The positive implications of sex for relationships

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Romantic relationships are vital to our physical health and psychological well-being (e.g., Diener & Seligman, 2002; House, Landis, & Umberson, 1988), and sexuality is a key factor that shapes the quality of romantic relationships. In fact, people who are the most satisfied with their sex lives are also the most satisfied with their relationships, and this is true for both dating and married couples (Brezsnyak & Whisman, 2004; Sprecher, 2002). Despite the importance of sex for relationships, couples face numerous challenges to having and maintaining a satisfying sexual relationship. Empirical research reveals that sexual desire tends to peak in the beginning stages of romantic relationships as intimacy is rapidly developing (Baumeister & Bratlavsky, 1999), and then often declines over time as partners become more secure and comfortable in the relationship (see review by Impett, Muise, & Peragine, 2014). As a result, romantic partners will inevitably encounter times in which their sexual interests differ (Impett & Peplau, 2003), and couples may disagree about when and how frequently to engage in sex or the specific activities in which they wish to engage (Blumstein & Schwartz, 1983; O'Sullivan & Byers, 1996). In a national study of couples married fewer than 5 years, disagreements about sexual frequency were one of the top three most cited arguments between partners (Risch, Riley, & Lawler, 2003), and many long-term couples find themselves in situations in which they have divergent sexual interests (Davies, Katz, & Jackson, 1999; Mark, 2012; Mark & Murray, 2012). Further, conflicts of interest about sex are one of the most common reasons why couples seek marital therapy (Rosen, 2000), and can be one of the most difficult types of conflict to successfully resolve (Sanford, 2003). Given the importance of sex for romantic relationships, these sexual difficulties are likely to threaten couples' global evaluations of the relationship. In fact, normative declines in sexual satisfaction may partially explain normative declines in marital satisfaction commonly observed in longitudinal research on marriage (e.g., Meltzer, McNulty, Jackson, & Karney, 2014).

But the positive side of this connection between sexual and relationship quality is that good sex is one powerful mechanism for enhancing relationships. When couples can successfully navigate sexual issues, feelings of closeness and intimacy in the relationship can be strengthened (Dawson, Fallis, & Rehman, 2010; Rehman et al., 2011). In this chapter, we will describe evidence demonstrating the importance of sexuality in relationships, and we will review research that sheds light on how couples can maintain sexual desire and satisfaction as they face declines or changes in desire over time as well as differences in their sexual interests. In the first section of the chapter, we describe the ways in which sex can benefit relationships, focusing on the roles of both sexual frequency and sexual satisfaction in shaping high-quality relationships. In the second section, we focus our attention on understanding how couples can stave off declines in sexual desire and satisfaction, with a focus on the individual differences and relationship factors that contribute to the maintenance of desire and sexual satisfaction over time. We then conclude the chapter by highlighting what we see as promising directions for future research on sex and relationships.

We want to acknowledge a few important caveats at the outset of the chapter. Although sexual aspects such as attraction, frequency, and communication have implications for the quality of casual relationships and new dating relationships (Fletcher, Kerr, Li, & Valentine, 2014; Lehmiller, VanderDrift, & Kelly, 2014), the current chapter is focused primarily on sexuality in the context of established romantic relationships. In addition, we acknowledge that sexuality in the context of romantic relationships also has a dark side. For example, many couples face specific sexual dysfunctions, such as erectile dysfunction and vaginismus (i.e., pain during sex) (e.g., Ferenidou et al., 2008), and sexual coercion is a stark reality, even in the context of established relationships (Brousseau, Bergeron, Hébert, & McDuff, 2011; O'Leary & Williams, 2006). These negative aspects of sexuality can be challenging - even devastating - for many people and couples, and are clearly in need of research attention. In line with the focus of this volume, however, our primary aim in this chapter is to highlight the positive side of sexuality in relationships - that is, to focus on the ways in which sex can lift people up and contribute to happy, flourishing relationships that last.

GOOD SEX IS GOOD FOR RELATIONSHIPS

Love is an ice cream sundae, with all the marvelous coverings. Sex is the cherry on top.

- Jimmy Dean

Sexuality is a key factor that shapes the quality of romantic relationships. As noted earlier, research has consistently demonstrated that people who are

the most satisfied with their sex lives are also the most satisfied with their romantic relationships (Brezsnyak & Whisman, 2004; Byers, 2005; McNulty, Wenner, & Fisher, 2015; Sprecher, 2002; Yeh, Lorenz, Wickrama, Conger, & Elder, 2006). In one of the strongest demonstrations of the association between a healthy sexual relationship and relationship satisfaction and vice versa, McNulty et al. (2015) used two eight-wave longitudinal studies of marriage to demonstrate that sexual satisfaction at one wave of measurement positively predicted changes in marital satisfaction from that wave to the next and that marital satisfaction at one wave positively predicted changes in sexual satisfaction from that wave to the next.

Sex and affection frequency in romantic relationships

Given the importance of sexual satisfaction to relationships, it is crucial to understand what makes for a satisfying sexual relationship. Does the frequency with which couples engage in sex or other affectionate activities lead to higher levels of sexual satisfaction? The answer appears to be "yes." Both men and women report feeling more satisfied with their sex lives when their frequency of engaging in sex is high (e.g., Cheung et al., 2008; Laumann, Gagnon, Michael, & Michaels, 1994; McNulty et al., 2015; Rahmani, Khoei, & Gholi, 2009). Interestingly, the multi-wave, longitudinal research described earlier indicates this association is bidirectional, such that sexually satisfied couples pursue sex more frequently, and frequent sex leads to increases in sexual satisfaction (McNulty et al., 2015). Further, the association between sexual frequency and sexual satisfaction is consistent for both men and women, and this has also been documented in individuals living in non-Western countries such as China (Cheung et al., 2008) and Iran (Rahmani et al., 2009). Finally, the association does not appear to be unique to heterosexual couples; it has also emerged in samples of same-sex couples (Blair & Pukall, 2014; Blumstein & Schwartz, 1983).

Do the implications of sexual frequency extend beyond sexual satisfaction? The answer to this question also appears to be "yes." Call and colleagues (1995) reported that (low) sexual frequency was the second strongest correlate of marital dissatisfaction, ranking only behind age and controlling for other important predictors of sexual frequency, such as relationship duration and whether or not couples had children living in the home. Further, in a study using data from the National Survey of Families and Households, Yabiku and Gager (2009) found that lower sexual frequency was associated with higher rates of relationship dissolution, particularly for cohabiting (compared to married) couples. Further, other work suggests that factors that affect relationship satisfaction may do so through their implications for the sexual relationship (Fisher &

McNulty, 2008; Meltzer & McNulty, 2010). For example, Meltzer and McNulty (2010) found that positive body image was positively associated with marital satisfaction for both partners, and these associations were fully mediated by sexual frequency and sexual satisfaction. In other words, women who evaluated their bodies more positively were happier in their marriages because they had more frequent, satisfying sex. Finally, other research indicates that established couples who report more frequent sex also report greater satisfaction with their lives overall (Muise, Schimmack, & Impett, 2015). In fact, the difference in well-being between having sex once a week compared to less than once a month is greater than the difference in well-being between making \$75,000 a year compared to \$25,000 (Muise et al., 2015). Of course, engaging in other affectionate and intimate behaviors also promotes sexual and relationship satisfaction (Heiman et al., 2011; Muise, Giang, & Impett, 2014), an issue we address in more detail later in this chapter. In fact, some research suggests the association between affectionate behaviors, such as kissing and cuddling, and relationship quality is as strong or stronger than the association between sexual frequency and relationship quality (Heiman et al., 2011).

Engaging in more frequent sex can also buffer romantic couples against other negative relationship outcomes. Both attachment insecurity (for review, see Cassidy & Shaver, 1999) and neuroticism (e.g., Karney & Bradbury, 1997) have been consistently associated with relationship dissatisfaction. However, research has shown that the negative effects of both factors are attenuated for people who engage in more frequent sex. Russell and McNulty (2011) demonstrated that neuroticism was unassociated with marital satisfaction among spouses who engaged in relatively frequent sex. Given that sexual activity enhances positive affect, this effect may have emerged because such positive affect offsets the implications of negative affect so frequently experienced by people high in neuroticism. Likewise, Little, McNulty, and Russell (2010) demonstrated that attachment avoidance was not associated with marital satisfaction among spouses who engaged in more frequent sex. This effect was mediated by expectancies for partner availability, suggesting that more frequent sex assuaged such partners' automatic concerns of abandonment.

There are some theoretical reasons to expect sex differences in the implications of sexual frequency. From an evolutionary perspective, men desire more frequent sex than women due to differences in parental investment (Trivers, 1972), whereby the reproductive costs of engaging in frequent sexual activity tend to be lower for men than for women (e.g., Buss & Schmitt, 1993). Some evidence supports this perspective by showing that men and women report different levels of desired sexual frequency (Baumeister, Cantonese, & Vohs, 2001). Interestingly, however, recent research indicates that the association between sexual frequency and sexual satisfaction is no

stronger among married men than it is among married women (McNulty et al., 2015). In two longitudinal studies of marriage, increased sexual frequency was as strongly predictive of positive changes in sexual satisfaction among women as it was among men.

One reason for the equally strong association between sexual frequency and satisfaction among men and women in established relationships, despite their different sexual appetites, may be that the actual levels of sex that occur in relationships reflect a compromise in the desires of the male and female partner. Indeed, in same-sex relationships, where decisions about sexual frequency are made by partners of the same gender, female same-sex couples report having sex less frequently than male same-sex couples or mixed-sex couples (Blumstein & Schwartz, 1983), although in other research female same-sex couples reported a significantly longer duration of sexual activity than men and women in mixed-sex relationships or men in same-sex relationships (Blair & Pukall, 2014). In fact, duration of sex in that study was associated with self-reported sexual and relationship satisfaction, suggesting that researchers should consider other aspects of couples' sex lives beyond frequency, such as duration, when looking at correlates of sexual and relationship quality.

Given that sexual frequency is important for relationship quality, the fact that sexual frequency tends to decline with age (Waite et al., 2009) could pose a problem for the maintenance of relationship satisfaction over time. Nevertheless, non-penetrative sex, such as kissing, cuddling and caressing. does not seem to decline (Waite et al., 2009), which suggests one way some spouses may stay happy despite declines in sexual frequency. Indeed, there is evidence that non-penetrative sex is important to satisfaction as well. In a recent study of mixed-sex couples in midlife and older adulthood conducted in five countries, affectionate behaviors such as kissing, cuddling and caressing were associated with increased sexual satisfaction for both men and women (Heiman et al., 2010). Interestingly, despite women's tendency to focus more on relational aspects of sexuality relative to men (see review by Diamond, 2004), these associations were strongest for men and significant predictors of men's (but not women's) general relationship satisfaction. Of course, these findings need to be considered in light of the fact that age-related declines in sexual desire may stem in part from hormonal changes (DeLamater & Sill, 2005), which may lessen the importance of penetrative sex. Nevertheless, another set of studies of younger couples also highlights the importance of affection to sexual and relationship satisfaction (Muise, Giang, & Impett, 2014). In particular, couples who spent a longer duration engaging in post sex affection (i.e., kissing, cuddling, caressing) felt more satisfied with the sexual experience and with their relationship as a whole. In fact, the duration of after sex affection was a stronger predictor of sexual and relationship satisfaction than the

amount of time spent engaging in foreplay or sex itself, and this was true for both men and women.

Engaging in affectionate behaviors may help couples maintain satisfaction during times when sexual frequency in their relationship is low. Couples who are able to move beyond the notion that penetrative sex is the primary or only mode of sexual expression and incorporate a broader repertoire of sexual and affectionate behaviors seem better able to maintain or experience heightened sexual satisfaction in older adulthood (Hinchliff & Gott, 2008; Potts, Grace, Vares, & Gavey, 2006). In addition, Ahlborg et al. (2005) found that during pregnancy and the post-partum period when sexual frequency was lower than pre-pregnancy levels, couples remained affectionate, with the majority of parents reporting daily kisses and caresses. Of course, the cross-sectional nature of these studies makes it impossible to draw causal conclusions. Future longitudinal research may benefit from examining whether affectionate behaviors can compensate for the temporarily lower levels of sexual satisfaction that couples experience during times in a relationship when the frequency of penetrative sex may be low, such as during times of stress and change.

Sexual satisfaction and relationship quality

Although the frequency with which couples engage in sex as well as other affectionate activities shape relationship quality, it is likely that how people feel about their sex lives may be a better predictor of how they feel about their relationships than the frequency with which they engage in sex or the duration of sex. Indeed, McNulty et al. (2015) demonstrated that the effects of sexual frequency on relationship satisfaction were indirect, such that they emerged through sexual satisfaction. In other words, having a satisfying sexual relationship appears to be most important to relationship quality, regardless of how one gets there.

A recent thematic analysis of responses to the question "How would you define sexual satisfaction?" revealed two main themes (Pascoal, Narciso, & Pereira, 2014). The first theme focuses on the positive aspects of an individual's sexual experience, such as pleasure, positive feelings, arousal, sexual openness, and orgasm. The second theme emphasizes relational aspects, such as mutuality of pleasure, romance, expression of feelings, creativity, acting out desires, and frequency of sexual activity. These two themes are further supported by a quantitative study designed to create and validate a new scale for measuring sexual satisfaction (Stulhofer, Busko, & Brouillard, 2010). Again, the research suggested sexual satisfaction has two main dimensions, one that is self or ego focused and reflects satisfaction with personal sensations and experiences, and one that is partner or relationship focused and reflects satisfaction with a partner's sexual engagement. Taken together, these

qualitative and quantitative studies highlight that in addition to the obvious role of personal sexual pleasure in promoting sexual satisfaction, relational aspects such as partner engagement are vital to people's experience of sexual satisfaction.

As noted earlier, in both dating and married couples, and across the lifespan, people's satisfaction with their sex lives is closely linked with their feelings of satisfaction with their relationship as a whole (Brezsnyak & Whisman, 2004; Byers, 2005; Davies et al., 1999; Laumann et al., 2006; McNulty et al., 2015; Sprecher, 2002; Yeh et al., 2006). In fact, in a multi-national study of individuals from 29 countries, Laumann et al. (2006) demonstrated that individuals who were the most sexually satisfied were also the happiest with their romantic relationships and with their lives in general. Extensive research has also shown that couples who enjoy positive, satisfying sexual relationships have more stable relationships than couples who are less sexually satisfied or who report experiencing sexual problems (e.g., Edwards & Booth, 1994; Sprecher, 2002). In fact, as noted earlier, sexual dissatisfaction or incompatibility is a key reason why couples ultimately break up and dissolve their relationships (Kurdek, 1991; Sprecher, 1994). Importantly, this association appears to be synchronous as opposed to directional. As noted earlier, in two eight-wave, longitudinal studies of marriage, McNulty et al. (2015) demonstrated that sexual satisfaction at one wave positively predicted changes in marital satisfaction from that wave to the next and that marital satisfaction at one wave positively predicted changes in sexual satisfaction from that wave to the next. Interestingly, once the bidirectional association between sexual and relationship satisfaction was controlled, frequency of sex had no direct effects on changes in relationship satisfaction, supporting the idea that sexual interactions primarily have benefits to the extent that they are satisfying.

The importance of sexual satisfaction is also highlighted by research demonstrating that, like sexual frequency, sexual satisfaction explains and attenuates the effects of critical individual difference factors on relationship quality. For example, Fisher and McNulty (2008) demonstrated that sexual satisfaction mediated the effects of neuroticism on marital satisfaction – that is, the low marital satisfaction of people high in neuroticism was accounted for by their low sexual satisfaction. Likewise, Little et al. (2010) demonstrated that sexual satisfaction moderated the effects of attachment anxiety on global relationship satisfaction, such that anxiety was unrelated to marital satisfaction among intimates who were satisfied with their sexual relationships. This finding is important because it demonstrates that even those who are high in attachment anxiety – who tend to report lower relationship quality – can benefit from engaging in satisfying sex with a close partner.

STAVING OFF DECLINES IN SEXUAL INTIMACY OVER TIME

I wonder if it's possible to have a love affair that lasts forever.

- Andy Warhol

The importance of sex for the quality of relationships described in the previous section highlights the need to understand how some couples are able to either stave off such declines or remain satisfied despite them. Indeed, although sexual desire tends to decline or waver over the course of a relationship on average (Call et al., 1995; Simms & Meana, 2010), romantic love, which is characterized by high sexual interest, engagement, and intensity, does not decline for everyone (Acevedo & Aron, 2009) and not everyone experiences accompanying declines in relationship satisfaction (Lavner & Bradbury, 2010; Simms & Meana, 2010). From their review of the literature, Aceyedo and Aron (2009) concluded that although the obsessive element of passionate love (i.e., the "honeymoon" phase) decreases over time, the romantic elements - including strong sexual desire - can be maintained in long-term relationships. In fact, many couples in long-term marriages report that sexual activity remains an important component of their relationship, albeit not as prominent or experienced as intensely as during the earlier stages of the relationship (Hinchliff & Gott, 2004). Even for the many romantic partners who experience discrepancies in sexual desire or have divergent sexual interests, some are able to navigate these differences with greater success and maintain satisfaction even in the face of sexual disagreements. In this section, we focus on how couples can maintain sexual desire and satisfaction over the course of a long-term relationship. We review research on who and under what circumstances people are able to stave off declines in sexual desire and satisfaction, including work on sexual motives, sexual communal motivation, cognition, and sexual communication. We also discuss non-traditional approaches to understanding "great sex" and the maintenance of relationships over time.

Sexual motives

Although research suggests that, in general, engaging in more frequent sex with a romantic partner is associated with greater sexual and relationship satisfaction, research on sexual motivation suggests that not all sexual experiences are similarly satisfying. For example, research guided by self-determination theory (e.g., Deci & Ryan, 2000) has found that people experience greater psychological well-being and relationship quality when they engage in sex for motives that are more self-determined in nature such as "because I enjoy being sexual" and "for the pleasure of sharing a special and intimate experience," compared to when they engage in sex for motives

that are more controlling in nature such as "because I would feel bad to withhold from my partner" and "because I feel pressured by my partner to have sex" (Brunell & Webster, 2013). Similarly, research indicates that sexual interactions characterized by higher levels of autonomy, competence, and relatedness are also associated with more positive sexual experiences (Smith, 2007). Furthermore, research guided by approach-avoidance motivational theory (for a review, see Gable & Impett, 2012) has shown that when people reported engaging in sex to pursue positive outcomes in their relationship, such as to enhance intimacy or express love for their partner (i.e., approach goals), they felt more positive emotions and both partners reported higher sexual and relationship satisfaction (Impett, Peplau, & Gable, 2005; Muise, Impett, & Desmarais, 2013). In contrast, when people engaged in sex to avoid negative outcomes in their relationship, such as to avoid conflict or a partner's disappointment (i.e., avoidance goals), they experienced more negative emotions and relationship conflict and both partners reported lower sexual and relationship satisfaction. In one longitudinal study of long-term married and cohabitating couples, people who had sex more frequently for avoidance goals over the course of a 3-week daily experience study reported lower sexual satisfaction at a 4-month follow-up and had partners who felt less sexually satisfied and committed to maintaining their relationship 4 months later (Muise et al., 2013). As such, research on sexual motivation suggests that some sexual experiences contribute more strongly to relationship quality and well-being than others.

Research guided by approach-avoidance motivational theory has also shown that individuals who are motivated by approach goals such as to deepen their relationship with their partner or promote growth and development in their relationship are more likely to sustain high levels of sexual desire for their partner over time (Impett et al., 2008). Two daily experience studies of dating, cohabitating, and married couples revealed that on days when people engaged in sex with their partner for approach goals, both partners reported higher sexual desire and in turn, felt more satisfied with the sexual experience and the relationship. In contrast, on days when people engaged in sex for avoidance goals such as to avoid disappointing their partner, not only did they feel lower desire and satisfaction, but their partners reported lower desire and satisfaction as well (Muise et al., 2013). This research has also shown that people who pursue sex for approach goals are able to maintain high levels of sexual desire even on days that would ordinarily be the most threatening to couples, such as when they have disagreements with their partner. In a 14-day daily experience study of college students in dating relationships, sexual desire was generally higher on days when people reported experiencing more frequent positive events and was lower on days with more frequent negative events, but people who were more approach-motivated were even able to maintain high desire in the face of more negative relationship events

(Impett et al., 2008). Therefore, engaging in sex to pursue positive outcomes for the partner or relationship, such as enhancing closeness, is one way that couples can maintain satisfying sexual relationships over time.

Sexual communal motivation

Another way people in romantic relationships may also differ in their sexual motivations is in the extent to which they are communally motivated to meet their partner's sexual needs. Communal strength is defined as the motivation to give to a partner to enhance that partner's well-being without the expectation of direct reciprocation, as opposed to giving quid pro quo where a favor is contingent upon receiving something in return (Mills, Clark, Ford, & Johnson, 2004). As such, communally motivated people are more willing to sacrifice their own self-interests for the sake of their partner or their relationship (Mills et al., 2004). Recently, theories of communal motivation have been applied to the sexual domain of relationships. Sexual communal strength is the extent to which people are motivated to be non-contingently responsive to their partner's sexual needs (Muise, Impett, Kogan, & Desmarais, 2013). People high in sexual communal strength report being more likely to have sex with their partner when they are not entirely in the mood, being open-minded about their partner's preferences, communicating with their partner about their sexual likes and dislikes (both learning about their partner's preferences and sharing their own), and ensuring that the sexual relationship is mutually satisfying (Muise & Impett, 2012).

Interestingly, people who are communally motivated to meet their partner's sexual needs compared to those who are less communal reap important benefits for both the self and their partner. In a sample of longterm couples who had been together for an average of 11 years, people who were higher in sexual communal strength felt more sexual desire for their partner and had more enjoyable sexual experiences (Muise et al., 2013). More intuitively, the partners of people high in sexual communal strength also reaped important benefits. People with communally motivated partners reported that their partners were, in fact, highly responsive to their needs during sex and in turn, they felt more satisfied with and committed to their relationships (Muise & Impett, 2015). Related research suggests that, at times, changing sexual habits (or making sexual transformations) for a partner can benefit the relationship (Burke & Young, 2012). In one study, romantic couples reported how frequently they made sexual changes for their partners (e.g., had sex more frequently than personally desired or engaged in activities that were not their preference), and how they felt about making these sexual changes. People who made more (compared to less) frequent sexual changes for their partners had partners who reported being more satisfied in their relationship. In addition, people who felt more positive about changing their sexual habits for a partner felt more satisfied with their relationships and had partners who reported feeling more satisfied as well.

Being communally motivated to meet a partner's sexual needs also helps couples maintain sexual desire over time. In one study, in comparison to people lower in sexual communal strength, people who were highly motivated to meet their partner's sexual needs in a relationship engaged in sex more for approach goals, such as to enhance intimacy with their partner, over the course of a 3-week diary study and reported higher levels of daily sexual desire as a result (Muise et al., 2013). In addition, whereas people low in sexual communal strength declined in desire over time in their relationship, people high in sexual communal strength began the study with slightly higher desire and were able to maintain sexual desire over a 4-month period of time (Muise et al., 2013). Communally motivated people are even motivated to meet their partner's needs in situations when it is not particularly easy - for example, in situations in which their partner is interested in sex but their own desire for sex is low. In these situations, communally motivated people remain motivated to pursue benefits for their partner, such as making their partner feel loved and desired, instead of focusing on what they personally have to lose from engaging in sex, such as feeling too tired (Day, Muise, Joel, & Impett, 2015). As a result of their increased motivation to pursue benefits for their partner and decreased motivation to avoid costs to themselves, they are more likely to engage in sex in these situations and both partners report greater sexual and relationship satisfaction as a result. Taken together, the research on sexual communal motivation suggests that pursuing benefits for a partner and the relationship is associated with higher sexual desire and can lead to enhanced sexual fulfillment and relationship quality for both partners.

Researchers have also examined how narcissistic tendencies influence sexual satisfaction over time. In many ways, narcissists are the opposite of highly communal people - instead of being focused on meeting their partner's needs, they tend to have low levels of empathy, focus on themselves in their communication, and exploit others for their own gains (Campbell, Foster, & Finkel, 2002). In a longitudinal study, McNulty and Widman (2013) assessed sexual narcissism, which captures four facets of narcissism in the sexual domain, including sexual exploitation, sexual entitlement, low sexual empathy, and sexual skill (Widman & McNulty, 2010). Interestingly, one facet of sexual narcissism - high perceived sexual skill - was associated with higher sexual and relationship satisfaction as reported by both members of the couple. However, by and large sexual narcissism was associated with negative sexual and relational outcomes; three of the four facets of sexual narcissism, sexual exploitation, sexual entitlement, and low sexual empathy, predicted declines in sexual and relationship satisfaction for both partners over the first 5 years of marriage. Taken together, the research on sexual communal motivation and narcissism suggests that sexual responsiveness to a partner's needs and engaging in sex to pursue benefits for a partner may help couples to stave off declines in sexual desire and satisfaction over time.

Cognition

Although sex itself is a physical act, sexual satisfaction is an evaluative cognition. Accordingly, it may be difficult to gain the fullest understanding of sexual satisfaction without also understanding its cognitive elements. One of the most basic tenets of social cognition is that people tend to evaluate social objects in a manner that is consistent with their initial expectancies for those objects through processes of perceptual confirmation (Wyer & Srull, 1986). The same may be true for sexual evaluations; what intimates expect from their sexual relationships may shape the way they perceive those relationships. Of course, not all events are subject to the influence of expectations. Very concrete information, such as how frequently a couple has sex, is less open to interpretation and thus less susceptible to the perceptual influences of expectations (Neff & Geers, 2013) (though expectations could still predict people's willingness to engage in sex). As numerous scholars have noted, women's sexual experiences are more influenced by contextual factors such as acculturation, education, and religion (Baumeister, 2000; Peplau, 2003). Therefore, expectations about a sexual relationship may more strongly influence women's sexual satisfaction than they influence men's, whereas men's sexual satisfaction may be more strongly influenced by objective aspects such as frequency.

In one study, both partners reported their sexual satisfaction and sexual frequency as well as completed a 7-day daily experience study about how sexually satisfied they expected to be in their relationship (McNulty & Fisher, 2008). Six months later both partners again reported their sexual satisfaction and sexual frequency. For women, but not men, sexual expectancies (i.e., how satisfied they expected to feel with their sexual relationship with their partner) predicted changes in their sexual satisfaction over this 6-month period of time. More specifically, women who expected to be more satisfied with their sex lives over time were, in fact, more satisfied 6 months later. For men, in contrast, changes in sexual frequency over the 6-month period predicted changes in their sexual satisfaction. Engaging in less frequent sex at the 6-month follow-up compared to the beginning of the study was associated with lower sexual satisfaction for men. In sum, whereas women's expectations for their sexual experiences appear to play a role in shaping their sexual evaluations, men's sexual evaluations may be grounded in more objective aspects of sex, such as frequency.

But expectations are not the only cognition likely to affect sexual satisfaction and the sexual relationship. Recent research also suggests that people's implicit beliefs about how sexual satisfaction is maintained over time in a relationship have implications for their sexual and relationship quality. A robust body of research demonstrates that people's implicit theories regarding whether particular behaviors are innate or take effort to cultivate have important implications for the way people approach and ultimately engage in such behaviors (Dweck, 2008). Following Knee (1998), who applied this distinction to relationships, Maxwell, Muise, MacDonald, Day, Rosen and Impett (invited resubmission) developed a measure of two implicit theories intimates may have regarding sexual relationships: sexual growth beliefs and sexual destiny beliefs. Sexual growth believers think that sexual satisfaction is maintained by work and effort, whereas sexual destiny believers think that sexual satisfaction results from finding a highly compatible partner, their sexual "soulmate." The results of five studies showed that sexual growth believers were more responsive sexual partners and reported higher sexual and relationship satisfaction as a result. In contrast, sexual destiny believers used their sexual compatibility with their partner as a barometer for relationship quality and as such, were more sensitive to sexual disagreements and experienced lower sexual and relationship satisfaction.

Lastly, people are motivated to view their relationships positively and these cognitive processes help to maintain romantic relationships over time (Murray et al., 2011), at least for those in healthy relationships at the outset (see McNulty, O'Mara, & Karney, 2008; O'Mara, McNulty, & Karney, 2011). Recent research has applied theory about cognitive relationship maintenance mechanisms to the sexual domain (de Jong & Reis, in press). This research has revealed that romantic partners tend to positively construe their sexual relationship such that they view their current partner as their ideal sexual partner and feel optimistic about their future sex lives. People higher in commitment are more likely to positively construe their sexual relationships, which reflects a motivational process serving to bolster people's resolve to persist in their relationships. Assuming such processes are occurring in healthy, well-functioning relationships, they may predict better sexual outcomes over time. Taken together, this research suggests that a person's expectations for their sexual relationship and their beliefs about how sexual satisfaction is maintained over time have implications for how much their sexual desire declines over time, how they react to such declines, and thus the quality and maintenance of their relationships.

Sexual communication

Another factor that influences the association between sexual and relationship satisfaction is sexual communication. Couples who report higher-quality communication about their sex lives also report higher sexual and relationship satisfaction (Byers, 2005). In fact, general self-disclosure as well

as disclosure about specific sexual likes and dislikes contributes to romantic partners' feelings of sexual satisfaction (Byers & Demmons, 1999). In one study, researchers found that it is not just communication outside the bedroom that is important, but communicating with a partner during sex also has implications for sexual quality. People who communicate, either verbally or nonverbally, with their partner during sex reported higher levels of sexual satisfaction (Babin, 2012). In fact, couples who reported using more sexual terms during sexual interactions with their partner reported higher satisfaction with sexual communication, and also greater overall relational quality and feelings of closeness (Hess & Coffelt, 2012). Using more sexual terms with a partner might indicate that these couples are talking about sex more frequently or have greater comfort with sexual communication and this is accounting for their increased relationship quality.

Sexual self-disclosure may also be one way for couples to maintain sexual desire and satisfaction over the course of long-term relationships (MacNeil & Byers, 2009). As mentioned previously, people who are high in sexual communal strength (i.e., those who are motivated to meet their partner's sexual needs) are more likely to maintain sexual desire over time (Muise et al., 2013) and one way they report meeting their partner's sexual needs is through effective sexual communication. In response to an open-ended question about the strategies they use to meet their partner's needs, communal people indicated that they try to learn about a partner's sexual likes and dislikes and incorporate what they learn into their sexual activities (Muise & Impett, 2012). Individual differences in romantic attachment also influence comfort with sexual communication as well as sexual and relationship satisfaction. Securely attached individuals (i.e., those who are comfortable with intimacy and closeness) generally have committed, stable, and satisfying romantic relationships and enjoy sex in the context of relationships (Birnbaum et al., 2006).

One key reason why secure people have satisfying sex lives and relationships seems to be that they are better able to communicate their sexual needs and understand the needs of their partner. In general, more open and effective sexual communication is associated with greater sexual and relationship satisfaction (e.g., Byers & Demmons, 1999; Sprecher, 2006), and secure individuals tend to be better able to communicate their sexual needs compared to insecure individuals (i.e., those high in attachment anxiety or attachment avoidance) (Shaver & Mikulincer, 2005). In one study, secure individuals reported less inhibited sexual communication compared to anxious and avoidant individuals, and this was found to mediate the relationship between attachment and levels of sexual satisfaction (Davis et al., 2006). Similarly, in a more recent study of partnered gay men, securely attached individuals reported the highest levels of sexual communication and experienced greater relationship quality, and men with securely attached partners were

the most likely to report having sex with their partners at least once per week (Starks & Parsons, 2014). Of course, given recent research suggesting that people tend to overestimate how accurate they are in their knowledge of their partner's sexual preferences and the extent to which their sexual preferences are similar and compatible with their romantic partner (de Jong & Reis, 2014), couples may need to strike a balance between disclosure and leaving some preferences and desires for the imagination. Future research may benefit by investigating this issue.

Non-traditional approaches to maintaining sexual intimacy

Traditionally, sex and relationship therapists have focused on minimizing sexual dysfunctions and problems in relationships. However, in recent years, sex therapists and researchers have embraced the idea that sexual fulfillment in relationships does not simply mean the absence of sexual problems and have shifted their focus from treating sexual dysfunction to helping couples achieve sexual fulfillment. In some ways, this new focus mirrors the advantages of approach (versus avoidance) motivations described in the earlier section. Indeed, in her research on optimal sexuality, Peggy Kleinplatz explores what her participants endorse as "great sex" (Kleinplatz & Menard, 2007; Kleinplatz et al., 2009). Kleinplatz and her colleagues conducted qualitative interviews with couples who reported having "great sex" and extracted the common themes that emerged during these interviews. She argues that the picture of great sex that emerges from her research looks radically different than that prescribed by conventional sex therapy or the mainstream media. Eight components of great sex were identified from her interviews: being present, connection, deep sexual and erotic intimacy, extraordinary communication, interpersonal risk-taking and exploration, authenticity, vulnerability, and transcendence (Kleinplatz et al. 2009). Interestingly, orgasm, which is typically viewed as a standard indicator of sexual function, did not emerge as a key component of or even necessary to experience great sex. In fact, in these narratives, great sex had little to do with physical function and was instead more grounded in a deep connection between partners. The fact that these participants were specifically recruited because they reported having very satisfying sex may mean these findings are unique to such couples, as compared to couples who are satisfied by more frequent sex (e.g., Call et al., 1995; McNulty et al, 2015), but it also suggests focusing less on the physical, objective aspects of sex may lead couples to experience enhanced satisfaction.

Researchers have also suggested some non-normative sexual behaviors that have the potential to strengthen relationships. Based on the idea that some people may hold their relationships to standards that those relationships are unable to meet (Finkel et al., 2014), Conley and Moors (2014) suggest that some couples may benefit from employing the tenets of consensually non-monogamous (CNM) or polyamorous relationships. These ideas involve multiple aspects such as: removing the expectations that one person (i.e., a romantic partner) will meet all of one's needs; anticipating that sexual desire and attraction for one's partner will waver at times over the course of a long-term relationship; understanding that having multiple loving relationships (whether these are romantic or sexual relationships or not) can be healthy and beneficial; communicating with your partner (or partners) in an open and honest way; and making time to talk about your relationship. It is important to point out that Conley and Moors are not suggesting that everyone should pursue a CNM relationship; instead, they suggest that both researchers and couples may learn strategies from polyamorous relationships that can help to revive romantic partnerships over time. For some couples, this may mean discussing and re-evaluating the terms of their monogamous commitment regularly. For other couples, this may mean accepting attractions to and sexual fantasies about others. For other couples, it may be learning from CNM couples who are likely to have addressed complicated issues in their relationships and studying how CNM couples manage conflict that might present useful strategies for monogamous couples as well. These ideas are ripe for empirical investigation.

CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

Although in recent years we have gained many important insights about the positive implications of sexuality for relationships, many unanswered questions remain. In this section, we briefly highlight some key directions for future work on the intersection of sexuality and romantic relationships. First, we know that desire discrepancies or conflicts of sexual interest between partners often have negative implications for dating and marital relationships. However, divergent sexual interests are common in long-term relationships and certainly some couples are able to navigate these differences while maintaining high relationship quality. An important avenue for future research is to explore the strategies that couples use to manage sexual disagreements more successfully. Dyadic research that involves interviewing desire-discrepant couples who are both struggling and thriving and observing interactions between partners are promising directions for this line of inquiry. With respect to the latter, recent research on non-sexual problem-solving communication indicates that direct communication can be more effective than more indirect forms (McNulty & Russell, 2010; Overall, Fletcher, Simpson, & Sibley, 2009). Further research may benefit from examining whether the same is true for resolving disagreements about sex. We also know that a combination of compromise and acceptance can help distressed couples improve their relationship satisfaction (Jacobson, Christensen, Prince, Cordova, & Eldridge, 2000). Applied to the sexual domain of relationships, romantic couples may aim to make changes to their sex life based on each other's sexual preferences or desired sexual frequency when reasonable, in order to reach a compromise. This may include engaging in sexual activities that one partner enjoys, but are not the other partner's preferred activity, or compromising on how frequently the couples engages in sex by pursuing sex at a frequency that is somewhere in between partners' desired frequency. At the same time, however, partners may also aim to accept the things that the other person is not willing to change. For example, if one partner is interested in a specific sexual activity, but their partner is not comfortable doing this, they may have to accept that this activity will not be part of their sex life with this partner. Future research may benefit from addressing these possibilities as well.

Second, a growing body of research suggests that a person's reasons or goals for engaging in sex are crucial for predicting when sex is most enjoyable and when it might detract from relationship satisfaction. But in many situations, relationship partners will choose not to engage in sex and decide, instead, to pursue their own personal interests. There is currently no research investigating how and why people decline their partner's sexual advances, as well as whether some ways of delivering sexual rejection are better able to preserve closeness in romantic relationships. On the flip slide, we know virtually nothing about how people can remain satisfied despite receiving sexual rejection from their romantic partner. In short, almost all of the existing work on sex and relationships has focused on what happens when people do have sex, and almost none of it has looked at what happens when people don't have sex – and if there are particular ways of rejecting a partner and receiving a rejection that can best preserve intimacy in couples.

Third, although there are biological differences, such as sex, that influence sexual desire, research has also revealed that there are important individual difference factors – including individual differences in approach goals, communal motivation, and sexual expectations – that can powerfully shape desire and satisfaction in romantic relationships. Although some of the variance in these and other individual differences may be due to biological individual differences, they may be partially malleable. Nevertheless, we know very little about how they can be modified. The lack of research on this topic likely reflects the challenges in conducting experimental work in the area of sexuality. However, learning whether it is possible to enhance people's approach sexual goals or communal motivation has important implications for improving couples' sexual relationships. In previous research on social goals, Strachman and Gable (2006) manipulated approach and avoidance social goals and found that being primed with approach goals leads to more positive social interactions. It is possible that providing couples

with information about the benefits of certain approaches to sexuality in their relationship could have positive effects, and this would be a worthwhile avenue for future research.

Finally, romantic relationships change over time and following important relationship transitions, such as the transition to parenthood, but few studies have followed couples over long periods of time and during these transitional periods to learn about the factors that help couples maintain desire and better navigate sexual changes and differences in a relationship. We believe that longitudinal studies of romantic couples may hold the greatest potential for answering questions about why some relationships thrive over time and others fail. Many couples strive to maintain desire and satisfaction over time, and researchers have much to contribute and much left to learn about the positive implications of sex for relationships.

In today's world, some people expect more from their romantic relationships than ever before (Finkel et al., 2014), including sexual fulfillment. Although we know that high expectations can benefit sexual relationships (McNulty & Fisher, 2008) and relationships more broadly (McNulty & Karney, 2002), we also know that expectations that are difficult or impossible to meet can be a liability (Finkel et al., 2014, McNulty & Karney, 2004). Successfully navigating these challenges and maintaining sexual fulfillment over time has great potential to enhance the quality of a couple's relationship and some of the lines of research described throughout this chapter have begun to shed light on how couples may do this. We hope that our review of the growing literature on positive perspectives of sexuality in relationships highlights how much we have learned and sparks increased interest in a topic that we think is integral to strengthening the quality and longevity of romantic bonds.

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