

Sexual need fulfillment and satisfaction in consensually nonmonogamous relationships

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Abstract

Consensually nonmonogamous (CNM) relationships allow individuals to fulfill their sexual needs with multiple partners, but research has yet to investigate how having one's sexual needs met in one relationship is associated with satisfaction in another relationship. We draw on models of need fulfillment in CNM relationships and theories of sexual communal motivation to test how sexual need fulfillment in one relationship is associated with satisfaction in another, concurrent relationship. Across two studies, individuals in CNM relationships ($N = 1,054$) who were more sexually fulfilled in their primary relationship reported greater relationship satisfaction with their secondary partner. In Study 2, men who were more sexually fulfilled in their secondary relationship reported greater relationship satisfaction with their primary partner, but women who were more sexually fulfilled with their secondary partner reported lower sexual satisfaction in their primary relationship. Implications for communal relationships and need fulfillment are discussed.

Keywords

Consensual nonmonogamy, need fulfillment, polyamory, relationships, sexuality

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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.

—Esther Perel (2007)

In North America, compared with previous eras, people expect more fulfillment from their romantic relationships today (Finkel, Hui, Carswell, & Larson, 2014). Romantic partners expect to give and receive love, passion, comfort, and support, as well as derive a sense of meaning from their relationships. Of course, getting all of these needs met from *one* partner is a tall order. A relatively recent development, historically speaking, is expecting sexual fulfillment with the same partner over the course of time (Finkel et al., 2014). One novel solution to the idea that it may be challenging for one person to meet all of these needs, proposed by Conley and Moors (2014), is to seek fulfillment from more than one partner. Specifically, Conley and Moors draw on the experience of those in consensually nonmonogamous (CNM) relationships in which all parties agree that it is acceptable to have additional romantic or sexual partners (Conley, Ziegler, Moors, Matsick, & Valentine, 2013)—a population that is ideal to test theoretical questions about sexual need fulfillment in multiple relationships given that having multiple partners is consensual. We draw on models of need fulfillment in CNM relationships and theories of sexual communal motivation (Muise & Impett, 2016) to understand whether sexual need fulfillment influences satisfaction with multiple partners in a CNM relationship.

CNM relationships

People in CNM relationships form their own specific agreement with their partner(s); however, three broad categories of CNM relationships (Conley, Ziegler et al., 2013) include open relationships (partners can pursue additional sexual relationships; Hyde & DeLameter, 2000), swinging (partners can have sex outside of the relationship, usually in the context of specific events; Jenks, 1998), and polyamory (partners can engage in romantic relationships with more than one person; Klesse, 2006). Rubin, Moors, Matsick, Ziegler, and Conley (2014) found that approximately 5% of individuals recruited in general convenience samples identified as CNM—which is comparable to the number of people who identified as being gay or lesbian (2–3%; Ward, Dahlhamer, Galinsky, & Joestl, 2014)—and that approximately 21% of American singles have been involved in a CNM relationship at some point in their life (Hauptert, Gesselman, Moors, Fisher, & Garcia, 2016). Interest in CNM relationships among Americans has also been growing. Moors (2016) found that Google search queries about open relationships and polyamory increased significantly between 2006 and 2015. However, empirical research on the relational processes of CNM relationships is still relatively limited (Barker & Langdrige, 2010).

Early research on sexually open marriages revealed that couples can remain committed to a primary partner while engaging in consensual extramarital relationships and report high satisfaction with both their primary and secondary partners (Buunk, 1980).

People in CNM relationships also report similar levels of commitment, trust, and relationship satisfaction as those in monogamous relationships (Conley, Matsick, Moors, & Ziegler, 2017). The agreement to have multiple partners in CNM relationships may allow sexual need fulfillment in one relationship to influence satisfaction in another relationship. People engaged in CNM relationships express comfort and/or enthusiasm with another person meeting their partner's sexual needs (e.g., Ritchie & Barker, 2006). The findings from the current studies, therefore, offer an important theoretical advance for understanding whether sexual need fulfillment influences satisfaction with multiple partners in a CNM relationship.

Sexual need fulfillment in CNM relationships

One study of people in CNM relationships showed that having one's needs fulfilled in one relationship was not associated with (higher or lower) satisfaction and commitment in the other relationship (Mitchell, Bartholomew, & Cobb, 2014). Instead, people engaged in CNM relationships reported high general need satisfaction in both of their concurrent relationships, leading to the conclusion that the various relationships held by CNM individuals are largely independent of one another. However, it remains unclear the extent to which people's *sexual* need fulfillment across multiple partners is associated with relationship and sexual satisfaction. Given that sexual intimacy is an integral part of the human experience and a hallmark of contemporary theories of love and romance (see Conley et al., 2017 for further discussion), there are a couple of reasons why it is important to examine sexual need fulfillment in CNM relationships. First, whereas in monogamous relationships it is often acceptable for partners to have *other* needs met outside of the relationship (e.g., relying on family for emotional support), CNM relationships are unique insofar as partners are not limited to having their sexual needs fulfilled by one person (Conley & Moors, 2014). Second, research with monogamous couples has shown that sexual need fulfillment is uniquely associated with satisfaction, above and beyond general need fulfillment (Day, Muise, Joel, & Impett, 2015), suggesting that sexual need fulfillment is distinct from general need fulfillment.

Three different models of need fulfillment in CNM relationships have been posited (see Mitchell, et al., 2014): the contrast model, the additive model, and the compensation model. The *contrast model* suggests that having one's needs met in one relationship detracts from satisfaction in another relationship. This model is consistent with a common perception of people involved in CNM relationships that having multiple relationships detracts from relationship quality in each individual relationship (e.g., Conley, Moors, Matsick, & Ziegler, 2013). These lay perceptions of CNM relationship quality have some theoretical support. For instance, interdependence theory and the investment model of relationships (e.g., Rusbult & Van Lange, 2003; Rusbult, Agnew, & Arriaga, 2012) seek to understand relationship functioning by applying an economic lens of rewards and costs incurred by partners in the relationship. Specifically, high levels of relationship quality are influenced by high rewards/low costs and a low quality of alternatives (e.g., Le & Agnew, 2003). Thus, greater relationship satisfaction and commitment are, in part, products of derogating (or lack of options for) alternative romantic or sexual partners (Rusbult & Buunk, 1993). Stemming from these

perspectives, it is plausible that investing in people outside of the primary relationship will detract from satisfaction, an idea in line with the contrast model.

The *additive model* suggests that greater need fulfillment in one relationship is associated with greater satisfaction in another relationship (Cook, 2005). In other words, the benefits of one relationship “spillover” to enhance satisfaction in another, concurrent relationship. In theorizing “spillover” effects among people who practice polyamory, Mitchell et al. (2014) suggest that psychological well-being may be enhanced when people have the possibility of receiving varied need fulfillment from multiple romantic partners. Recent qualitative research found that the most commonly cited benefit of CNM relationships (reported by 42% of the sample) was diversified need fulfillment (Moors, Matsick, & Schechinger, 2017). Specifically, people in CNM relationships viewed their partners as a way to help displace needs that would typically be met by one person in a monogamous relationship—often, directly associating diversified need fulfillment to increased relationship satisfaction.

Previous research has also demonstrated that it is not only actual need fulfillment that is associated with relationship satisfaction, but the perception that a partner is willing to be responsive to one’s needs as they arise (for a review, see Reis, 2012). People who perceive that their partner is motivated to meet their needs report greater relationship satisfaction (Reis, 2012). Research drawing on sexual communal motivation theory (Muisse & Impett, 2016) has shown that people with romantic partners who are highly motivated to meet their sexual needs report greater sexual and relationship satisfaction (Day et al., 2015; Muise & Impett, 2015). That is, both people’s perception that their partner is motivated to meet their sexual needs and their perception of actual sexual need fulfillment are likely to contribute to greater sexual and relationship satisfaction in a given relationship. Unique to CNM relationships, both actual sexual need fulfillment and perceiving that a partner is motivated to meet one’s needs in one relationship may be associated with greater satisfaction in another relationship, an idea in line with the additive model.

The *compensation model* suggests that need fulfillment in one relationship is associated with greater satisfaction in another relationship, but particularly when need fulfillment in the initial relationship is low (Sheff, 2011). Research and theory focused on monogamous relationships have demonstrated that one reason people seek out extra-marital relationships is low need fulfillment (Baumeister & Leary, 1995; Lewandowski & Ackerman, 2006). In the context of CNM relationships, people might compensate for low sexual fulfillment in one relationship by deriving sexual connection from another relationship, which might help that person maintain satisfaction in their primary relationship because their needs are still being met.

Current studies

We examined how sexual need fulfillment and the motivation to fulfill a partner’s sexual needs are associated with sexual and relationship satisfaction among people engaged in a CNM relationship with at least two concurrent partners. We predicted that actual sexual need fulfillment (Study 1) and a partner’s willingness to meet one’s sexual needs (i.e., sexual communal motivation; Study 2) in one relationship will be associated with greater

sexual and relationship satisfaction, not only in the same relationship, but in another, concurrent relationship. In line with the additive model, we predicted that sexual need fulfillment in one relationship may “spillover” and be associated with increased satisfaction in another relationship. That is, higher need fulfillment in a primary relationship will be associated with greater satisfaction in a secondary relationship and vice versa. In line with the compensation model, we explore the possibility that the “spillover” effect may be more pronounced when need fulfillment is low in one relationship (see Table 1 for descriptions and predictions of each model).

Ruling out alternative explanations and generalizability of the findings

Given that both studies are correlational, we aimed to rule out several alternative explanations for our effects, including individual difference (attachment orientation, sexual responsiveness, personality, gender, sexual orientation) and relational factors (centrality of CNM identity and the type of CNM relationship). First, past research has found that a person’s attachment orientation is associated with their willingness to engage in a CNM relationship (Moors, Conley, Edelstein, & Chopik, 2015); more specifically, people high in avoidant attachment (i.e., those who value independence and resist closeness) tend to report more positive attitudes about CNM and report being more willing to engage in a CNM relationship. In addition, people who are securely attached (i.e., those who are comfortable with both closeness and autonomy) tend to be more satisfied in their relationships (e.g., Birbaum, Reis, Mikulincer, Gillath, & Orpaz, 2006). Therefore, in Study 1, we tested whether any associations between sexual need fulfillment and satisfaction remained after controlling for participants’ attachment orientation.

Given that people tend to project their own responsiveness onto their partners (e.g., Lemay & Clark, 2008), it is also possible that any associations between perceptions of a partner’s motivation to meet one’s sexual needs and satisfaction are driven by the person’s own responsiveness to their partners’ sexual needs. Therefore, in Study 2, we conducted additional analyses controlling for a person’s own sexual communal motivation to rule out this possibility.

Although all participants in the current studies identified as being in a CNM relationship, they may differ in how central this identity is to their relationships. It is possible that people who have more explicit agreements in their relationships (i.e., have discussed the “rules”) have partners who are more accepting of the person’s other relationships, and this might be driving any cross-relationship associations between sexual need fulfillment and satisfaction. Therefore, in Study 2, we tested whether any results remain significant after controlling for the extent to which participants report discussing the rules of their relationship with their primary partner.

Finally, we tested the generalizability of our findings across sexual orientation, gender, and relationship type. Samples of people in CNM relationships tend to be diverse in terms of sexual orientation (Moors, Rubin, Matsick, Ziegler, & Conley, 2014), and some research suggests that nonheterosexuals are more likely than heterosexuals to be comfortable with nonmonogamous agreements (see Moors et al., 2014). In both studies, we test whether the associations differ between people who identified as heterosexual versus nonheterosexual (i.e., lesbian, gay, bisexual, queer). In addition, some evidence

Table 1. Models of need fulfillment in consensually nonmonogamous relationships with associated predictions and empirical support.

Model	Description	Prediction(s)
Additive	Having sexual needs met by one partner will be associated with greater satisfaction with another partner.	<ol style="list-style-type: none"> 1. Positive association between primary partner sexual need fulfillment and secondary partner satisfaction. 2. Positive association between secondary partner sexual need fulfillment and primary partner satisfaction.
Compensation	High sexual need fulfillment in one relationship can buffer against low sexual need fulfillment in another relationship.	<ol style="list-style-type: none"> 1. Significant moderation between primary partner sexual need fulfillment and secondary partner need fulfillment when predicting satisfaction in the primary relationship where sexual need fulfillment with a secondary partner should be more strongly associated with primary partner satisfaction when sexual need fulfillment in the primary relationship is low vs. high. 2. Significant moderation between primary partner sexual need fulfillment and secondary partner need fulfillment when predicting satisfaction in the secondary relationship where sexual need fulfillment with a primary partner should be more strongly associated with secondary partner satisfaction when sexual need fulfillment in the secondary relationship is low vs. high.
Contrast	Having sexual needs met by one partner will detract from satisfaction in with another partner.	<ol style="list-style-type: none"> 1. Negative association between sexual need fulfillment with a primary partner and secondary partner satisfaction. 2. Negative association between sexual need fulfillment with a secondary partner and primary partner satisfaction.

suggests that men tend to be more negatively impacted by declines in sexual frequency compared with women (McNulty & Fisher, 2008), suggesting that perhaps they benefit more from having multiple partnerships, which may allow for more frequent sex. In both studies, we also test whether any of the associations are moderated by the gender of the participant. In Study 1, we recruited our participants from online forums devoted to CNM, and in Study 2, we also recruited participants from Amazon's Mechanical Turk (MTurk) to ensure diversity. In Study 2, we were also able to test for generalizability by relationship type (i.e., polyamorous, swingers, open).

Study 1 method

Participants and procedure

Participants were recruited from websites (e.g., Meetup.com), Facebook groups (e.g., Polyamory Weekly), and subreddits (i.e., r/Polyamory) dedicated to people with

interest in CNM relationships between November and December 2012. All participants were volunteers and had to be 18 years or older and self-identified as part of a CNM relationship.

A total of 589 participants completed the survey; from this, we excluded 28 respondents who indicated they were in a monogamous relationship and 145 respondents who were involved in fewer than two concurrent relationships. Given that the majority (89%) of the remaining sample identified as currently in a poly-amorous relationship, we limited the sample to this group prior to analyses. Thus, the final sample consisted of 405 participants. We initially conducted a power analysis for a two-predictor regression model to determine power for detecting our key question about the role of sexual need fulfillment with a primary partner and a secondary partner, which revealed that with a final sample size of $N = 405$, we had an 88% chance of detecting a small regression effect ($f^2 = .03$) with a two-tailed significance test ($\alpha = .05$). Following this, we decided to test our predictions using multilevel modeling to account for the fact that the same person is reporting on both relationships. On average, participants reported having three partners ($M = 2.85$; $SD = 1.16$), had been in their primary relationship for approximately 9 years ($M = 111.87$ months, $SD = 100.05$ months), and had been in their secondary relationship for approximately 3 years ($M = 40.51$ months, $SD = 52.10$ months). See Table 2 for participant demographics.

Measures

Participants completed an online survey where they reported on each of their current partners. We want to note that some people who engage in CNM relationships avoid using primary/secondary terminology (Aggiezez, 2014), which is why we did not ask people to report on their partners in this way. Instead, we asked participants to report on their partners in order of how much time they spend with each partner. However, for clarity, we use the terms “primary” and “secondary” partner when describing the results to refer to the partners with whom participants spend the most and second-most time, respectively. To facilitate answering questions about multiple partners, participants were asked to provide the initials for each of their partners. This identifier was piped into each question so participants could easily identify the partner about whom they were being asked (e.g., “How much do you cherish <first partner’s initials>?”). Although participants could report on a maximum of eight partners, the current analysis focuses on the two partners with whom participants spend the most amount of time. See Table 3 for correlations.

Relationship satisfaction. Relationship satisfaction was assessed with the 16-item Couples Satisfaction Index (Funk & Rogge, 2007). Ten items were rated on a 7-point scale, with varying scale anchoring. For instance, “I have a warm and comfortable relationship with my partner” was measured on a scale from 1 = *not at all true* to 7 = *completely true*. Six items regarding feelings about participants’ current relationship were rated on a 7-point semantic differential scale (e.g., “Our relationship is . . . interesting/boring.”). Ratings were summed, and higher scores indicate higher levels of satisfaction with a given

Table 2. Study 1 sample demographic characteristics ($N = 405$).

Characteristic	M (range) or n	SD or %
Age (years)	35.39 (59)	10.59
Gender		
Female	234	57.8%
Male	127	31.4%
Other	25	6.2%
No answer	19	4.7%
Ethnicity/race		
European-American/White	341	84.2%
Latino/Latina	5	1.2%
African-American/Black	3	0.7%
Asian-American	1	0.2%
Native American/First Nations	1	0.2%
Multiracial	19	4.7%
Other	16	4.0%
No answer	19	4.7%
Sexual orientation		
Bisexual	174	43.0%
Heterosexual	124	30.6%
Pansexual/omnisexual/queer	71	17.5%
Gay or lesbian	11	2.7%
Other	6	1.5%
No answer	19	4.7%

Table 3. Study 2 correlations among variables.

	1	2	3	4	5	6	7	8
1. P1 Sexual need fulfillment	—							
2. P1 Relationship satisfaction	.50***	—						
3. P1 Attachment avoidance	-.65***	-.22***	—					
4. P1 Attachment anxiety	-.21***	-.25	-.19***	—				
5. P2 Sexual need fulfillment	.05	.07	-.03	-.04	—			
6. P2 Relationship satisfaction	.14*	.19***	-.07	-.08	.55***	—		
7. P2 Attachment avoidance	-.09*	-.12*	.16**	.12*	-.27***	-.67***	—	
8. P2 Attachment Anxiety	-.12*	-.08	.01	.31***	-.19**	-.35	.22***	—

Note. P1 = primary partner; P2 = secondary partner.

*** $p < .01$; ** $p < .05$.

partner (primary partner: $M = 95.28$, $SD = 14.16$, $\alpha = .95$; secondary partner: $M = 84.32$, $SD = 17.03$, $\alpha = .95$). Participants reported significantly greater relationship satisfaction in their primary compared with their secondary relationship, $t(356) = 9.79$, $p < .001$.

Sexual need fulfillment. Sexual need fulfillment was measured using the partner-focused subscale of the New Scale of Sexual Satisfaction (Stulhofer, Busko, & Brouillard, 2010). Participants responded to the 8-item subscale using a 5-point scale ranging from 1 = *not at all satisfied* to 5 = *extremely satisfied*. Items include “(Satisfaction with) the way (partner) takes care of my sexual needs.” Higher scores reflect greater sexual need fulfillment (primary partner: $M = 3.69$, $SD = 0.98$, $\alpha = .92$; secondary partner: $M = 3.82$, $SD = 0.92$, $\alpha = .88$). There were no significant differences in sexual need fulfillment in their primary and secondary relationships, $t(296) = 1.78$, $p = 0.08$.

Attachment anxiety and avoidance. Attachment anxiety and avoidance in each relationship were measured using the 12-item Experiences in Close Relationships Inventory—Short (Wei, Russell, Mallinckrodt, & Vogel, 2007). Sample items include “I try to avoid getting too close to (partner)” (*avoidance*) and “I worry that (partner) won’t care about me as much as I care about them” (*anxiety*) and were rated on a 7-point scale ranging from 1 = *disagree strongly* to 7 = *agree strongly*. Higher scores indicate higher anxiety or avoidance (anxiety in primary relationship: $M = 2.61$, $SD = 1.04$, $\alpha = .71$; avoidance in primary relationship: $M = 1.72$, $SD = 0.90$, $\alpha = .84$; anxiety in secondary relationship: $M = 3.05$, $SD = 1.35$, $\alpha = .81$; avoidance in secondary relationship: $M = 2.49$, $SD = 1.14$, $\alpha = .83$).

Data analysis

We analyzed the data using multilevel modeling (for access to the data and syntax: <https://osf.io/tmnrz/>). Participants’ reports about both their primary and secondary partners were entered simultaneously into the model. In the first model, which tested evidence for the additive and contrast models, we entered primary partner sexual need fulfillment and secondary partner sexual need fulfillment as predictors of relationship satisfaction. Our key interest is in testing cross-relationship effects while accounting for same-relationship effects. In subsequent analyses, we tested whether there is evidence for a compensation model. We included primary partner sexual need fulfillment, secondary partner sexual need fulfillment, and the interaction between these variables as predictors of satisfaction. We probed significant interactions with simple slope analyses (Aiken & West, 1991). We then conducted an auxiliary analysis in which we reran all of the models controlling for participants’ attachment orientation in both relationships. Finally, we tested whether any of the associations were moderated by participant gender or sexual orientation.

Results

Tests of key predictions

Consistent with findings from past research on monogamous relationships (e.g., Muise & Impett, 2015), people who reported being more sexually fulfilled in their primary relationship reported greater primary relationship satisfaction, $b = 6.91$, 95% CI [5.51, 8.32], $t(294) = 9.68$, $p < .001$, and those who reported greater sexual need fulfillment

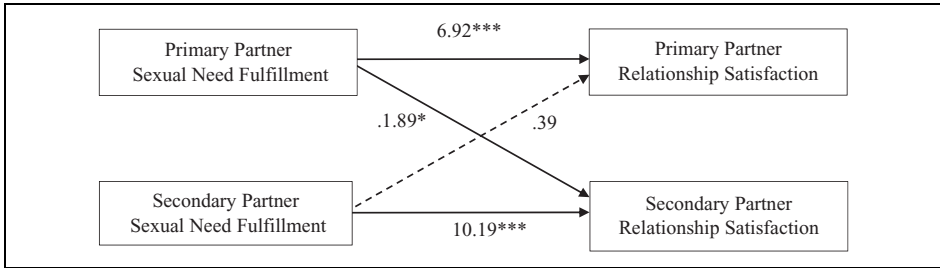


Figure 1. Associations between sexual need fulfillment and relationship satisfaction for primary and secondary partners in Study 1. * $p < .05$; ** $p < .01$; *** $p < .001$. Values are unstandardized. Solid line represents significant association; dashed line represents nonsignificant association.

with their secondary partner reported greater secondary relationship satisfaction, $b = 10.19$, 95% CI [8.45, 11.92], $t(294) = 11.56$, $p < .001$. Next, in line with the additive model, participants who reported being more sexually fulfilled in their primary relationship also reported feeling more satisfied with their secondary relationship, $b = 1.89$, 95% CI [.28, 3.50], $t(294) = 2.30$, $p = .02$. However, the reverse cross-relationship association—between secondary partner sexual need fulfillment and primary partner relationship satisfaction—was not significant, $b = 0.39$, 95% CI [−1.12, 1.91], $t(294) = 0.51$, $p = .60$ (see Figure 1). That is, there was a “spillover” effect from a person’s primary relationship onto their secondary relationship, but no such reverse effect.¹

In a separate model, we tested whether either of these associations was moderated by sexual need fulfillment in the other relationship (in line with the compensation model). The association neither between secondary partner sexual need fulfillment and primary partner relationship satisfaction, $b = 0.79$, 95% CI [−.53, 2.10], $t(293) = 1.18$, $p = .24$, nor between primary partner sexual need fulfillment and secondary partner relationship satisfaction, $b = 0.42$, 95% CI [−1.10, 1.93], $t(293) = 0.54$, $p = .59$, was moderated by need fulfillment in the other relationship.

Ruling out alternative explanations and generalizability

All of the associations, including the cross-relationship effect between primary partner sexual need fulfillment and secondary relationship satisfaction, remained significant after controlling for attachment anxiety and avoidance in both relationships. All effects reported above were significant both for sexual orientation groups and for men and women (see Online Supplementary Materials).

Study 2

In Study 2, we aimed to test the effects in an independent sample using a different conceptualization of sexual need fulfillment—perceptions of a partner’s motivation to meet their sexual needs—as research has shown that perceptions of a partner’s responsiveness in the sexual domain are associated with greater satisfaction (Muise & Impett, 2015). We also recruited a more diverse sample of people in CNM relationships

so we could test whether there are differences across people in open, swinging, and polyamorous relationships. In Study 2, we recruited participants using websites devoted to CNM as well as Amazon's MTurk. We used multiple recruitment methods due to concerns that those who are highly involved in the CNM community may be more satisfied (or report that they are more satisfied) than people less involved in the CNM community. As such, we tested whether our results are consistent across both recruitment methods.

Study 2 method

Participants and procedure

We recruited participants in two key ways. First, we posted online advertisements for the study during January and February of 2016 on websites (i.e., polyamorytoronto.ca), Facebook groups (i.e., Polyamory Weekly), and subreddits (e.g., r/Swingers, r/Polyamory) dedicated to people in CNM relationships. Second, we recruited participants from MTurk. To be eligible for the study, participants had to be at least 18 years old, self-identified as in a CNM relationship (e.g., open relationship, swinger, polyamorous) and be in two or more sexual/romantic relationships. Those sampled from the community were entered into a draw to win one of five \$50 (CAD) Amazon gift certificates, and those sampled from MTurk were paid \$1 (USD).

A total of 867 individuals responded to the advertisement. We excluded 16 respondents who indicated *nonconsensual nonmonogamy*, 161 who were involved in less than two concurrent relationships, and 41 who did not pass attention checks embedded within the survey. The final sample was $N = 649$ ($n = 410$ from community websites and $n = 239$ from MTurk). Our approach to conducting power analysis was the same as in Study 1; with a two-predictor model and a two-tailed significance test ($\alpha = .05$), we had a 98% chance of detecting a small regression effect ($f^2 = .03$). On average, participants reported having three partners ($M = 3.18$, $SD = 3.19$) and being in their primary relationship for approximately 5.5 years ($M = 66.65$ months, $SD = 71.47$ months) and in their secondary relationship for approximately 2 years ($M = 27.17$ months, $SD = 38.09$ months). See Tables 4 and 5 for demographic information.

Measures

In an online survey, participants could report on a maximum of five partners, but the current analysis focuses on the two partners with whom participants spent the most time. See Table 5 for correlations.

Sexual need fulfillment. Sexual need fulfillment was assessed using a measure of perceptions of partners' motivations to meet their sexual needs, adapted from a measure of sexual communal motivation (Muise, Impett, Kogan, & Desmarais, 2013). Items such as "How far would (partner) be willing to go to meet your sexual needs?" were rated on a 5-point scale (1 = *not at all* to 5 = *extremely*; primary partner: $M = 4.33$, $SD = 0.74$, $\alpha = .76$; secondary partner: $M = 4.11$, $SD = 0.78$, $\alpha = .78$). Participants reported greater

Table 4. Study 2 sample demographic characteristics ($N = 649$).

Characteristic	M (range) or n	SD or %
Age (years)	33.18 (18–52)	8.84
Gender		
Female	341	52.5%
Male	275	42.4%
Other	33	5.1%
Education		
Less than high school	2	0.3%
High school or equivalent	47	7.3%
Some college	144	22.2%
College diploma/associate degree	85	13.1%
Some university	46	7.1%
University degree	209	32.3%
Graduate school degree	115	17.7%
Ethnicity		
White/Caucasian	542	83.5%
Black/African-American	43	6.6%
South Asian	34	5.2%
Hispanic/Latin-American	27	4.2%
East Asian	17	2.6%
Other/no answer	59	8.8%
Religious affiliation		
Christian—Protestant	14.3	14.3%
Christian—Catholic	70	10.8%
Christian—Orthodox	9	1.4%
Hinduism	24	3.7%
Buddhism	12	1.8%
Judaism	10	1.5%
Islam	3	0.5%
Sikhism	2	0.3%
Other	78	12.0%
No religion	327	50.4%
No answer	21	3.3%
Type of consensually nonmonogamous relationship		
Polyamory	404	62.2%
Open relationship	163	25.1%
Swinging	82	12.6%

sexual need fulfillment in their primary compared with secondary relationship, $t(546) = 5.21, p < .001$. Participants also reported on their own sexual communal motivation for each partner (primary partner: $M = 4.38, SD = 0.67, \alpha = .71$; secondary partner: $M = 4.04, SD = 0.74, \alpha = .75$).

Relationship satisfaction. Relationship satisfaction was measured using the 3-item satisfaction subscale of the Perceived Relationship Quality Components Inventory (Fletcher, Simpson, & Thomas, 2000) which includes items such as “How satisfied are you with

Table 5. Study 2 correlations among variables.

	1	2	3	4	5	6
1. P1 Sexual need fulfillment	—					
2. P1 Relationship satisfaction	.43**	—				
3. P1 Sexual satisfaction	.49**	.57**	—			
4. P2 Sexual need fulfillment	.10*	.05	-.03	—		
5. P2 Relationship satisfaction	.16**	.30**	.21**	.41**	—	
6. P2 Sexual satisfaction	.15**	.25**	.28**	.52**	.63**	—

Note. Sexual need fulfillment is assessed with a measure of perceived partner sexual communal motivation. P1 = primary partner; P2 = secondary partner.

** $p < .01$; * $p < .05$.

your relationship with (partner)?” answered on a 7-point scale: 1 = *not at all* to 7 = *extremely* (primary partner: $M = 5.89$, $SD = 1.15$, $\alpha = .93$; secondary partner: $M = 5.27$, $SD = 1.32$, $\alpha = .96$). Participants reported greater relationship satisfaction with their primary partner than with their secondary partner, $t(542) = 9.81$, $p < .001$.

Sexual satisfaction. Sexual satisfaction was assessed using the 5-item Global Measure of Sexual Satisfaction (Lawrance & Byers, 1995) rated on 7-point bipolar scales (e.g., “bad–good” and “unsatisfying–satisfying;” primary partner: $M = 5.94$, $SD = 1.18$, $\alpha = .91$; secondary partner: $M = 5.69$, $SD = 1.23$, $\alpha = .92$). Participants reported greater sexual satisfaction with their primary partner than with their secondary partner, $t(534) = 3.40$, $p = .001$.

Explicitness of relationship “rules”. Explicitness of relationship “rules” was assessed with 1 item “My partner and I have talked openly about the ‘rules’ and expectations in our relationship.” asked about the primary partner ($M = 5.62$, $SD = 1.81$).

Data analysis

Data analysis followed the same procedures as Study 1 (for access to data and syntax: <https://osf.io/tnmrz/>). In addition, we also examined the possibility that the effects are driven by the participant’s own motivation to meet their partner’s sexual needs and the explicitness of the rules in their primary relationship and tested moderations by relationship type (i.e., open, polyamorous, swinging) and recruitment source.

Results

Tests of key predictions

Consistent with Study 1, we found significant same-relationship associations: Greater primary partner sexual need fulfillment was associated with greater primary relationship and sexual satisfaction, $b = .67$, 95% CI [.56, .79], $t(563.97) = 11.27$, $p < .001$; $b = .81$, 95% CI [.69, .93], $t(563.97) = 13.48$, $p < .001$, respectively, and greater secondary partner sexual need fulfillment was associated with greater secondary relationship and

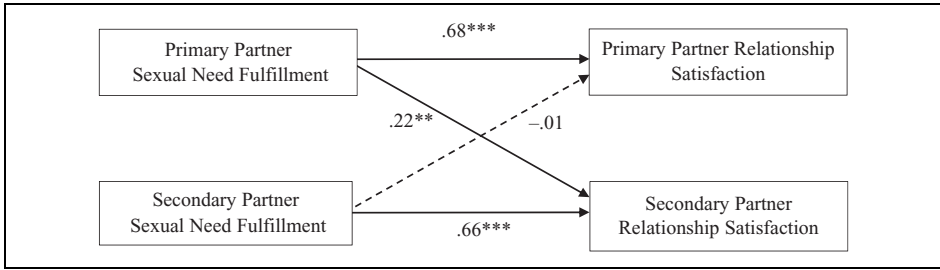


Figure 2. Associations between sexual need fulfillment and relationship satisfaction for primary and secondary partners in Study 2. * $p < .05$; ** $p < .01$; *** $p < .001$. Values are unstandardized. Solid line represents significant association; dashed line represents nonsignificant association.

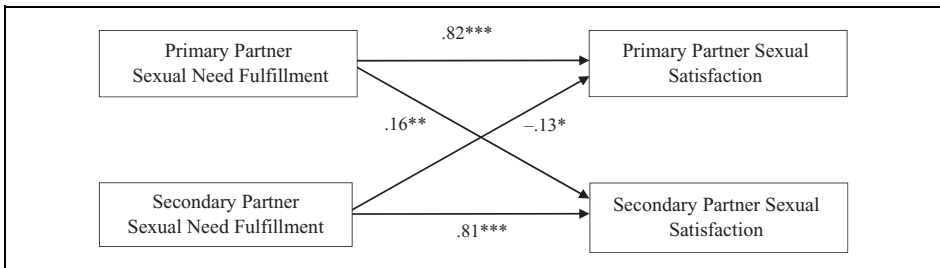


Figure 3. Associations between sexual need fulfillment and sexual satisfaction with primary and secondary partners in Study 2. * $p < .05$; ** $p < .01$; *** $p < .001$. Values are unstandardized.

sexual satisfaction, $b = .64$, 95% CI [.51, .77], $t(551.39) = 9.78$, $p < .001$; $b = .82$, 95% CI [.71, .94], $t(547.93) = 14.04$, $p < .001$, respectively. Next, consistent with Study 1, participants who perceived their primary partner as more motivated to meet their sexual needs reported higher relationship, $b = .12$, 95% CI [.08, .36], $t(530) = 3.15$, $p = .002$, and sexual satisfaction with their secondary partner, $b = .16$, 95% CI [.04, .28], $t(523) = 2.58$, $p = .01$ (see Figures 2 and 3). There was no significant association between secondary partner sexual need fulfillment and primary partner relationship satisfaction, $b = -.01$, 95% CI [-.12, .10], $t(543) = -0.12$, $p = .90$. However, unlike the results in Study 1, this association was significantly moderated by gender, $b = .17$, 95% CI [.05, .29], $t(514) = 2.79$, $p = .01$; men who reported greater sexual need fulfillment with their secondary partner reported greater relationship satisfaction with their primary partner, $b = .21$, 95% CI [.02, .40], $t(513) = 2.25$, $p = .03$, but this association was not significant for women, $b = -.12$, 95% CI [-.26, .02], $t(513) = -1.64$, $p = .10$.

In addition, inconsistent with our predictions, the results revealed some support for the contrast model. There was a negative association between secondary partner sexual need fulfillment and primary partner sexual satisfaction, $b = -.13$, 95% CI [-.24, -.02], $t(543) = -2.25$, $p = .03$. However, this effect was moderated by gender, $b = .16$, 95% CI [.04, .27], $t(514) = 2.56$, $p = .01$: Women who perceived their secondary partner as more motivated to meet their needs reported less sexual satisfaction in their primary

relationship, $b = -.26$, 95% CI [.41, $-.11$], $t(513) = -3.47$, $p = .001$, but this association was not significant for men, $b = .05$, 95% CI [$-.14$, .25], $t(513) = 0.56$, $p = .58$ (see Figures 2 and 3).²

Finally, in a separate model, we tested whether there is support for the compensation model. The results indicated that sexual need fulfillment in the primary relationship did not significantly moderate the association between secondary partner need fulfillment and primary relationship, $b = -.03$, 95% CI [$-.16$, .09], $t(542) = -0.53$, $p = .60$, or sexual satisfaction, $b = -.02$, 95% CI [$-.15$, .10], $t(543) = -0.37$, $p = .71$. However, secondary partner need fulfillment marginally moderated the association between primary partner need fulfillment and secondary relationship satisfaction, $b = .12$, 95% CI [$-.01$, .25], $SE = .07$, $t(522) = 1.80$, $p = .07$, and the association between primary partner sexual need fulfillment and secondary partner sexual satisfaction, $b = -.07$, 95% CI [$-.14$, .10], $t(531) = -1.78$, $p = .08$. Simple effects analyses revealed that primary partner sexual need fulfillment was associated with greater relationship and sexual satisfaction in a secondary relationship when secondary partner need fulfillment was low, $b = .33$, 95% CI [.17, .50], $t(529) = 4.04$, $p < .001$; $b = .23$, 95% CI [.08, .38], $t(522) = 3.16$, $p = .002$, respectively, but not high, $b = .05$, 95% CI [$-.14$, .24], $t(529) = 0.49$, $p = .63$; $b = .05$, 95% CI [$-.12$, .22], $t(523) = 0.59$, respectively.

Ruling out alternative explanations and generalizability

We ran additional analyses to rule out alternative explanations and test the generalizability of our effects (see Online Supplementary Materials). The effects were largely consistent across the type of relationship, recruitment method, and sexual orientation. In addition, the significant associations between sexual need fulfillment and relationship and sexual satisfaction remained significant when controlling for a person's own sexual communal motivation and the extent to which people had explicitly discussed the rules of their relationships with their primary partner, suggesting that these variables are not driving the effects.

General discussion

The current studies are the first to investigate the relationship between sexual need fulfillment and relationship satisfaction among people in CNM relationships. Consistent with an additive model, people who reported greater sexual need fulfillment (Study 1) and perceived their primary partner as motivated to meet their sexual needs (Study 2) reported greater relationship and sexual satisfaction with their secondary partner. Moreover, men who reported greater sexual need fulfillment in their secondary relationship reported greater relationship satisfaction with their primary partner (Study 2). One explanation for these additive or "spillover" effects is that having multiple partners is a way for people to achieve greater sexual need fulfillment, and this, in turn, enhances each relationship. Research on *new relationship energy* (a time of excitement when a new relationship begins) among people engaged in CNM relationship supports this "spillover" effect (Wosick-Correa, 2010). These effects may be strongest for men ("spillover" to both their primary and secondary relationships) since having multiple

relationships often means engaging in more frequent sex (Fleckenstein & Cox, 2015), and in research on monogamous couples, sexual frequency tends to be more important for men's relationship satisfaction than for women's (McNulty & Fisher, 2008).

In Study 2, we found some evidence to support a compensation model—people who reported that their primary partner was more motivated to meet their sexual needs reported greater relationship (and marginally greater sexual) satisfaction when their secondary partner was low, relative to high, in their motivation to be responsive to the person's sexual needs. It is possible that we did not find this in Study 1 since we assessed actual sexual need fulfillment (i.e., how satisfied a person is with their sexual relationship) as opposed to a partner's motivation to meet one's sexual needs. In fact, when we tested the same model in Study 2 using actual need fulfillment (i.e., sexual satisfaction), we did not find support for the compensation model. Perhaps, having a primary partner who is highly motivated to meet one's sexual needs, even if they cannot fulfill all of their partner's sexual needs themselves, allows people to seek out secondary relationships for specific purposes (e.g., to pursue a specific sex act that is not part of their repertoire with a primary partner). That is, perceiving a partner as high in sexual communal motivation may be associated with satisfaction in a secondary relationship, even if a secondary partner is not highly communal.

In Study 2, we also found some support for the contrast model in that women who reported greater sexual need fulfillment in their secondary relationship reported *less* sexual satisfaction with their primary partner. One explanation for these results is that women may recognize that they are not getting all of their sexual needs met by their primary partner and seek a secondary partner to meet these unfulfilled needs. Conley and Moors (2014) theorize that seeking a secondary relationship is a form of “offloading” of sexual demands—the primary partner is no longer expected to fulfill these sexual needs. The fact that we did not find a significant negative association between secondary partner need fulfillment and primary *relationship* satisfaction may be due to this theoretical offloading of expectations. Another possibility is that perceiving a secondary partner as highly motivated to meet one's sexual needs detracts from satisfaction in a primary relationship. Mitchell, Bartholomew, and Cobb (2014) discussed that, in CNM relationships, when a person experiences new relationship energy, the excitement and novelty of a new partner can “spillover” into the primary relationship (e.g., increasing happiness and frequency of sexual encounters). It is possible that, for women, this new relationship energy may not spillover and enhance sexual satisfaction in their primary relationship, but instead may lead them to feel less sexually satisfied with their primary partner comparatively. One factor that might explain the different findings regarding the contrast and compensation models across studies and between men and women is people's motivations for seeking out a secondary relationship. Future research may investigate people's sexual and nonsexual motivations for forming additional relationships (see Moors, Matsick, & Schechinger, 2017). To our knowledge, there is no existing empirical work on motivations for engaging in CNM relationships, but as with monogamous relationships (Meston & Buss, 2007), it is likely that motivations vary and have implications for satisfaction.

Theories of sexual communal motivation

The current study extends research on sexual communal motivation (Muise & Impett, 2016) to people in CNM relationships and demonstrates that, at times, sexual need fulfillment in one relationship can “spillover” to another relationship. However, sexual need fulfillment in a CNM relationship may be qualitatively different from sexual need fulfillment in a monogamous relationship and may include being comfortable with another person meeting a partner’s sexual needs. We found that higher sexual need fulfillment with one’s primary partner was more consistently associated with a secondary partner’s satisfaction than the reverse cross-relationship association (it was only men in Study 2 who reported a spillover effect from their secondary to their primary relationship). Arguably, this is due to the strong foundation that is necessary to maintain a primary relationship in a CNM context. Research indicates that people engaged in a CNM relationship report *lower* attachment avoidance (e.g., a discomfort with intimacy) than people in monogamous relationships (Moors et al., 2015). Therefore, primary partners may be particularly attuned to each other’s needs and comfortable with having others fulfill some of those needs.

These findings have broad implications. The belief that monogamy is superior is an (implicit) assumption underlying contemporary theories of development and intimacy (Moors & Schechinger, 2014; Moors et al., 2017), and the current findings suggest that it is valuable to consider how CNM relationships can inform existing perspectives of relationship quality. As Conley and Moors (2014) argue, applying some of the tenets of CNM relationships (i.e., that some needs can be outsourced to other relationships) can help “oxygenate” or increase happiness in monogamous relationships. For instance, open communication and managing jealousy and attraction are insights that CNM relationships could afford monogamous relationships. Future research could extend the current findings to monogamous relationships and investigate whether outsourcing needs to others or having a communal nonromantic relationship (e.g., close friend, family member) can improve one’s romantic relationship, and vice versa.

Limitations and future directions

Major strengths of the present research include two high-powered studies of people who are challenging to recruit, as well as the use of two different recruitment methods (targeted CNM listserv/groups and MTurk) to obtain diverse samples. Although it is possible that people who chose to participate in this research are more satisfied than those who did not participate, our data are correlational and do not allow us to test the causal direction of the effects. Longitudinal research in which people in CNM relationships are followed through the development of new relationships would extend the current findings. This could help inform whether people seek out new relationships because they expect that a new partner will enhance their current relationship(s) or whether the structure of CNM relationships provides benefits across relationships. Longitudinal research can also inform gender differences in the associations between sexual need fulfillment and satisfaction and whether the *new relationship energy* effect (Wosick-Correa, 2010) is stronger for men compared with women.

Future research is also needed to test possible mechanisms of the associations such as whether “spillover effects” of having a partner who is responsive to one’s sexual needs are, in fact, due to greater sexual need fulfillment overall (Finkel et al., 2014). Sampling more than two partners in future work would also allow for a broader picture of overall need fulfillment across relationships. An additional benefit of recruiting all partners is to ensure that partners are appropriately linked in the analyses (it is possible that a small number of people in our sample may have been in relationships with each other since we recruited from online forums). Another possible mechanism for cross-relationship associations is compersion; that is, feeling happiness when one learns that their partner is experiencing fulfillment with another person (e.g., Ritchie & Barker, 2006). It is possible that people higher in sexual communal motivation are more likely to experience compersion, and this could account for the cross-relationship effects. Finally, the cross-relationship effects in the current research are small, and a fruitful avenue for future research is testing when and for whom these cross-relationship associations are strongest. Perhaps people who feel more supported in their relationships reap more benefits (Bloedel & Manning, 2017).


Conclusion

The current research provides the first empirical test of the idea that having one’s sexual needs met by one partner might enhance satisfaction in another concurrent relationship. The findings suggest that having a partner who meets (or is highly motivated to meet) one’s sexual needs is associated with increased satisfaction not only in that relationship, but also in a concurrent relationship. We also found some limited support for contrast effects, where, for women, sexual need fulfillment in one relationship detracts from sexual satisfaction in a concurrent relationship. Interesting possibilities for future research include exploring the mechanisms for the association between sexual need fulfillment and satisfaction in CNM relationships and, more broadly, testing whether need fulfillment in one relationship is associated with satisfaction in other close relationships.

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Notes

1. Due to the small numbers of people in open and swinging relationships, we decided before conducting the analyses to include only people in polyamorous relationships. However, in response to a reviewer comment, we tested the model including

- participants in all types of CNM relationships and we found that although the same-relationship effects remained significant for both primary and secondary partners, the cross-relationship effect was nonsignificant but trended in the same direction as the original results, $b = 1.13$, 95% CI $[-.34, 2.62]$, $SE = .75$, $t(362) = 1.51$, $p = .13$).
2. If we replace our measure of sexual need fulfillment with sexual satisfaction (to be more consistent with Study 1), we replicate the same relationship associations, $b = .51$, 95% CI $[.44, .58]$, $t(505.01) = 13.82$, $p < .001$; $b = .67$, 95% CI $[.59, .75]$, $t(563.97) = 16.64$, $p < .001$, in both the primary and secondary relationships, respectively. For people in polyamorous relationships, we also replicate the cross-relationship association between sexual need fulfillment (assessed using the measure of sexual satisfaction) in a primary relationship and secondary relationship satisfaction, $b = .10$, 95% CI $[-.01, .21]$, $t(317) = 1.87$, $p = .06$, albeit marginal. In addition, for people in open relationships, we find that sexual need fulfillment in a secondary relationship is associated with greater primary relationship satisfaction, $b = .18$, 95% CI $[.05, .31]$, $t(146) = 2.76$, $p = .01$. We do not, however, replicate the compensation or contrast effects using sexual satisfaction as the predictor.

Supplementary material

Supplementary material for this article is available online.

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