on perceived partner sexual autonomy support during sex and daily well-being held after accounting for perceived partner sexual responsiveness during sex. On days when people reported perceiving greater autonomy support from their partner during sex, they still reported greater sexual need fulfillment, but their partners no longer no did after accounting for perceiving their partner as sexually responsive during sex. In turn, on days when people reported greater sexual need fulfillment, they still reported greater sexual (b = .35, SE = .04, t(552,27) = 9.78 , p < .001 , 95% CI[.28, .42]), and relationship (b = .20, SE = .04, t(595.49) = 4.73 , p < .001 , 95% CI[.12, .28]) satisfaction, but once again, their partners did not controlling for perceived partner sexual responsiveness during sex. After accounting for daily perceptions of partner sexual responsiveness, sexual need fulfillment significantly mediated the effect of daily perceptions of sexual autonomy support on people's daily reports of sexual and relationship satisfaction (see Table S4 for total, direct, and indirect effects).

Within-Person Mediation Models Separated by Sexual Needs

We further examined whether perceived sexual autonomy support during sex mediated

Table S4.

Daily Mediation Models Controlling for Perceived Partner Sexual Responsiveness in Study 2

Effects	Daily Actor's Sexual Need Fulfillment	Daily Actor's Sexual Satisfaction	Daily Partner's Sexual Satisfaction	Daily Actor's Relationship Satisfaction	Daily Partner's Relationship Satisfaction
Perceived Sexual Autonomy Support (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.20(.03)***	.12(.03)***	.03(.03)	.12(.03)***	-.00(.03)
Direct Effect		.05(.03)*	.00(.03)	.08(.03)**	-.02(.03)
Indirect Effect		**[.05, .10]**	[-.00, .01]	**[.02, .06]**	[-.00, .01]
Perceived Sexual Autonomy Support (mediated by Partner's Sexual Need Fulfillment)					
Total Effect	.04(.03)	.12(.03)***	.03(.03)	.12(.03)***	-.00(.03)
Direct Effect		.05(.03)*	.00(.03)	.08(.03)**	-.02(.03)
Indirect Effect		[-.01, .02]	[-.01, .03]	[-.01., .03]	[-.00, .02]
Perceived Partner Sexual Responsiveness (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.28(.04)***	.28(.03)***	.10(.03)***	.08(.03)*	.15(.03)***
Direct Effect		.18(.03)***	.07(.03)*	.02(.04)	.13(.04)***
Indirect Effect		**[.07, .01]**	[-.00, .01]	**[.03, .08]**	[-.00, .01]
Perceived Partner Sexual Responsiveness (mediated by Partner's Sexual Need Fulfillment)					
Total Effect	.05(.03)	.28(.03)***	.10(.03)***	.08(.03)*	.15(.03)***
Direct Effect		.18(.03)***	.07(.03)*	.02(.04)	.13(.04)***
Indirect Effect		[-.01, .03]	[-.00, .04]	[-.01, .04]	[-.00, .03]

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models.

daily satisfaction through fulfilling sexual needs for autonomy, competence, and relatedness respectively. On days when people reported perceiving greater sexual autonomy support from their partner during sex, they endorsed more sexual autonomy, and in turn, greater sexual (b = .24, SE = .03, t(492.89) = 7.30, p < .001, 95% CI[.18, .31] and relationship (b = .14, SE = .04, t(540.28) = 3.97, p < .001, 95% CI[.07, .21]) satisfaction. Need fulfillment for sexual autonomy mediated the effect of perceived sexual autonomy support on sexual and relationship satisfaction as well as their partner's sexual and relationship satisfaction (see Table S5 for total, direct, and indirect effects).

On days when people reported perceiving greater sexual autonomy support from their partner during sex, both they and their partner endorsed more sexual competence, and in turn, they reported greater sexual (b = .26, SE = .03, t(588.15) = 9,85, p < .001, 95% CI[.21, .31]) and relationship (b = .11, SE = .03, t(612.08) = 3.77, p < .001, 95% CI[.05, .17]) satisfaction and their partner reported greater sexual satisfaction (b = .05, SE = .03, t(588.15) = 1,90, p = .058, 95% CI[- .00, .11]). Both partner's need fulfillment for sexual competence significantly mediated the effect of perceived sexual autonomy support on one's own sexual and relationship satisfaction as well as partner's sexual satisfaction (see Table S5 for total, direct, and indirect effects)

.On days when people reported perceiving greater sexual autonomy support from their partner during sex, both they and their partner endorsed more sexual relatedness, and in turn, they reported greater sexual (b = .34, SE = .03, t(586.57) = 11,14, p < .001, 95% CI[.28, .40]) and relationship (b = .19, SE = .03, t(632.98) = 5.43, p < .001, 95% CI[.12, .25]) satisfaction and their partner reported greater sexual (b = .08, SE = .03, t(586.57) = 2.57, p = .010, 95% CI[.02, .14]) and relationship (b = .09, SE = .03, t(632.34) = 2.50, p = .013, 95% CI[.02, .15])

Table S5

Daily Mediation Model Separated by Needs in Study 2

Effects	Daily Sexual Need Fulfillment	Actor's Daily Sexual Satisfaction	Partner's Daily Sexual Satisfaction	Actor's Daily Relationship Satisfaction	Partner's Daily Relationship Satisfaction
Perceived Sexual Autonomy Support mediated by Actor's Sexual Autonomy					
Total Effect	.32(.03)***	.26(.02)***	.10(.03)***	.17(.03)***	.07(.03)**
Direct Effect		.19(.02)***	.08(.03)**	.12(.03)***	.05(.03)
Indirect Effect		**[.05, .10]**	[-.00, .00]	**[.02, .07]**	[-.00, .01]
Perceived Sexual Autonomy Support mediated by Partner's Sexual Autonomy					
Total Effect	.03(.03)	.26(.02)***	.10(.03)***	.17(.03)***	.07(.03)**
Direct Effect		.19(.02)***	.08(.03)**	.12(.03)***	.05(.03)
Indirect Effect		[-.02, .03]	[-.01, .02]	[-.00, .04]	[-.00, .02]
Perceived Sexual Autonomy Support mediated by Actor's Sexual Competence					
Total Effect	.32(.03)***	.26(.02)***	.10(.03)***	.17(.03)***	.07(.03)**
Direct Effect		.18(.02)***	.05(.02)	.13(.03)***	.05(.03)
Indirect Effect		**[.05, .11]**	[-.00, .02]	**[.02, .06]**	[-.00, .01]
Perceived Sexual Autonomy Support mediated by Partner's Sexual Competence					
Total Effect	.10(.03)**	.26(.02)***	.10(.03)***	.17(.03)***	.07(.03)**
Direct Effect		.18(.02)***	.05(.02)	.13(.03)***	.05(.03)
Indirect Effect		[-.00, .04]	**[.01, .05]**	[-.01, .03]	**[.00, .02]**
Perceived Sexual Autonomy Support mediated by Actor's Sexual Relatedness					
Total Effect	.38(.03)***	.26(.02)***	.10(.03)***	.17(.03)***	.07(.03)**

Direct Effect		.13(.02)***	.03(.02)	.09(.03)***	.02(.03)
Indirect Effect		**[.10, .16]**	**[.00, .02]**	**[.04, .10]**	**[.00, .02]**
Perceived Sexual Autonomy Support mediated by Partner's Sexual Relatedness					
Total Effect	.10(.03)***	.26(.02)***	.10(.03)***	.17(.03)***	.07(.03)**
Direct Effect		.13(.02)***	.03(.02)	.09(.03)***	.02(.03)
Indirect Effect		**[.01, .05]**	**[.01, .06]**	**[.01, .06]**	**[.01, .03]**

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. *$p < .05$, ** $p < .01$. *** $p < .001$.

satisfaction. Both partners' need fulfillment for sexual autonomy significantly mediated the effect of one's own perceived sexual autonomy support on sexual and relationship satisfaction as well as partner's sexual and relationship satisfaction (see Table S5 for total, direct, and indirect effects).

Between-Person Effects and Mediation Model Over Time

In addition to the within-person analyses referred to in Study 2, we also examined whether perceptions of partner autonomy support during sex aggregated across the 21-day period were associated with sexual and relationship satisfaction three months later, after controlling for satisfaction at baseline. We also tested whether sexual need fulfillment aggregated across the 21-day period mediated the associations. Sexual satisfaction was measured with the GMSEX at baseline (M=5.60, SD=1.29; α=.93, ω=.93) and three months later at follow up (M=5.58, SD=1.36; α=.95, ω=.95). Relationship satisfaction was measured with three items from the relationship satisfaction subscale of the PRQC at baseline (M=6.20, SD=.82; α=.90, ω=.90) and follow up (M=5.93, SD=1.12; α=.94, ω=.94).

After accounting for sexual and relationship satisfaction at baseline, people who perceived more sexual autonomy support from their partner over the course of the 21-day diary period reported greater sexual satisfaction three months later (*b*=.27, *SE*=.05, *t*(234.68)=4.68, *p*<.001, 95% CI[.16, .38]) and their partner reported greater relationship satisfaction (*b*=.10, *SE*=.05, *t*(235.30)=2.15, *p*=.032, 95% CI[.01, .20]) and marginally greater sexual satisfaction (*b*=.10, *SE*=.05, *t*(234.68)=1.81, *p*=.071, 95% CI[-.01, .20]) over time. After controlling for perceived partner sexual responsiveness over the course of the 21-day daily period, people who perceived more sexual autonomy support from their partner during sex still reported greater sexual satisfaction over time (*b*=.15, *SE*=.07, *t*(224.33)=2.25, *p*=.025, 95% CI[.02, .29]);

however, other effects were no longer significant. Sexual need fulfillment, aggregated across the daily experience study, also mediated the association between aggregated perceptions of sexual autonomy support from a partner during sex and relationship satisfaction over time (See Table S6 for total, direct, and indirect effects). People who perceived more sexual autonomy support from their partner during sex over the course of the 21-day period endorsed greater sexual need fulfillment during that time, and, in turn, reported greater relationship satisfaction three months later.

Mediation Model Over Time Separated by Each Sexual Need

We examined whether perceived partner sexual autonomy support across the 21-day daily period was associated with greater satisfaction over time through fulfilling sexual needs for autonomy, competence and relatedness. People who perceived greater sexual autonomy support from their partner over the course of the 21-day period endorsed greater sexual autonomy during that same period of time (b = .39, SE = .17, t(38.99) = 2.29, p = .028, 95% CI[.04, .74]), and, in turn, reported greater relationship satisfaction three months later (b = .20, SE = .07, t(230.94) = 2.90, p = .004, 95% CI[.06, .34]). Need fulfillment for sexual autonomy significantly mediated the effect of one's own perceived partner sexual autonomy support on relationship satisfaction three months later (see Table S7 for total, direct, and indirect effects).

Mediation Model Over Time Controlling for Perceived Partner Sexual Responsiveness

We tested whether sexual need fulfillment across the 21-day period mediated the associations between perceived sexual autonomy support during that same time and satisfaction three months later after accounting for perceived partner sexual responsiveness. There were no

Table S6

Mediation Models Over Time in Study 2

Effects	Daily Sexual Need Fulfillment	Follow-Up Actor's Sexual Satisfaction	Follow-Up Partner's Sexual Satisfaction	Follow-Up Actor's Relationship Satisfaction	Follow-Up Partner's Relationship Satisfaction
Perceived Partner Sexual Autonomy Support (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.34(.13)*	.27(.06)***	.10(.05)	.08(.05)	.10(05)*
Direct Effect		.10(.09)	.05(.09)	-.01(.06)	.10(.06)
Indirect Effect		[-.03, .11]	[-.03,.04]	**[.00, .16]**	[.-.04, .03]
Perceived Partner Sexual Autonomy Support (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	-.02(.13)	.27(.06)***	.10(.05)	.08(.05)	.10(05)*
Direct Effect		.10(.09)	.05(.09)	-.01(.06)	.10(.06)
Indirect Effect		[-.09. .04]	[-05, .04]	[.01, .06]	[-.06, .05]

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. *$p < .05$, **$p < .01$, ***$p < .001$.

Table S7

Follow Up Mediation Model Separated by Needs in Study 2

Effects	Sexual Need Fulfillment	Follow-up Actor's Sexual Satisfaction	Follow-up Partner's Sexual Satisfaction	Follow-up Actor's Relationship Satisfaction	Follow-up Partner's Relationship Satisfaction
Perceived Sexual Autonomy Support mediated by Actor's Sexual Autonomy					
Total Effect	.39(.17)*	27(.06)***	.10(.05)	.10(.05)	.10(.05)
Direct Effect		.16(.07)*	.07(.06)	.07(.06)	.07(.06)
Indirect Effect		[-.01, .20]	[-.05, .03]	**[.01, .18]**	[-.05, .03]
Perceived Sexual Autonomy Support mediated by Partner's Sexual Autonomy					
Total Effect	-.08(.16)	27(.06)***	.10(.05)	.10(.05)	.10(.05)
Direct Effect		.16(.07)*	.07(.06)	.07(.06)	.07(.06)
Indirect Effect		[-.02, .10]	[-.11, .07]	[-.03, .11]	[-.09, .05]
Perceived Sexual Autonomy Support mediated by Actor's Sexual Competence					
Total Effect	.33(.19)	.27(.06)***	.10(.05)	.08(.05)	.10(.05)*
Direct Effect		.19(.06)**	.03(.06)	.05(.06)	.05(.05)
Indirect Effect		[-.04, .14]	[-.05, .06]	[-.03, .08]	[-.00, .01]
Perceived Sexual Autonomy Support mediated by Partner's Sexual Competence					
Total Effect	.03(.18)	.27(.06)***	.10(.05)	.08(.05)	.10(.05)*
Direct Effect		.19(.06)**	.03(.06)	.05(.06)	.05(.05)
Indirect Effect		[-.03, .10]	[-.07, .08]	[-.01, .12]	[-.00, .01]
Perceived Sexual Autonomy Support mediated by Actor's Sexual Relatedness					
Total Effect	.33(.13)*	.27(.06)***	.10(.05)	.08(.05)	.10(.05)*
Direct Effect		.22(.06)***	.04(.06)	.03(.06)	.06(.06)
Indirect Effect		[-.01, .09]	[-.04, .03]	[-.01, .11]	[-.04, .03]
Perceived Sexual Autonomy Support mediated by Partner's Sexual Relatedness					

Total Effect	-.03(.12)	.27(.06)***	.10(.05)	.08(.05)	.10(.05)*
Direct Effect		.22(.06)***	.04(.06)	.03(.06)	.06(.06)
Indirect Effect		[-.01, .09]	[-05, .04]	[-.01, .09]	[-.04, .03]

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. *p < .05, ** p < .01. *** p < . 001.

significant indirect effects controlling for perceived partner sexual responsiveness (see Table S8 for total, direct, and indirect effects).

Additional Pre-registered Analyses

We pre-registered analyses examining the associations between perceived partner autonomy support during sex and life satisfaction at the daily level and over time, which were not included in the primary manuscript due to space considerations. On days when people perceived their partner as autonomously supportive during sex, they reported greater life satisfaction (b = .22, SE = .03, t(596.83) = 6.57, p < .001, 95% CI[.16, .29]) and their partners also reported greater life satisfaction (b = .22, SE = .03, t(596.83) = 6.57, p < .001, 95% CI[.16, .29]). People who perceived their partner as autonomously supportive during sex across the 21-day period reported marginally greater life satisfaction three months later (b = .09, SE = .05, t(237.00) = 1.92, p = .056, 95% CI[.64, .83]).

Study 3

Aggregate Main Effects of Daily Perceived Partner Sexual Autonomy Support on Daily Satisfaction

In addition to the within-person effects of perceived partner sexual autonomy support on daily sexual and relationship satisfaction reported in the main paper, we examined the between-person effects of perceived partner sexual autonomy support aggregated across the 21-day period on satisfaction. We found that people who perceived more sexual autonomy support from their partner across the 21-day period reported greater daily sexual (b=.54, SE=.01, t(232.90)=12.90, p<.001, 95% CI[.46, .62]) and relationship (b=.25, SE=.03, t(229.85)=8.11, p<.001, 95% CI[.19, .30]) satisfaction, and their partners also reported greater daily sexual (b=.21, SE=.01,

Table S8

Follow Up Mediation Models Controlling for Perceived Partner Sexual Responsiveness in Study 2

Effects	Daily Actor's Sexual Need Fulfillment	Follow-up Actor's Sexual Satisfaction	Follow-up Partner's Sexual Satisfaction	Follow-up Actor's Relationship Satisfaction	Follow-up Partner's Relationship Satisfaction
Perceived Sexual Autonomy Support (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.12(.20)	.15(.07)*	.01(.07)	.00(.06)	.04(.06)
Direct Effect		.12(.07)	.00(.01)	-.02(.06)	.02(.06)
Indirect Effect		[-.06, .14]	[-.06, .05]	[-.03, .13]	[-.05, .06]
Perceived Sexual Autonomy Support (mediated by Partner's Sexual Need Fulfillment)					
Total Effect	-.01(.17)	.15(.07)*	.01(.07)	.00(.06)	.04(.06)
Direct Effect		.12(.07)	.00(.01)	-.02(.06)	.02(.06)
Indirect Effect		[-.04, .09]	[-.09, .08]	[-.03, .12]	[-.05, .06]
Perceived Partner Sexual Responsiveness (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.17(.24)	.26(.09)**	.14(.09)	17.(.09)	.11(.08)
Direct Effect		.16(.10)	.08(.10)	.11(.10)	.05(.10)
Indirect Effect		[-.07, .28]	[-.07, .08]	[-.05, .11]	[-.09, .06]
Perceived Partner Sexual Responsiveness (mediated by Partner's Sexual Need Fulfillment)					
Total Effect	.01(.23)	.26(.09)**	.14(.09)	17.(.09)	.11(.08)
Direct Effect		.16(.10)	.08(.10)	.11(.10)	.05(.10)
Indirect Effect		[-.05, .12]	[-.11, .12]	[-.05, .11]	[-.09, .06]

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models.

t(232.95)=2.28, *p*=.024, 95% CI[.01, .18]) and relationship (*b*=.07, *SE*=.03, *t*(229.85)=2.41, *p*=.017, 95% CI[.01, .13) satisfaction.

Within-Person Mediation Models on Sex Days

To replicate our mediation model at the daily level with sexual need fulfillment mediating the associations between perceived partner sexual autonomy support and daily sexual and relationship satisfaction, we used a 1-1-1 model with all the primary variables measured at the same level (Zhang et al., 2009). Given that sexual need fulfillment was only measured on days in which sex occurred, the mediation model applies specifically to sex days. We used MCMAM (Selig & Preacher, 2008), with 20,000 resamples and 95% confidence intervals (CIs). Significant indirect effects were considered present if the CI does not contain zero.

We found that on days when people endorsed perceiving more sexual autonomy support from their partner, they reported greater sexual need fulfillment, and their partner did as well (see total effects in Table S9). In turn, on days when people reported greater sexual need fulfillment, they reported greater sexual (b = .44, SE = .05, t(625.33) = 9.22, p < .001, 95% CI[.35, .54]) and relationship (b = .30, SE = .05, t(626.66) = 6.45, p < .001, 95% CI[.21, .39]) satisfaction. Sexual need fulfillment significantly mediated the effect of perceived partner sexual autonomy support on both partners daily reports of sexual and relationship satisfaction (see Table S9 for total, direct, and indirect effects).

Within-Person Mediation Models Separated by Sexual Needs

We tested whether perceived partner sexual autonomy support mediated sexual and relationship satisfaction through sexual autonomy, competence, and relatedness. On days when

Table S9

Within-Person Mediation Models for Perceived Partner Sexual Autonomy Support in Study 3

Effects	Daily Sexual Need Fulfillment	Daily Actor's Relationship Satisfaction	Daily Partner's Relationship Satisfaction	Daily Actor's Sexual Satisfaction	Daily Partner's Sexual Satisfaction
Perceived Partner Sexual Autonomy Support (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.36(.02)***	.19(.01)***	.08(.01)***	.54(.01)***	.21(.01)***
Direct Effect		.07(.03)*	.00(.03)	.20(.03)***	-.04(.03)
Indirect Effect		**[.07, .15]**	[-.00, .01]	**[.12, .20]**	[-.00, .01]
Perceived Partner Sexual Autonomy Support (mediated by Partner's Sexual Need Fulfillment)					
Total Effect	.05(.02)*	.19(.01)***	.08(.01)***	.54(.01)***	.21(.01)***
Direct Effect		.07(.03)*	.00(.03)	.20(.03)***	-.04(.03)
Indirect Effect		[-.03, .04]	**[.00, .03]**	[-.01, .06]	**[.00, .05]**

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. * $p < .05$, ** $p < .01$, *** $p < .001$.

people reported perceiving sexual autonomy support from their partner, they endorsed more sexual autonomy (b = .33, SE = .03, t(833.37) = 11.30, p < .001, 95% CI[.27, .39]), and in turn, reported greater sexual (b = .25, SE = .04, t(590.51) = 6.08, p < .001, 95% CI[.17, .34] and relationship (b = .18, SE = .04, t(604.16) = 4.43, p < .001, 95% CI[.10, .25]) satisfaction.

On days when people perceived sexual autonomy support from their partner, they endorsed more sexual competence (b = .35, SE = .03, t(830.33) = 10.89, p < .001, 95% CI[.29, .41]), and in turn, reported greater sexual (b = .26, SE = .04, t(605.58) = 6.78, p < .001, 95% CI[.19, .34]) and relationship (b = .18, SE = .04, t(596.97) = 4.71, p < .001, 95% CI[.19, .25]) satisfaction. On days when people perceived sexual autonomy support from their partner, their partner endorsed more sexual competence (b = .08, SE = .03, t(818.81) = 2.74, p = .006, 95% CI[.02, .14]), and in turn, they reported greater sexual (b = .26, SE = .04, t(605.58) = 6.78, p < .001, 95% CI[.19, .34) and relationship (b = .18, SE = .04, t(596.97) = 4.71, p < .001, 95% CI[.19, .25]) satisfaction.

On days when people perceived sexual autonomy support from their partner, they endorsed more sexual relatedness (b = .39, SE = .03, t(845.21) = 12.84, p < .001, 95% CI[.33, .45]), and in turn, greater sexual (b = .32, SE = .04, t(615.93) = 8.14, p < .001, 95% CI[.24, .39]) and relationship satisfaction (b = .21, SE = .04, t(616.98) = 5.44, p < .001, 95% CI[.13, .28]). The associations between perceived partner sexual autonomy support and satisfaction were significantly mediated through fulfilling one's needs for sexual autonomy and relatedness as well as both partners' sexual competence, respectively (see total, direct, and indirect effects in Table S10).

Table S10

Within-Person Mediation Models Separated by Needs in Study 3

Effects	Sexual Need Fulfillment	Actor's Sexual Satisfaction	Partner's Sexual Satisfaction	Actor's Relationship Satisfaction	Partner's Relationship Satisfaction
Perceived Partner Sexual Autonomy Support mediated by Actor's Sexual Autonomy					
Total Effect	.33(.03)***	.39(.03)***	.07(.03)	.20(.03)***	.02(.03)
Direct Effect		.28(.03)***	-.01(.03)	.12(.03)	.03(.03)
Indirect Effect		**[.05, .12]**	[-.00, .00]	**[.03, .09]**	[-.00, .00]
Perceived Sexual Autonomy Support mediated by Partner's Sexual Autonomy					
Total Effect	.02(.03)	.39(.03)***	.07(.03)	.20(.03)***	.02(.03)
Direct Effect		.28(.03)***	-.01(.03)	.12(.03)	.03(.03)
Indirect Effect		[-.01, .02]	[-.01, .01]	[-.03, .02]	[-.01, .01]
Perceived Partner Sexual Autonomy Support mediated by Actor's Sexual Competence					
Total Effect	.35(.03)***	.39(.03)***	.07(.03)	.20(.03)***	.02(.03)
Direct Effect		.27(.03)***	-.03(.03)	.12(.03)***	.00(.03)
Indirect Effect		**[.06, .12]**	[-.00, .01]	**[.04, .09]**	[-.00, .01]
Perceived Partner Sexual Autonomy Support mediated by Partner's Sexual Competence					
Total Effect	.08(.03)***	.39(.03)***	.07(.03)	.20(.03)***	.02(.03)
Direct Effect		.27(.03)***	-.03(.03)	.12(.03)***	.00(.03)
Indirect Effect		[-.01, .05]	**[.01, .04]**	[-.01, .04]	**[.00, .03]**
Perceived Partner Sexual Autonomy Support mediated by Actor's Sexual Relatedness					
Total Effect	.39(.03)***	.39(.03)***	.07(.03)	.20(.03)***	.02(.03)
Direct Effect		.24(.03)***	-.02(.03)	.10(.03)**	.00(.03)
Indirect Effect		**[.09. .16]**	[-.00, .01]	**[.05, .11]**	[-.00, .01]
Perceived Partner Sexual Autonomy Support mediated by Partner's Sexual Relatedness					
Total Effect	.05(.03)	.39(.03)***	.07(.03)	.20(.03)***	.02(.03)
Direct Effect		.24(.03)***	-.02(.03)	.10(.03)**	.00(.03)

Indirect Effect	[-.02, .04]	[-.00, .04]	[-.02, .03]	[-.00, .02]

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. *$p < .05$, ** $p < .01$. *** $p < .001$.

Daily Effects and Within-Person Mediation Models Controlling for Perceived Partner Sexual Responsiveness

We entered perceived partner sexual responsiveness as a covariate with perceived partner sexual autonomy support on sexual and relationship satisfaction to account for their unique variance. With perceived partner sexual responsiveness only measured on days in which sexual activity occurred, the following analyses correspond specifically to sex days. We found that on days when people endorsed perceiving sexual autonomy support from their partner, they reported greater sexual (b = .21, SE = .03, t(699.39) = 6.26, p < .001, 95% CI[.15, .28]) and relationship (b = .13, SE = .03, t(745.03) = 3.96, p < .001, 95% CI[.07, .20]) satisfaction, while controlling for the associations between perceived partner responsiveness during sex and sexual (b = .29, SE = .04, t(620.75) = 7.18, p < .001, 95% CI[.21, .37]) and relationship (b = .11, SE = .04, t(644.03) = 2.76, p = .006, 95% CI[.03, .18]) satisfaction. Although partner effects for perceived partner sexual autonomy support on relationship and sexual satisfaction were no longer significant in the model, on days when people endorsed perceiving greater responsiveness from their partner during sex, their partner reported greater sexual satisfaction (b = .11, SE = .04, t(640.75) = 2.76, p = .006, 95% CI[.03, .19]).

We tested whether the mediated effects of sexual need fulfillment on perceived partner sexual autonomy support during sex and daily well-being held after accounting for perceived partner sexual responsiveness during sex. On days when people reported perceiving sexual autonomy support from their partner, they still reported greater sexual need fulfillment, but their partners no longer did after accounting for perceiving their partner as sexually responsive during sex as well (see total effects in Table S11). In turn, on days when people reported greater sexual need fulfillment, they still reported greater sexual (b = .38, SE = .04, t(583.35) = 7.06, p < .001,

95% CI[.27,.48]) and relationship (b = .29, SE = .05, t(592.96) = 5.63, p < .001, 95% CI[.19, .40]) satisfaction, but once again, their partners did not controlling for perceived partner sexual responsiveness during sex. After accounting for daily perceptions of partner sexual responsiveness, sexual need fulfillment significantly mediated the effect of daily perceptions of sexual autonomy support on people's daily reports of sexual and relationship satisfaction (see Table S11 for direct and indirect effects).

Mediation Models Over Time Separated by Needs

With the intention of replicating the mediation model over time in Study 2, we tested whether perceived partner sexual autonomy support aggregated across the 21-day period mediated sexual and relationship satisfaction three months later through sexual autonomy, competence, and relatedness during sex. People who reported perceiving greater sexual autonomy support from their partner across the 21-day period endorsed more sexual autonomy (b = .24, SE = .05, t(202.86) = 4.87, p < .001, 95% CI[.14, .34]), and in turn, reported greater sexual satisfaction three months later (b = .27, SE = .08, t(184.76) = 3.20, p = .002, 95% CI[.10, .43]. People who reported perceiving greater sexual autonomy support from their partner across the 21-day period also endorsed more sexual relatedness (b = .19, SE = .05, t(202.88) = 3.73, p < .001, 95% CI[.09, .29]), and in turn, reported greater sexual satisfaction three months later (b = .23, SE = .08, t(187.93) = 2.76, p = .006, 95% CI[.07, .40]. The associations between perceived partner sexual autonomy support across the 21-day period and sexual satisfaction three months later were significantly mediated through fulfilling one's needs for sexual autonomy and relatedness respectively (see total, direct, and indirect effects in Table S12).

As a more sensitive test of the temporal sequence of our mediation model, we examined whether perceived partner sexual autonomy support at baseline was associated with greater

Table S11

Within-Person Mediation Models Controlling for Perceived Partner Responsiveness During Sex in Study 3

Effects	Daily Sexual Need Fulfillment	Daily Actor's Sexual Satisfaction	Daily Partner's Sexual Satisfaction	Daily Actor's Relationship Satisfaction	Daily Partner's Relationship Satisfaction
Perceived Partner Sexual Autonomy Support (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.20(.03)***	.21(.03)***	-.07(.03)a	.13(.03)***	-.02(.03)
Direct Effect		.14(.03)***	-.07(.03)*	.06(.03)	-.01(.03)
Indirect Effect		**[.05, .01]**	[-.00, .01]	**[.04, .09]**	[-.00, .00]
Perceived Partner Sexual Autonomy Support (mediated by Partner's Sexual Need Fulfillment)					
Total Effect	.014(.03)	.21(.03)***	-.07(.03)a	.13(.03)***	-.02(.03)
Direct Effect		.14(.03)***	-.07(.03)*	.06(.03)	-.01(.03)
Indirect Effect		[-.01, .03]	[-.01, .03]	[-.02, .02]	[-.01, .02]
Perceived Partner Sexual Responsiveness (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.32(.03)***	.29(.04)***	.11(.04)**	.11(.04)**	.05(.04)
Direct Effect		.16(.04)***	.07(.04)	.02(.04)	.03(.04)
Indirect Effect		**[.08, .16]**	[-.00, .01]	**[.06, .13]**	[-.03, .03]
Perceived Partner Sexual Responsiveness (mediated by Partner's Sexual Need Fulfillment)					
Total Effect	.06(.03)*	.29(.04)***	.11(.04)**	.11(.04)**	.05(.04)
Direct Effect		.16(.04)***	.07(.04)	.02(.04)	.03(.04)
Indirect Effect		[-.02, .05]	[.00, .05]	[-.02, .05]	**[.00, .04]**

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. * $p < .05$, ** $p < .01$, *** $p < .001$. $a = .05$

Table S12

Follow Up Mediation Model Separated by Needs

Effects	Daily Sexual Need Fulfillment	Follow up Actor's Sexual Satisfaction	Follow up Partner's Sexual Satisfaction	Follow up Actor's Relationship Satisfaction	Follow up Partner's Relationship Satisfaction
Baseline Perceived Partner Sexual Autonomy Support mediated by Actor's Sexual Autonomy					
Total Effect	.20(.04)***	.03(.06)	.06(.05)	.01(.04)	.02(.04)
Direct Effect		-.04(.06)	.04(.05)	-.01(.04)	.02(.04)
Indirect Effect		**[.03, .01]**	[-.01, .01]	[-.01, .02]	[-.00, .00]
Baseline Perceived Sexual Autonomy Support mediated by Partner's Sexual Autonomy					
Total Effect	-.01(.04)	.03(.06)	.06(.05)	.01(.04)	.02(.04)
Direct Effect		-.04(.06)	.04(.05)	-.01(.04)	.02(.04)
Indirect Effect		[-.04, .03]	[-.03, .03]	[-.01, .02]	[-.01, .00]
Baseline Perceived Partner Sexual Autonomy Support mediated by Actor's Sexual Competence					
Total Effect	.23(.04)***	.03(.06)	.06(.05)	.01(.04)	.02(.04)
Direct Effect		.00(.06)	.02(.05)	-.01(.04)	.03(.04)
Indirect Effect		**[.03, .13]**	[-.01, .01]	[-.02, .04]	[-.01, .01]
Baseline Perceived Partner Sexual Autonomy Support mediated by Partner's Sexual Competence					
Total Effect	.02(.04)	.03(.06)	.06(.05)	.01(.04)	.02(.04)
Direct Effect		.00(.06)	.02(.05)	-.01(.04)	.03(.04)
Indirect Effect		[-.04, .03]	[-.02, .04]	[-.02, .05]	[-.01, .01]
Baseline Perceived Partner Sexual Autonomy Support mediated by Actor's Sexual Relatedness					
Total Effect	.15(.05)***	.03(.06)	.06(.05)	.01(.04)	.02(.04)
Direct Effect		-.03(.06)	.05(.05)	-.01(.04)	.04(.04)

Indirect Effect		**[.01, .11]**	[-.01, .01]	[-.02, .03]	[-.01, .01]
Baseline Perceived Partner Sexual Autonomy Support mediated by Partner's Sexual Relatedness					
Total Effect	-.01(.05)	.03(.06)	.06(.05)	.01(.04)	.02(.04)
Direct Effect		-.03(.06)	.05(.05)	-.01(.04)	.04(.04)
Indirect Effect		[-.05, .02]	[-.03, .02]	[-.03, .02]	[-.01, .01]
Daily Perceived Partner Sexual Autonomy Support mediated by Actor's Sexual Autonomy					
Total Effect	.28(.05)***	.15(.05)**	.07(.05)	.01(.04)	.06(.04)
Direct Effect		.10(.06)	.05(.06)	-.01(.04)	.04(.04)
Indirect Effect		**[.02, .12]**	[-.01, .01]	[-.02, .04]	[-.01, .01]
Baseline Perceived Sexual Autonomy Support mediated by Partner's Sexual Autonomy					
Total Effect	.02(.05)	.15(.05)**	.07(.05)	.01(.04)	.06(.04)
Direct Effect		.10(.06)	.05(.06)	-.01(.04)	.04(.04)
Indirect Effect		[-.05, .03]	[-.02, .03]	[-.02, .05]	[-.01, .01]
Daily Perceived Partner Sexual Autonomy Support mediated by Actor's Sexual Competence					
Total Effect	.24(.05)***	.15(.05)**	.07(.05)	.01(.04)	.06(.04)
Direct Effect		.13(.06)*	.01(.06)	.00(,04)	.05(.04)
Indirect Effect		[-.01, .07]	[-.01, .02]	[-.03, .03]	[-.01, .01]
Daily Perceived Partner Sexual Autonomy Support mediated by Partner's Sexual Competence					
Total Effect	.06(.05)	.15(.05)**	.07(.05)	.01(.04)	.06(.04)
Direct Effect		.13(.06)*	.01(.06)	.00(,04)	.05(.04)
Indirect Effect		[-.02, .04]	[-.00, .03]	[-.03, .03]	[-.01, .01]
Daily Perceived Partner Sexual Autonomy Support mediated by Actor's Sexual Relatedness					
Total Effect	.20(.05)***	.15(.05)**	.07(.05)	.01(.04)	.06(.04)
Direct Effect		.12(.06)	.05(.06)	.01(.04)	.06(.04)
Indirect Effect		**[.01, .09]**	[-.02, .01]	[-.02, .03]	[-.01, .00]

Daily Perceived Partner Sexual Autonomy Support mediated by Partner's Sexual Relatedness					
Total Effect	.03(.04)	.15(.05)**	.07(.05)	.01(.04)	.06(.04)
Direct Effect		.12(.06)	.05(.06)	.01(.04)	.06(.04)
Indirect Effect		[-.05, .01]	[-.01, .03]	[-.04, .01]	[-.01, .01]
Daily Perceived Partner Sexual Autonomy Support mediated by Actor's Sexual Relatedness					
Total Effect	.20(.05)***	.15(.05)**	.07(.05)	.01(.04)	.06(.04)
Direct Effect		.12(.06)	.05(.06)	.01(.04)	.06(.04)
Indirect Effect		**[.01, .09]**	[-.02, .01]	[-.02, .03]	[-.01, .00]
Daily Perceived Partner Sexual Autonomy Support mediated by Partner's Sexual Relatedness					
Total Effect	.03(.04)	.15(.05)**	.07(.05)	.01(.04)	.06(.04)
Direct Effect		.12(.06)	.05(.06)	.01(.04)	.06(.04)
Indirect Effect		[-.05, .01]	[-.01, .03]	[-.04, .01]	[-.01, .01]

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. *$p < .05$, ** $p < .01$. *** $p < .001$.

sexual and relationship satisfaction over time through sexual autonomy, competence, and relatedness aggregated across the 21-day period. People who reported perceiving greater sexual autonomy support from their partner at baseline endorsed greater sexual autonomy across the 21-day period (b = .23, SE = .04, t(204.79) = 5.30, p < .001, 95% CI[.15, .32]), and in turn, sexual satisfaction over time (b = .33, SE = .08, t(187.29) = 4.05, p < .001, 95% CI[.17, .48]). People who reported perceiving greater sexual autonomy support from their partner at baseline also endorsed greater sexual competence across the 21-day period (b = .15, SE = .05, t(204.98) = 3.10, p = .002, 95% CI[.06, .25]), and in turn, sexual satisfaction over time(b = .16, SE = .07, t(189.92) = 2.26, p = .025, 95% CI[.20, .31]). People who reported perceiving greater sexual autonomy support from their partner at baseline endorsed greater sexual relatedness across the 21-day period (b = .22, SE = .04, t(203.58) = 5.14, p < .001, 95% CI[.14, .30]), and in turn, sexual satisfaction over time (b = .30, SE = .08, t(189.99) = 3.57, p < .001, 95% CI[.13, .46]). The associations between perceived partner sexual autonomy support at baseline and sexual satisfaction three months later were significantly mediated through fulfilling one's needs for sexual autonomy, competence, and relatedness respectively across the 21-day period (see total, direct, and indirect effects in Table S12).

Mediation Models Over Time Controlling for Perceived Partner Sexual Responsiveness

We also examined whether sexual need fulfillment aggregated across the 21-day period mediated the associations between perceptions of partner autonomy support during sex and sexual and relationship satisfaction over time after controlling for perceived partner responsiveness during sex. However, there were no significant mediation models (for total, direct, and indirect effects see Table S13).

Table S13.

Follow Up Mediation Models Controlling for Perceived Partner Responsiveness During Sex

Effects	Daily Sexual Need Fulfillment	Follow up Actor's Relationship Satisfaction	Follow up Partner's Relationship Satisfaction	Follow up Actor's Sexual Satisfaction	Follow up Partner's Sexual Satisfaction
Perceived Partner Sexual Autonomy Support (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.07(.03)*	.01(.05)	.07(.04)	.10(.06)	.08(.06)
Direct Effect		.00(.05)	.06(.04)	.08(.06)	.07(.06)
Indirect Effect		[-.00, .02]	[-.00, .01]	[-.01, .04]	[-.01, .01]
Perceived Partner Sexual Autonomy Support (mediated by Partner's Sexual Need Fulfillment)					
Total Effect	.02(.03)	.01(.05)	.07(.04)	.10(.06)	.08(.06)
Direct Effect		.00(.05)	.06(.04)	.08(.06)	.07(.06)
Indirect Effect		[-.01, .02]	[-.00, .01]	[-.01, .03]	[-.01, .03]
Perceived Partner Sexual Responsiveness (mediated by Actor's Sexual Need Fulfillment)					
Total Effect	.58(.05)***	-.01(.06)	-.07(.06)	.24(.08)**	-.10(.08)
Direct Effect		-.05(.09)	-.12(.09)	.14(.11)	-,17(.11)
Indirect Effect		[-.03, .10]	[-.01, .03]	[-.04, .24]	[-.01, .03]
Perceived Partner Sexual Responsiveness (mediated by Partner's Sexual Need Fulfillment)					
Total Effect	.08(.05)	-.01(.06)	-.07(.06)	.24(.08)**	-.10(.08)
Direct Effect		-.05(.09)	-.12(.09)	.14(.11)	-,17(.11)
Indirect Effect		[-.05, .15]	[-.01, .02]	[-.09,.19]	[-.01, .04]

Note. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are SEs; numbers inside brackets are upper and lower limits of 95% confidence intervals from Monte Carlo Method for Assessing Mediation (MCMAM) mediation analyses. Dyads in these analyses are indistinguishable and actor and partner effects are tested in the same model, therefore, the total and direct effects are the same for the actor and partner mediation models. * $p < .05$, ** $p < .01$, *** $p < .001$. *a = .056*

Moderation by Sexual Activity

For all the interactions between daily perceived partner sexual autonomy support and sexual activity on sexual and relationship satisfaction, see Table S14.

Moderation by Gender and Relationship Duration

We examined whether the associations between PPSAS and satisfaction were moderated by either gender or relationship duration. There were no significant interactions between PPSAS and relationship duration on sexual or relationship satisfaction at baseline, the daily level, or follow up. There was a significant interaction between gender and daily PPSAS on daily sexual satisfaction (b=.15, SE=.10, t(3361.05)=4.99, p<.001, 95% CI[.09, .21]). On days when women perceived their partner as sexually autonomously supportive, they reported greater sexual satisfaction (b=.47, SE=.02, t(3152.65)=22.85, p<.001, 95% CI[.43, .51]), however, the effect was stronger for men (b=.62, SE=.02, t(3308.40)=30.59, p<.001, 95% CI[.58, .66]). There was also a significant interaction between gender and daily PPSAS on a partner's sexual satisfaction (b=.15, SE=.10, t(3361.05)=4.99, p<.001, 95% CI[.09, .21]). On days when men perceived their partner as sexually autonomously supportive, their partner reported greater sexual satisfaction (b=.16, SE=.02, t(3013.59)=7.57, p<.001, 95% CI[.22, .30]), however, the effect was stronger for women's partners (b=.26, SE=.02, t(3138.56)=13.17, p<.001, 95% CI[.22, .30]).

Table S14

Interactions Between Daily PPSAS and Sexual Activity on Daily Relationship and Sexual Satisfaction in Study 3

APIM Parameter	***b***	***SE***	***t***	***p***	**95% CI**
Relationship Satisfaction					
Intercept	5.81	0.05	109.17	<.001	[5.70, 5.91]
Aggregated PPSAS (Actor)	0.24	0.03	7.73	<.001	[.18, .30]
Within-Person PPSAS (Actor)	0.21	0.02	14.43	<.001	[.18, .24]
Aggregated PPSAS (Partner)	0.07	0.03	2.35	0.02	[.01, .13]
Within-Person PPSAS (Partner)	0.11	0.01	7.79	<.001	[.08, .14]
Sexual Activity	-0.01	0.06	-0.13	0.9	[-.12, .10]
Aggregated PPSAS (Actor) * Sexual Activity	0.06	0.03	1.99	0.046	[.00, .11]
Within-Person PPSAS (Actor) * Sexual Activity	-0.03	0.03	-0.97	0.332	[-.09, .03]
Aggregated PPSAS (Partner) * Sexual Activity	-0.01	0.03	-0.23	0.82	[-.06, .05]
Within-Person PPSAS (Partner) * Sexual Activity	-0.09	0.03	-3.07	0.002	[-.15, -.03]
Sexual Satisfaction					
Intercept	3.92	0.08	49.07	<.001	[3.76, 4.07]
Aggregated PPSAS (Actor)	0.54	0.04	12.95	<.001	[.46, .62]
Within-Person PPSAS (Actor)	0.33	0.02	20.65	<.001	[.30, .36]
Aggregated PPSAS (Partner)	0.06	0.04	1.31	0.191	[-.03, .14]
Within-Person PPSAS (Partner)	0.07	0.02	4.6	<.001	[.04, .10]
Sexual Activity	1.44	0.06	23.95	<.001	[1.32, 1.56]
Aggregated PPSAS (Actor) * Sexual Activity	-0.09	0.03	-2.73	0.006	[-.15, -.02]
Within-Person PPSAS (Actor) * Sexual Activity	0.15	0.04	4.13	<.001	[.08, .22]
Aggregated PPSAS (Partner) * Sexual Activity	0.07	0.03	2.37	0.018	[.01, .13]
Within-Person PPSAS (Partner) * Sexual Activity	-0.01	0.03	-0.15	0.881	[-.07, .06]

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Dissertation Discussion

One key challenge of maintaining a romantic relationship over time is balancing both partners' needs and interests. In a highly interdependent domain such as sexuality, this may be heightened and partners' motivation to meet each other's needs and support each other's autonomy may be especially consequential for relationship maintenance. In my dissertation, I integrated Communal Theories of Sexual Motivation with Self-Determination Theory to further our understanding of how people can balance their partner's sexual needs with their own and support each other's sexual interests. Ultimately, my dissertation underscores the importance of being responsive to a partner's needs, balanced with asserting one's own needs, and supporting a partner's autonomy in the maintenance of desire and satisfaction. In the first paper, I demonstrated that being responsive to a partner's sexual needs is differentially associated with desire and satisfaction depending on whether responsiveness is motivated by having sex for pleasure and meaning or out of pressure and obligation. That is, I found that people higher in sexual communal strength and their partners engage in sex for more autonomous and less controlled reasons, and in turn report greater desire and satisfaction. In contrast, those higher in unmitigated sexual communion and their partners engage in sex for more controlled reasons, and in turn report lower desire and satisfaction. In the second paper, I tested the model using an experimental design and showed that when people are oriented toward being responsive to a partner's needs in addition to asserting their own needs (versus low sexual assertiveness or a neutral control condition) they feel more autonomously motivated to have sex, and in turn, report higher desire and satisfaction. Lastly, in the third paper, to consider how a partner influences a person's ability to be sexually autonomous (i.e., express and fulfill their own sexual needs), I introduced a novel construct, perceived partner sexual autonomy support. Here, I demonstrated

the unique value of perceiving a partner as autonomously supportive in the sexual domain for fulfilling both partner's sexual needs, and in turn, sexual and relationship satisfaction in general, during sex, daily, and over time, even after accounting for the confluence of perceived partner sexual responsiveness.

Theoretical Advances

This dissertation fundamentally identifies the motivational processes behind why being responsive to a partner's sexual needs can be either beneficial or costly for sexual and relationship well-being depending on whether it is paired with one's own or partner-supported sexual autonomy. Although research applying theories of communal motivation to sexuality has demonstrated the divergent effects of sexual communal strength and unmitigated sexual communion on sexual and relationship outcomes, there has been less attention paid to identifying the mechanisms explaining these differences. For example, previous research has demonstrated that people higher in sexual communal strength tend to be more motivated toward positive outcomes for the partner and the relationship during sex, which explains their higher sexual desire (Muise et al., 2013). Additionally, in one other study examining attentional cues during sex as mechanisms distinguishing sexual communal strength and unmitigated sexual communion, people higher in sexual communal strength attended to more positive and less negative cues and people higher in unmitigated sexual communion attended to more negative cues, which explained their divergent associations with sexual and relationship well-being (Impett et al., 2019). However, the research up until this point had not captured the motivational differences in being responsive to a partner's sexual needs when paired with autonomy versus self-neglect as suggested by Communal Theories of Sexual Motivation (Muise & Impett, 2016). This dissertation is the first to apply Self-Determination Theory (Knee et al., 2013) as a

framework for demonstrating that sexual communal motivation can be associated with greater desire and satisfaction when the underlying reasons for having sex are autonomous (i.e., aligned with genuine sexual interests and values), and associated with lower desire and satisfaction when sex is engaged in for controlled reasons (i.e., influenced by pressure and obligation). That is, the sexual and relational benefits of sexual communal strength, representing the balance between being responsive to a partner's sexual needs and maintaining one's own sexual needs (Muise & Impett, 2016), are motivated by intrinsic and meaningful reasons for having sex that align with one's authentic sexual self. In contrast, the costs of unmitigated sexual communion, reflecting the imbalance of being sexually responsive at the expense of oneself, stem from pressure and obligation to have sex which limits one's ability to be sexually authentic.

This dissertation also highlights the value of conceptualizing the motivational processes behind responsiveness to a partner's sexual needs and asserting one's own sexual needs as an inherently interpersonal dynamic between partners. Drawing on the dyadic nature of the data in the first paper, we consistently found that people higher in sexual communal strength had partners who reported feeling more sexually and relationally satisfied because they felt less pressured and obligated to have sex whereas partners of people higher in unmitigated sexual communion reported feeling less satisfied from having sex for more controlled reasons. This offers a key theoretical insight that being motivated to meet a partner's sexual needs does not actually benefit the partner when it involves self-neglect at least in part because having sex for controlled reasons is not satisfying for either partner. Instead, people who are able to balance sexual responsiveness with asserting their own sexual needs have more satisfied partners because they feel less pressure and obligation to meet their sexual needs in return.

In addition to sexual communal motivation influencing a partner's self-determined reasons for engaging in sex, this dissertation advanced the interpersonal function of perceiving a partner as autonomously supportive of one's sexual needs. Although Self-Determination Theory has advocated for the role of perceiving a partner as autonomously supportive—feeling that a partner acknowledges their perspective, provides choice and options, and encourages self-initiation—in promoting need fulfillment within relationships (La Guardia & Patrick, 2008), this dissertation is the first application of perceived partner autonomy support to the sexual domain. Indeed, sexuality is a unique domain through which perceiving autonomy support from a partner can allow people to fulfill their sexual needs by feeling sexually free, skillful, and connected with their partner, and in turn, experience greater satisfaction with not only their sexual experiences but also their relationship more generally. In addition to reflecting broader individual differences in perceptions of partner sexual autonomy support, the daily diary data revealed how people vary in their perceptions of a partner as autonomously supportive during sex, as well as on days when sex did not occur, and that both were associated with greater daily relationship and satisfaction for both partners. Additionally, the effects of perceived partner sexual autonomy support on relationship and sexual satisfaction remained over and above the influence perceived partner sexual responsiveness, suggesting that perceiving a partner as autonomously supportive is more than just feeling that a partner is responsive to one's sexual needs. Instead, people may feel empowered to assert their own needs when they notice a partner acknowledging their sexual preferences and interests, providing them with sexual options to choose from, and encouraging them to express and pursue their sexual interests and desires. Taken together, advancing the role of perceived partner sexual autonomy support provides unique insights into the supportive dynamics of sexual need fulfillment between partners in romantic relationships.

Broad Limitations and Future Directions

Despite the strengths of this work in being guided by a strong theoretical foundation in both communal and self-determined approaches and utilizing a variety of dyadic, experimental, daily experiences, and longitudinal methods, there are important limitations to consider that cut across the papers and highlight opportunities to improve this program of research in the future. One such limitation is the generalizability of this work. The demographics of samples in this dissertation reflected predominantly white, cisgendered, and heterosexual individuals. This reflects a broader issue in psychological research with its overemphasis on studying individuals from western, educated, industrialized, rich, and democratic (WEIRD) societies (Henrich et al., 2010), which has been increasingly criticized within sexuality and relationship science as well (McCormack, 2010; McGorray et al., 2023). The prevalence of self-selection bias among participants in sexuality and relationship research can similarly limit generalizability (Dawson et al. 2019, Park et al., 2021). Indeed, sexual motivation and supportive processes in romantic relationships can be expressed differently across social, economic and cultural dimensions (Frost et al., 2014). For instance, social class provides a prime example of how couples with higher incomes, more education and stable employment can often afford opportunities to pursue responsive and autonomous goals in their relationships that less affluent couples may lack due to various sources of pressure and control in their lives (Karney, 2021). Future research requires more careful consideration of inclusive sampling efforts for recruiting and retaining sexual and gender minority couples (see Whitton et al., 2023), as well as racially and ethnically diverse couples (see Karney et al., 2004). It would be worthwhile to explore sociodemographic factors as potential moderators as well as considering the role that motivation and support may play in buffering the challenges diverse couples face in promoting their well-being.

A marginalized population that could provide novel insights into the motivational and supportive dynamics of sexual need fulfillment are individuals in consensually non-monogamous relationships. Expanding from the confines of exclusively relying on a monogamous partner to fulfill one's sexual needs (Levine et al., 2018), the diversification of sexual need fulfillment from multiple sources (i.e., several partners) in consensual non-monogamy, can contribute to overall sexual need fulfillment (Conley & Moors, 2014). It is important to understand the various ways people are motivated to and support one another in getting their sexual needs met outside the context of a primary partner. Indeed, past work has shown that people in consensually non-monogamous relationships experience greater sexual need fulfillment as well as relationship and sexual satisfaction with their primary and secondary partners when they are more sexually communal (Muise et al., 2019) and self-determined (Wood et al., 2018, 2021). Future work could examine whether having a primary partner who is higher in sexual communal strength or unmitigated sexual communion influences the extent to which one feels sexually autonomous or controlled in another, concurrent relationship, and in turn, the corresponding associations with relational and sexual outcomes across relationships. Additionally, it would be worthwhile to examine whether perceiving one's primary partner as autonomously supportive of getting one's sexual needs fulfilled by other partners, as opposed to feeling pressured by one's partner to enter a consensually non-monogamous relationship, influences sexual and relationship satisfaction.

The samples used in this dissertation also predominantly included people in long-term relationships and ages averaging in their thirties, which limit the generalizability of the findings to different relationship stages across the lifespan. For instance, emerging adulthood is a key development milestone for people to explore and define their sexuality as they enter into romantic relationships (Halpern & Kaestle, 2014), and it would be worthwhile to capture how communal

and self-determined forms of sexual motivation develop over the course of a relationship from its early stages. Similarly, as people maintain romantic relationships into older age, sexual motivation may evolve to accommodate changes to sexual function and life experiences that can shape their sexual and relationship well-being (Gewirtz-Meydan & Ayalon, 2019).

While the focus of this dissertation was on how sexual motivation and support shape general sexual and relationship outcomes of desire and satisfaction, future research would benefit from examining more specific relationship dynamics and contexts unique to sexuality. One such avenue of research could be understanding how couples navigate sexual initiation and rejection in a responsive and self-determined manner. Past research has shown that communal motivation for pursuing sex with a partner is distinct from communal motivation to be understanding when a partner is disinterested in sex (Muise et al., 2017). Drawing on differences in sexual communal motivation, it would be interesting to see whether people higher in sexual communal strength are also able to decline sexual advances from a partner when not in the mood in an autonomous fashion that still maintains desire and satisfaction, whereas people higher in unmitigated sexual communion might struggle to reject sexual advances from a partner when not in the mood because they are motivated by controlled reasons for engaging in sex. Although past research has typically examined people's responses to sexual initiation and rejection from a partner (Byers & Heinlein, 1989; Kim et al. 2020), the role that partners play in autonomously supporting one's choice to initiate or refuse sex needs further study. Relative to the existing research on sexual rejection, more attention is warranted for understanding the motivation behind initiating sex between partners. One promising area of research to draw on for sexual initiation are notions of enthusiastic and affirmative consent, referring to the informed, voluntary and active components of consenting to sexual activity with a partner (Curtis & Burnett, 2017). People who are sexually responsive may

be more attuned to authentic cues of sexual interest and disinterest from a partner when they are motivated to understand, validate and care for a partner's sexual needs. Similarly, self-determined reasons for engaging in sex can differentiate when consent is autonomously motivated versus feeling pressured to consent out of sexual compliance. Perceived partner sexual autonomy support may promote a sexual environment where people feel comfortable and encouraged to offer enthusiastic and affirmative consent as well as decline sex when not interested.

Another way people express their sexual motivation and support in relationships are through sexual conversations with their partner. However, many couples avoid directly communicating about sex because it is more anxiety-provoking than non-sexual discussions (Rehman et al., 2017) and are instead more likely to follow established sexual scripts and routines (MacNeil & Byers, 2009). Perceiving sexual autonomy support from a partner may attenuate the threat associated with talking about sex in a relationship and allow partners to openly discuss their reasons for having (or not having) sex and their sexual needs. Past research examining observed conversations between couples showed that autonomy support was perceived by participants as more effective than controlling strategies in eliciting disclosure from a partner and associated with greater relationship satisfaction (Kil et al., 2021), which may extend to the sexual domain. For instance, self-disclosure of sexual secrets or interests in BDSM and kink practices to a partner can be a major challenge for people in relationships given the potential to be met with a lack of understanding and judgment from a partner (Fox et al., 2021; Meyer & Chen, 2019). People may be more open to self-disclose aspects of their sexual identity to an autonomously supportive partner who encourages them to authentically express their desires in a self-determined manner.

While this dissertation provided a comprehensive examination of motivation and support guided by communal and self-determined theories of sexuality, there are some neglected areas of

the theories worth addressing. In their original theorizing of general and unmitigated forms of communion, Helgeson and Fritz (2000) contrasted communion with agency, suggesting that agency could also be unmitigated. Indeed, existing work on self-focused sexual motives demonstrates that agentic motivations can have divergent associations with sexual and relationship satisfaction with high sexual assertiveness being associated with higher sexual and relationship quality (e.g., Haavio-Mannila & Kontula, 1997; Greene & Faulkner, 2005) whereas sexual narcissism, which also taps into high sexual agency, is largely associated with lower satisfaction (e.g., Widman & McNulty, 2010). Beyond the current conceptualization of sexual responsiveness paired with high and low sexual agency, it would be worthwhile to explore how high and low levels of sexual responsiveness may interact with varying levels of sexual agency, and the implications that may pose for sexual and relationship well-being. In addition to understanding how people perceive their partner as supportive of their sexual autonomy, it is important to consider how partners could be perceived as controlling instead and the interpersonal processes involved in thwarting their sense of sexual autonomy (Rocchi et al., 2017), which can have negative sexual and relational consequences. Similarly, consistent with a growing body of research distinguishing the effects of perceived autonomy support from competence and relatedness support across interpersonal relationships (Rocchi et al., 2017), it would be informative for future work to separately account for how perceived sexual competence and relatedness support from partners can specifically cultivate sexual skills and intimacy in relationships.

Clinical Implications

This dissertation primarily examined sexual motivation and support in community samples of couples despite an extensive body of research applying both communal and self-determination theories to clinical samples of couples coping with sexual difficulties (Bockaj et al., 2019; Hogue

et al., 2019; McClung et al., 2024; Muise et al., 2017b, 2018; Pecore et al., 2023). For clinical conditions that can undermine a sense of control over one's own sexuality, being responsive to a partner's sexual needs in a way that aligns with personal sexual need fulfillment is a way that people can harness their autonomous capacity to enjoy and value sex in spite of their sexual challenges. The experimental findings from this dissertation also suggest that being responsive to a partner's sexual needs in an autonomous manner is something that people can be oriented toward and may be able to be cultivated in relationships. The theoretical framework of integrating sexual responsiveness with personal need fulfillment in relationships may be scalable to sex and couples therapy. Psychoeducation about sexual communal motivation, self-determined reasons for engaging in sex, and perceived partner sexual autonomy support can be effective at promoting sexual and relationship satisfaction based on similar interventions (Dawson et al., 2023; Muise et al., 2018). These findings can also be embedded within existing therapeutic modalities such as a systems-based approach to couples and sex therapy, which has historically advocated for the value of partners regulating their emotions and tolerating the uncertainty associated with effectively balancing sexual responsiveness with assertiveness (Schnarch, 2009). Similarly, clinicians might use cognitive-behavioral interventions to monitor and shift thoughts and behaviours that are consistent with being sexually communal while promoting sexual assertiveness through communication skills training (Jangi et al., 2023). There is also a large body of evidence demonstrating the efficacy of clinical health interventions informed by Self-Determination Theory for health-related behavioural change (e.g., dieting, exercise; Teixeira et al., 2021), which have been successfully adapted to couples as well (Gorin et al., 2022), highlighting the potential for extending this clinical approach to sexual health.

Concluding Remarks

A defining crucible of sexual motivation and support in relationships is how people navigate being responsive to a partner's sexual needs while still asserting their own sexual needs. By integrating communal and self-determined approaches to sexual need fulfillment through multiple methods, this dissertation demonstrated how and why the reasons for being responsive to a partner's sexual needs and the perception of partner as supportive of one's sexual needs are central to sexual and relationship well-being. This program of work provides a rich foundation on which future research can extend the value of being sexually responsive and self-determined in relationships to diverse populations, contexts, and interventions.

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