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Research Article

A National Dyadic Study of Oral Sex, Relationship Quality, and Well-Being among Older Couples

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Abstract

Objectives: We examine how giving versus receiving oral sex, 2 processes that are linked to relationship quality, are associated with older men's and women's well-being.
Method: We analyzed 884 heterosexual couples from the National Social Life, Health, and Aging Project (2010–2011). We estimate Actor–Partner Interdependence Models using the SEM approach to assess three well-being outcomes: general happiness, psychological distress, and self-reported mental health.
Results: Older adults with better relationship quality gave oral sex to their partner more often than those with worse relationship quality; this association was stronger for men than for women. While receiving oral sex was positively related to both men's, and women's perceptions of relationship quality, women's relationship quality was more strongly linked to their partners' well-being than men's. Correspondingly, men's giving of oral sex (and thus their female partner's receiving of oral sex) was positively related to their own well-being through increasing their female partner's perceived relationship quality.
Discussion: Given the high prevalence of sexual dysfunctions among older adults, oral sex may play an important but overlooked role in maintaining an active sexual life, a high-quality relationship, and psychological vibrancy in late life.

Keywords: Family sociology, Marriage, Sexual behavior, Gender

Oral sex, a sexual activity in which one person uses the mouth to stimulate another person's genitalia, is a highly intimate activity which has historically been understudied (Chambers, 2007; Herold & Way, 1983). Although recent studies tend to recognize the prevalence of oral sex (Chambers, 2007; Herbenick et al., 2010a; Lindau et al., 2007; Waite & Das, 2010), the implication of oral sex for individual well-being is rarely studied, especially among older adults. Given the high prevalence of sexual dysfunctions among older adults (Lindau et al., 2007), oral sex may play an important but overlooked role in enhancing sex life and well-being in late adulthood. We examine giving versus receiving oral sex, two distinct processes that relate to relationship quality, and their implications for older heterosexual couples' well-being. We provide the first nationally representative evidence on the dyadic processes linking oral sex, relationship quality, and psychological well-being from both men's and women's perspectives.

Using couple-level data from the second wave of the National Social Life, Health, and Aging Project (NSHAP), we address two research questions: (a) How are giving and receiving oral sex, respectively, related to both one's own and one's partner's feelings of relationship quality and how is this relationship quality related to their psychological well-being? (b) Do these relationships vary by gender of the oral sex receiver/giver? We study oral sex within married and cohabiting heterosexual dyads because among the current cohort of older adults, the vast majority of sexual

activities (including oral sex) take place within these types of relationships (Galinsky, McClintock, & Waite, 2014; Liu, Waite, Shen, & Wang, 2016). Findings speak to health policy and practice as well as to our understanding of sexuality in later life.

Background

The majority of research on sexual activity in later adulthood has focused on sexual dysfunctions from a medical perspective, contributing to the prevailing stereotype that most older adults are sexually inactive or asexual due to health conditions or related medication use (DeLamater & Koepsel, 2015). However, emerging evidence has shown that sexuality remains an important part of life and is key to the quality of life and well-being for many older adults (Bell, Reissing, Henry, & VanZuylen, 2017; Lindau et al., 2007; Liu et al., 2016). Although frequency of sexual activity and sexual desire tend to decline with age due to physiological changes, cultural norms, and changes in relationship status (Lodge & Umberson, 2012), many older adults have continued to engage in sexual activities into their eighties or even nineties (Das, 2017; Lee, Nazroo, O'Connor, Black, & Pendleton, 2016). Diagnoses of chronic conditions (e.g., hypertension and diabetes) and treatments seem not to disrupt sexual lives of older adults (Das, 2017; Liu et al., 2016, but also see Bell et al., 2017).

Among all sexual activities, penile–vaginal intercourse is most often discussed, perhaps because it remains the most prevalent form of sexual practice among most ages (Galinsky et al., 2014; Herbenick et al., 2017; Lindau et al., 2007). Oral sex has received much less attention, particularly in the discussion of older sexuality. Yet, major cohort differences are found in the practice of oral sex (Herbenick et al., 2017). Birth cohorts before 1940s (which came of age before the sexual liberation of 1960s) have 30% less lifetime experience of oral sex than later cohorts. More than 80% of men and 70% of women who were born after 1942 gave or received oral sex in their life, and the proportion remained stable in later cohorts (Laumann, Gagnon, Michael, & Michaels, 1994; Leichliter, Chandra, Liddon, Fenton, & Aral, 2007). These findings suggest that oral sex is likely more prevalent among today's older adults than before.

Oral Sex and Well-being: Limited Evidence

Penile–vaginal sex is often suggested to carry psychological and physiological benefits (Brody, 2010; Galinsky & Waite, 2014). Several studies on noncoital sexual activities also suggest that sexual touching and manual or oral clitoral stimulation (including receiving oral sex) may enhance sexual enjoyment and satisfaction, and increase the chance of orgasm (Armstrong, England, & Fogarty, 2012; Frederick, Lever, Gillespie, & Garcia, 2017; Galinsky, 2012). Still, empirical studies specifically focused on oral sex linked to general well-being are rare (even less among older adults), and the evidence is less clear. For example, a study based on an online nonrepresentative sample of women aged 18–58 found that sexual satisfaction from all sexual activities, including oral sex, was associated with better mental health, measured by a latent construct of psychological distress, anxiety, and stress (Holmberg, Blair, & Phillips, 2010); whereas a study comparing oral versus vaginal sex among college students found that oral sex was less associated with reduced psychological distress than vaginal sex (Lefkowitz, Vasilenko, & Leavitt, 2016). Another study on the self-rated health of U.S. women aged 18–92 found that both giving and receiving oral sex were associated with better self-rated health for women (Herbenick et al., 2010b); in contrast, Laumann and colleagues' (1994) analysis of data from the National Health and Social Life Survey revealed no association between oral sex and self-rated health among adults aged 18–59. Neither did Laumann and colleagues find evidence for the association between oral sex and happiness (Laumann et al., 1994). Yet, a diary analysis from 66 European couples aged 19–65 found that more frequent sexual activity including oral sex was associated with men's, but not women's, better mood during the following days (DeWitte, Van Lankveld, Vandenberghe, & Loeys, 2015). The limited and inconsistent findings may be due to different and poor well-being measures and/or one or more of the following limitations: lacking control covariates, ignoring dyadic interaction between partners, combining multiple sexual activities into an overall measure, and/or focusing on different, often younger, age groups.

A Gendered Dyadic Model: Linking Oral Sex, Relationship Quality, and Psychological Well-being

Despite the paucity of empirical evidence, the broad literature on gender, sexuality, relationship quality, and well-being lays a theoretical foundation for us to expect that giving and receiving oral sex hold different meanings in a relationship and in turn differentially relate to men's and women's well-being. Relationship quality—broadly defined as partners' subjective appraisals of their relationships, including satisfaction, happiness, strain, and conflict (Liu & Waite, 2014)—is a crucial factor that defines the relationship and interacts with couples' sexual activity and well-being (Carr, Cornman, & Freedman, 2016; Galinsky & Waite, 2014; Karraker & DeLamater, 2013). Basson (2001) posits the importance of integrating emotional intimacy in the human sex-response cycle and emphasizes the role of sexual interaction with a partner in enhancing relationship closeness, which becomes a further sexual stimulus. This is especially true for women as they will initiate, or agree to participate in, sexual activity and seek arousing sexual stimuli to engage in sex with a partner, with the ultimate goal of enhancing relationship quality (Basson, 2000). Drawing on Basson's model of the human sex-response cycle

(Basson, 2000, 2001), we hypothesize a two-stage process that links oral sex, relationship quality, and psychological well-being for men and women, as illustrated in Figure 1.

In the first stage, men's and women's perceptions of relationship quality may predict their likelihood of giving oral sex to their partner. Giving oral sex may be arousing and enjoyable (Gagnon & Simon, 2005; Galinsky & Sonenstein, 2013), and oral sex is one of the most common partnered sexual behaviors across all ages either as foreplay or as a replacement for vaginal sex (Herbenick et al., 2017). Happy relationships tend to induce more frequent and higher-quality sexual intercourse, including the giver being willing to perform oral sex on the partner (Galinsky & Waite, 2014). This process may differ for men and women, although the direction of prediction is mixed. Traditional gender values dictate that women fulfill the demands of femininity by being subordinate and submissive to men (Lodge & Umberson, 2012). The longstanding cultural norm of a "sexual double standard" encourages men's sexual desires and activities but suppresses women's (Elliott & Umberson, 2008). This may lead women to make more "sexual accommodations" for their male partners than vice versa (England & Kilbourne, 1990, p. 169) by, for example, providing oral sex to the partner whenever demanded. In this sense, women performing fellatio may reflect not only their own perceptions about the relationship, but also their unwillingness to turn down a sexual request from their partner (Braun et al., 2003). Indeed, studies among college students suggest that women feel less reward or intimacy from oral sex than do men (Chambers, 2007; Lefkowitz et al., 2016). In contrast, men's giving oral sex is less likely to be constrained by low status and more likely to be spontaneous. Perhaps only men who feel happy and satisfied with their relationship are willing to give oral sex to their partner, whereas women do so regardless of their own feelings about the relationship (Gagnon & Simon, 2005). In this sense, men's giving oral sex may be more closely related to their perceived relationship quality than women's. On the other hand, oral sex is more often initiated by men than women (Gagnon & Simon, 2005), and, in some instances, giving cunnilingus is the male partner's decision, even if a woman desires it (Satinsky & Jozkowski, 2015). When men perform cunnilingus, they often view it in masculinist terms, for example, as an opportunity to demonstrate their skill and feel a sense of power in their ability to pleasure a woman (Gagnon & Simon, 2005). If so, a man giving oral sex does not necessarily reflect his perceptions of relationship quality, but instead may simply be a way for him to express his masculinity. Taken together, we hypothesize that:

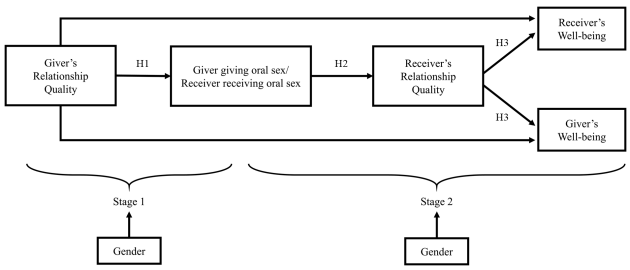

Figure 1. Two stages of the integrated dyadic model linking oral sex, relationship quality, and well-being.

> Hypothesis 1: Those who report better relationship quality will be more likely to give oral sex to their partner than those who report worse relationship quality. This association may be different for men and women.

In the second stage, receiving oral sex influences the receiver's perception of relationship quality, and in turn, affects both partners' well-being. For example, receiving oral sex, often a form of foreplay, may boost the chance of achieving orgasm and sexual enjoyment for the receiver, especially of women (Armstrong et al., 2012). Orgasm, a climax of sexual excitement, is positively related to women's feelings of love and intimacy in the relationship (Sprecher & Cate, 2004). At the same time, receiving oral sex may also be important for men's sense of masculinity (Gagnon & Simon, 2005) and thus enhance their perceived relationship quality. Moreover, the emotional and physical intimacy developed during the process of oral sex, regardless of whether orgasm is achieved, may enhance the receiver's perceived relationship quality for both genders (Galinsky & Waite, 2014). Therefore, we hypothesize that:

> Hypothesis 2: One's receiving (i.e., partner's giving) oral sex will be positively related to the receiver's perception of relationship quality. This will be true for both men and women.

A good-quality marital relationship is an important source of emotional and social support that fosters a sense of meaning and belonging, reduces loneliness, and facilitates healthy lifestyles, all of which may in turn promote individuals' well-being (Carr et al., 2016; Galinsky & Waite, 2014; Liu & Waite, 2014). This becomes increasingly salient at older ages when other social relationships, such as those with family members, friends, and neighbors, are lost due to geographic relocation and death in later adulthood (Liu & Waite, 2014; Warner & Kelley-Moore, 2012). Moreover, the link between relationship quality and well-being may be gendered. Previous studies suggest that women's health and well-being is more sensitive to relationship quality than men's (Kiecolt-Glaser & Newton, 2001; Liu & Waite, 2014). Women also do more care and emotion work for their partner than men (Revenson et al., 2016). This is perhaps especially true when women feel happy in their relationship. In this sense, how women feel about and value their relationship is more likely to shape their male partner's well-being than vice versa. Therefore, we expect that:

Hypothesis 3: A higher level of perceived relationship quality by one partner will be related to better well-being for both partners. This association will be stronger for women's perceptions of relationship quality than men's perceptions.

Data

We used dyadic data from the second wave (2010–2011) of the National Social Life, Health, and Aging Project (NSHAP). NSHAP is a nationally representative study of health and social relationships at older ages, conducted by NORC at the University of Chicago. NSHAP collected a probability sample of 3,005 community-dwelling adults aged 57–85 in the first wave (2005–2006). The sample design balanced age and gender subgroups but oversampled African Americans and Latinos. In Wave 2 (2010–2011), NSHAP reinterviewed 89% of the Wave 1 respondents (ages 62–90). Additionally, a random subsample of coresident spouses or partners (ages 36–99) were invited to be part of the study in Wave 2, and 86% of them completed the interview (O'Muircheartaigh, English, Pedlow, & Kwok, 2014). This resulted in a dyad sample of 953 heterosexual couples in Wave 2. We restricted our analytical sample to the 884 couples (1,768 individuals) who responded to the oral sex questions. In comparison to those who have complete information on oral sex, those with missing information on oral sex are older on average, with longer relationship duration, less likely to have family income above average, and more likely to be in their first marriage or cohabiting relationship; these two groups are not different in terms of education or racial/ethnic composition. The sensitivity analysis (results available upon request) based on the Heckman selection model (Heckman, 1979) revealed similar results after adjusting for sample selection of nonmissing on oral sex. We included both married and cohabiting couples because previous studies suggest that cohabitation and marriage tend to be similar among older couples (Brown, Bulanda, & Lee, 2012). Additional analyses (results available upon request) that excluded cohabiting couples (<4% of the sample) suggested similar results as reported. We weighted and further adjusted all analyses for clustering and stratification of the complex sampling design using MPLUS (Muthén & Muthén, 1998–2012).

Measures

Giving and receiving oral sex

Our measure of oral sex reflects each partner's frequency of giving and receiving oral sex within the heterosexual couple. Respondents were asked whether they had engaged in any sexual activities in the past 12 months and, if so, how frequently they had received oral sex from their partner. Based on these two questions, we create a variable to indicate men's and women's frequency of receiving oral sex with five categories: (1) sexually inactive in the past 12 months; (2) had sex but never received oral sex, (3) rarely received oral sex, (4) sometimes received oral sex, and (5) usually or always received oral sex. We note that although both categories (1) and (2) are not involved in oral sex, they are qualitatively different: one is sexually inactive while the other is sexually active. Our additional analysis (results available upon request) of collapsing these two groups into one revealed no major difference in the key findings. We create the variable of "giving" oral sex based on the information of partner's "receiving" oral sex. The variable that measures how often the female partner received oral sex corresponds to how often the male partner gave oral sex, and vice versa.

Psychological well-being

We examine three measures of psychological well-being: general happiness, psychological distress, and self-reported mental health. These cover both positive and negative dimensions of well-being and are the most commonly studied well-being measures available in the data. *General happiness* is a self-reported measure of a respondent's happiness ranging from 1 (*usually unhappy*) to 5 (*extremely happy*). *Psychological distress* is created using 11 questions from the Center for Epidemiological Studies Depression Scale (CES-D; Cronbach's alpha = 0.79; Radloff, 1977). This measure combines the answers to the following questions about how often a respondent reported experiencing any of the following in the previous week: (a) "I did not feel like eating," (b) "I felt depressed," (c) "I felt that everything I did was an effort," (d) "My sleep was restless," (e) "I was happy," (f) "I felt lonely," (g) "People were unfriendly," (h) "I enjoyed life," (i) "I felt sad," (j) "I felt that people disliked me," and (k) "I could not get 'going.'" Responses range from 0 (*rarely or none of the time*) to 3 (*most of the time*). Each question is coded so that a higher value represents greater depression. The final CES-D scale sums the score of the 11 measures. *Self-reported mental health* is based on the respondent's self-assessment of his or her emotional or mental health. The response categories range from 1 (*poor*) to 5 (*excellent*).

Relationship quality

Relationship quality consists of both positive and negative dimensions that are distinct constructs rather than opposite ends of a single dimension (Liu & Waite, 2014; Warner & Kelley-Moore, 2012). We follow previous studies (e.g., Galinsky & Waite, 2014; Liu & Waite, 2014; Warner & Kelley-Moore, 2012) to calculate relationship quality scales using the NSHAP data. These scales are composed of eight items, which we recode to obtain consistent response categories across all items. First, respondents were asked how close they felt their relationship with their partner was (Item 1). Responses include (1) not very close or somewhat close, (2) very close, and (3) extremely close. Respondents were also asked how happy they were in their relationship (Item 2: 1

[*very unhappy*] to 7 [*very happy*]) and how emotionally satisfied they felt with their relationship (Item 3: 0 [*not at all*] to 4 [*extremely*]). Because Items 2 and 3 were highly skewed, we collapsed the categories. For relationship happiness we collapsed the values to: 1 = *unhappy* (1, 2, 3, 4), 2 = *happy* (5, 6), and 3 = *very happy* (7). For emotional satisfaction, we collapsed the values to: 1 = *not satisfied* (0, 1, 2), 2 = *satisfied* (3), and 3 = *very satisfied* (4). Additionally, respondents were asked the extent to which they preferred to spend their free time doing things with their partner (Item 4). Responses include (1) mostly together, (2) some together and some apart, and (3) mostly apart. We reverse-coded this item so that higher values indicate better relationship quality. Finally, respondents were asked: how often they could open up to the partner if they needed to talk about their worries (Item 5), how often they could rely on their partner for help if they had a problem (Item 6), how often their partner made too many demands on them (Item 7), and how often their partner criticized them (Item 8). Responses to each question (Items 5–8) are (1) never, hardly ever, or rarely, (2) some of the time, and (3) often.

Results from exploratory factor analyses suggest that these eight items form two different dimensions, which we refer to as relationship support—reflecting the positive dimension of the relationship, and relationship strain—reflecting the negative dimensions of the relationship. We create two-factor scores, one for relationship support and the other for relationship strain based on the iterated principle factor method and an oblique rotation. Table 1 shows the factor loadings of each item used to generate the factor scores for relationship quality.

Covariates

We control for sociodemographic characteristics of both men and women. *Age* is measured as a continuous variable in years. *Race–ethnicity* includes non-Hispanic white (reference), non-Hispanic black, Hispanic, and other. *Education* includes less than high school (reference), high school graduate, some college, and bachelor's degree or above. We derive *family income* from a question that asked respondents to compare their family income with that of other American families. Responses include below average (reference), average, and above average. Because both relationship duration and order of unions are related to relationship quality and well-being and perhaps also the likelihood of giving and receiving oral sex (Call, Sprecher, & Schwartz, 1995; Galinksy & Waite, 2014; Hughes & Waite, 2009), we also control for relationship duration (in years) and order of unions (0 = first marriage/cohabitation relationship; 1 = higher order unions). Because partners may perform oral sex as a result of either partner's sexual dysfunctions that make penile–vaginal sex difficult, we control for gender-specific sexual dysfunctions: having trouble getting or maintaining an erection for men (1 = *yes*, 0 = *no*), and having trouble lubricating for women (1 = *yes*, 0 = *no*). We also control for whether men and women reported experiencing pain during sex (1 = *yes*, 0 = *no*).

Table 1. Relationship Quality Factor Loadings

Variables	Relationship Strain	Relationship Support
How happy is your relationship?	**0.63**	−0.06
How close do you feel to your partner?	**0.65**	0.03
How emotionally satisfying is your relationship?	**0.59**	−0.03
How often can you open up to your partner?	**0.59**	−0.02
Do you spend your free time together?	**0.38**	−0.01
How often can you rely on your partner?	**0.49**	−0.01
How often does your partner criticize you?	−0.02	**0.74**
How often does your partner make too many demands on you?	0.00	**0.56**

Boldface numbers indicate factor loadings above the 0.35 cutoff point.

Analytic Approach

We apply the Actor–Partner Interdependence Model (APIM) that is widely used in the analysis of dyadic data to account for the interdependence of the partners in couples (Kashy & Kenny, 1999). The APIM tests how one partner's behaviors or characteristics influence the other partner's outcomes (partner effects), above and beyond the effects of each partner's behaviors and characteristics on his or her own outcomes (actor effects). The APIM is estimated using the SEM approach, which has several advantages over standard regression methods (Cook & Kenny, 2005). A major advantage of using SEM in this study is its ability to integrate the complex relationships linking giving or receiving oral sex, relationship quality, and psychological well-being between partners (illustrated in Figure 1) into a single model and to estimate all these relationships simultaneously.

We run separate APIMs for each well-being outcome. Because the positivity and negativity of a relationship can relate to sexual behavior and well-being independently and asymmetrically (Liu & Waite, 2014), we have two sets of estimations for each well-being outcome, one examining relationship support and the other examining relationship strain. We use comparative fit index (CFI) and root mean square error of approximation (RMSEA) to evaluate model fit. Results (not shown) demonstrated that for all models, CFI is greater than 0.92 and RMSEA is less than 0.05, suggesting good model fits (Lance, Butts, & Michels, 2006). All models are estimated using Mplus, and missing data are handled using the full information maximum likelihood (FIML) method (Muthén & Muthén, 1998–2012). We conduct *t*-tests to compare corresponding path coefficients

between men and women. Results from *t*-tests (available upon request) suggest that all gender differences in the reported path coefficients within each APIM model are statistically significant at least at the level of $p < .05$.

Results

Table 2 shows descriptive statistics of men's and women's characteristics in the analyzed dyads. Men and women were not significantly different from each other in terms of levels of receiving or giving oral sex. Women reported more psychological distress than did men (5.01 vs 4.11, $p < .05$) but did not significantly differ from men in happiness or self-rated mental health. Women reported lower levels of both relationship support (−0.04 vs 0.13, $p < .05$) and strain (−0.10 vs 0.02, $p < .05$) than did men. Women were on average younger (67.70 vs 71.21, $p < .05$), more likely to report average income (44.54% vs 36.88%, $p < .05$), and less likely to be in their first unions (77.60% vs 85.29%, $p < .05$) than men. Men had a higher proportion of college graduates (35.20% vs 24.29%, $p < .05$) but also a higher proportion of no diploma (15.31% vs 10.83%, $p < .05$) than women. 40.90% of men had erection problems while 30.46% of women had lubrication problems; this gender difference was significant at $p < .05$. A higher proportion of women reported pain during sex than did men (13.09 vs 2.20, $p < .05$).

Results from the APIM models are illustrated in Figure 2 for happiness, Figure 3 for psychological distress, and Figure 4 for self-rated mental health. For each figure, the upper panel (a) shows the results for relationship support and the lower panel (b) shows the results for relationship strain. We see some clear patterns that are consistent across all APIM models. First, the male partner giving (i.e., the female partner receiving) oral sex was significantly correlated with the female partner giving (i.e., the male partner receiving). The more often the male partner gave oral sex to his female partner, the more often the female partner gave oral sex to her male partner, and vice versa. Second, we also see significant within-couple correlations in relationship quality and well-being outcomes in Figures 2–4. Specifically, if a male partner reported better relationship quality (Figures 2–4), greater happiness (Figure 2), lower levels of psychological distress (Figure 3), or better mental health (Figure 4) than other men, his female partner also tended to have advantages in these outcomes compared with other women. These results indicate interdependence between men and women in oral sex, relationship quality, and well-being.

Results from all APIM models (Figures 2–4) suggest that the male partner's assessment of relationship quality was associated with his likelihood of giving oral sex. Specifically, men who reported higher levels of relationship support tended to give oral sex to their female partner more often than men who reported lower levels of relationship support; men who reported higher levels of relationship strain tended to give oral sex to their female partner less often than men who reported lower levels of relationship strain. Although the female partner's assessment of relationship support was also positively associated with her likelihood of giving oral sex to her male partner, this association was weaker than that for the male partner ($p < .05$). The female partner's assessment of relationship strain was not related to her giving oral sex.

Figures 2–4 suggest that receiving oral sex—that is, the partner giving oral sex—was positively related to the respondent's assessment of better relationship quality, with some gender variations. Specifically, a male partner receiving oral sex was positively related to his assessment of relationship support and negatively related to his assessment of relationship strain; a female partner receiving oral sex was positively related to her assessment of relationship support but was not associated with her assessment of relationship strain.

Finally, a female partner's feeling of relationship quality was related to both her and her male partner's happiness (Figure 2) and psychological distress (Figure 3). Specifically, if the female partner reported higher levels of relationship support than other women, both she and her male partner tended to be happier (Figure 2A, $\beta = .482$, $p < .001$ for the actor effect and $\beta = .085$, $p < .05$ for the partner effect) and report lower levels of psychological distress (Figure 3A, $\beta = -.243$, $p < .001$ for the actor effect and $\beta = -.156$, $p < .01$ for the partner effect) than others; if the female partner reported higher levels of relationship strain than other women, both she and her male partner tended to be less happy (Figure 2B, $\beta = -.297$, $p < .001$ for the actor effect and $\beta = -.126$, $p < .01$ for the partner effect) and report higher levels of psychological distress (Figure 3B, $\beta = .219$, $p < .001$ for the actor effect and $\beta = .141$, $p < .05$ for the partner effect) than others. A female partner's assessment of relationship quality was also related to her own (but not her male partner's) self-rated mental health, with higher relationship support associated with better mental health ($\beta = .233$, $p < .001$) and higher relationship strain associated with worse mental health ($\beta = -.148$, $p < .01$, Figure 4).

In contrast, a male partner's assessment of relationship quality was related to his own well-being but not his female partner's in the majority of the models. Specifically, men who reported higher levels of relationship support tended to report greater happiness ($\beta = .365$, $p < .001$, Figure 2A), lower levels of psychological distress ($\beta = -.180$, $p < .001$, Figure 3A), and better mental health ($\beta = .229$, $p < .001$, Figure 4A) than other men who reported lower levels of relationship support; men who reported higher levels of relationship strain tended to report lower levels of happiness ($\beta = -.217$, $p < .001$, Figure 2B), higher levels of psychological distress ($\beta = .213$, $p < .001$, Figure 3B), and worse mental health ($\beta = -.137$, $p < .001$, Figure 4B) than other men who reported lower levels of relationship strain. But men's relationship quality (support or strain) did not predict their female partner's well-being with only one exception: men's perception of relationship strain was

Table 2. Weighted Descriptive Statistics for Couple Dyads, National Social Life, Health, and Aging Project, 2010–2011

	Men (N = 884)				Women (N = 884)		
Variables	Mean (SD)/%	Min	Max	Variables	Mean (SD)/%	Min	Max
Well-being measures				Well-being measures			
General happiness[a]	3.72 (0.82)	1	5	General happiness[b]	3.67 (0.89)	1	5
Self-rated mental health	3.69 (0.94)	1	5	Self-rated mental health	3.65 (0.97)	1	5
Psychological distress	4.11 (4.24)*	0	27	Psychological distress	5.01 (4.83)*	0	30
Frequency of oral sex				Frequency of oral sex			
Receiving oral sex	1.22 (1.36)	0	4	Receiving oral sex	1.14 (1.35)	0	4
Giving oral sex	1.14 (1.35)	0	4	Giving oral sex	1.22 (1.36)	0	4
Relationship quality				Relationship quality			
Relationship support[c]	0.13 (0.78)*	−3.21	0.98	Relationship support[d]	−0.04 (0.94)*	−3.55	0.98
Relationship strain[c]	0.02 (0.82)*	−0.81	2.48	Relationship strain[d]	−0.10 (0.80)*	−0.81	2.61
Covariates				*Covariates*			
Age	71.21 (7.48)*	38	99	Age	67.70 (8.17)*	36	89
Relationship duration[e]	37.39 (16.75)	0.13	71.08	Relationship duration[e]	37.39 (16.75)	0.13	71.08
Order of unions				Order of unions			
First marriage/cohabitation	85.29*			First marriage/cohabitation	77.60*		
Higher order unions	14.71*			Higher order unions	22.40*		
Race				Race			
Non-Hispanic white	83.79			Non-Hispanic white	83.59		
Non-Hispanic black	6.28			Non-Hispanic black	6.33		
Hispanic	7.78			Hispanic	7.56		
Other	2.15			Other	2.52		
Education				Education			
No diploma	15.31*			No diploma	10.83*		
High school graduate	22.53			High school graduate	25.82		
Some college	26.96*			Some college	39.06*		
College graduate	35.20*			College graduate	24.29*		
Income				Income			
Below average	25.66*			Below average	21.66*		
Average	36.88*			Average	44.54*		
Above average	26.28*			Above average	21.27*		
Missing	11.18			Missing	12.53		
Erection problems				Lubricating problems			
No (ref)	47.84*			No (ref)	54.97*		
Yes	40.90*			Yes	30.46*		
Missing	11.27*			Missing	14.57*		
Experienced pain during sex				Experienced pain during sex			
No (ref)	87.59*			No (ref)	75.52*		
Yes	2.20*			Yes	13.09*		
Missing	10.21			Missing	11.39		

*Two-way t-test comparing men and women was significant at the $p < .05$ level. [a]N = 883. [b]N = 882. [c]N = 853. [d]N = 857. [e]N = 862.

negatively associated with women's happiness (β = −.079, $p < .05$, Figure 2B). Nevertheless, this coefficient is smaller than the one for the association of women's relationship strain and men's happiness (−.079 vs −.126, $p < .05$).

Discussion

Penile–vaginal intercourse has long been the research focus in sexuality literature while other sexual activities have received less attention—even more so in the literature on older sexuality (Bell et al., 2017). Given that many older adults suffer from sexual dysfunctions that can prevent their enjoyment of penile–vaginal intercourse (Lindau et al., 2007), we highlight oral sex as a form of sexual activity that may be an important but overlooked channel to promote sexual activity and well-being among older couples. Despite the stereotypical belief that older adults rarely engage in oral sex, a significant share (37%) of older couples in our sample had participated in oral sex in the past 12 months. We use a nationally representative dyadic data set to examine

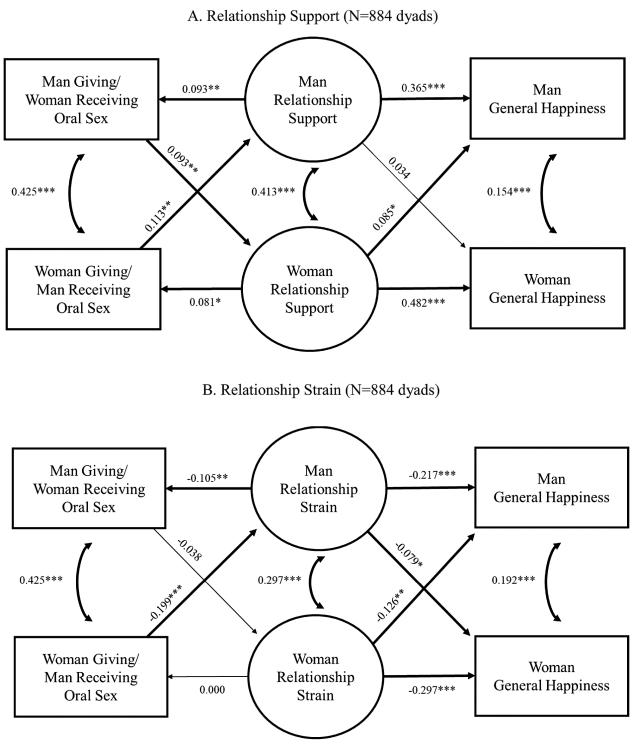

Figure 2. APIM path diagram of oral sex, relationship quality, and general happiness. *Note:* Models control for both partners' age, education, race–ethnicity, family income, relationship duration, order of unions, experiences of erection/lubrication problems, and pain during sex.

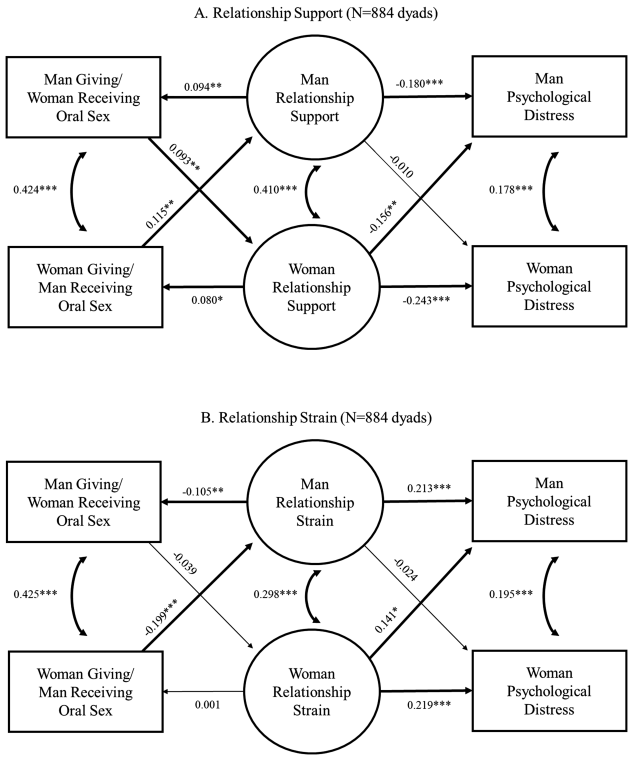

Figure 3. APIM path diagram of oral sex, relationship quality, and psychological distress. *Note:* Models control for both partners' age, education, race–ethnicity, family income, relationship duration, order of unions, experiences of erection/lubrication problems, and pain during sex.

giving and receiving oral sex as distinct actions that relate to partners' relationship quality and psychological well-being. Here, we outline our major findings and their implications.

Giving Oral Sex: Does Relationship Quality Matter?

Because relationship quality interacts with couples' sexual activity (Galinsky & Waite, 2014; Karraker & DeLamater, 2013), we focus on relationship quality as a factor that may relate to the likelihood of receiving and giving oral sex. Consistent with Hypothesis 1, we find that those who experience more relationship support and/or less relationship strain tend to give oral sex to their partner more often than others. Because giving oral sex may be a way to express fondness for and intimacy with a partner (Gagnon & Simon, 2005), relationship closeness, happiness, and satisfaction are likely to be related to an increase in partners' willingness to perform oral sex.

Interestingly, we find that the association between perceived relationship quality and the frequency of giving oral sex is stronger among men than women. Men who perceive their relationship more negatively are less likely to give oral sex to their female partner than other men, but women's perceptions of relationship strain are not related to their chances of giving oral sex to their male partner. Because men have more power in a relationship, they are more capable to be spontaneous about giving oral sex and they can dictate less oral sex if their feelings about the relationship are negative (Gagnon & Simon, 2005). It may be that a woman's act of giving oral sex to their male partner reflects their inability to turn down an oral sex request from their male partner even when they feel negative about the relationship because their lower power position does not allow them to carry out their own will (Gagnon & Simon, 2005). Another possibility is that women might provide oral sex when strain is high to improve the relationship while men may use other strategies. It is also likely that women may consider receiving oral sex more important to men, particularly those who cannot have intercourse any longer, and might be therefore willing to provide it even when they are annoyed with their partner (Waite & Das, 2010). In contrast, men may think receiving oral sex is not particularly important to women (Lewis & Marston, 2016), and therefore they would have no motivation to provide it when things were not going well with their partner.

Receiving Oral Sex: Links to Relationship Quality and Psychological Well-being

Our next question is how receiving oral sex is linked to individuals' well-being, in particular through the perception of relationship quality. Consistent with Hypotheses 2 and 3, we find that receiving oral sex is positively related to women's assessments of relationship quality, and women's relationship quality is positively related to both their own and their male partner's well-being. Receiving oral sex is also positively related to men's assessments of relationship quality, but men's

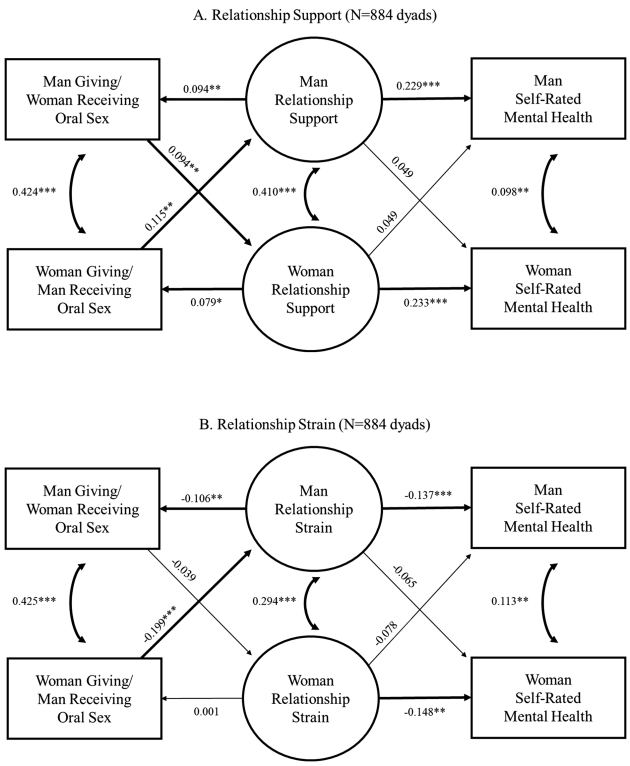

Figure 4. APIM path diagram of oral sex, relationship quality, and self-rated mental health. *Note:* Models control for both partners' age, education, race–ethnicity, family income, relationship duration, order of unions, experiences of erection/lubrication problems, and pain during sex.

assessments of relationship quality are mostly related to their own well-being and little to their female partner's.

For both men and women, receiving oral sex may boost the chance of orgasm and enhance sexual enjoyment, a predictor of emotional closeness, relationship intimacy, and overall relationship quality (Elliott & Umberson, 2008). Relationship quality can further shape health and well-being at all ages by fostering a sense of meaning and belonging, reducing loneliness, facilitating healthy behavior, and providing needed instrumental and emotional support (Carr et al., 2016; Liu & Waite, 2014). When family members, friends, and neighbors are lost due to geographic relocation and death in late adulthood, marital/cohabiting relationship quality plays an increasingly crucial role in older couples' well-being (Liu & Waite, 2014; Warner & Kelley-Moore, 2012). As our findings indicate, relationship quality is a key factor linking receiving oral sex to all psychological well-being outcomes examined in this study, although gender may modify the size of the effects.

Family scholars have long argued that women and men perceive their intimate relationships differently and that "her" relationship is different from "his" relationship (Carr, Freedman, Cornman, & Schwaarz, 2014). Even in the same relationship, women are more likely than men to see relationship problems and report lower levels of relationship quality in part because women are socialized to be more engaged in their close relationships, think more about these relationships, and use more active coping mechanisms rather than withdrawing from relationship problems (Carr et al., 2014; Rosenfield & Mouzon, 2013). Our results highlight that "her" assessment of relationship quality is more important than "his" for the couple's well-being. The female partner's perception of relationship quality is significantly associated with both her own and her male partner's well-being, while the male partner's perception is mostly related to his own well-being, not his female partner's. This finding is consistent with the longstanding adage "happy wife, happy life" (Carr et al., 2014). Because women usually play the primary role in caregiving, managing household work, and providing emotional support in the relationship, and men tend to benefit more from the relationship (Erickson, 2005; Sayer, 2005), it is not surprising that her appraisal of the relationship has a key impact on the couple's well-being.

Limitations

Several study limitations should be acknowledged. First, although we build our research hypotheses based on causal implications from previous studies, the cross-sectional nature of our analytic data limits our ability to determine causality between oral sex, relationship quality, and well-being. Indeed, we have cautiously assessed multiple alternative models with various specifications for causal ordering (e.g., bidirectional correlations, reversal relationships). These results (available upon request) suggest that our current model set-up has a better model fit than the alternative models. Nevertheless, with our cross-sectional data, we have no intention to claim the existence of casual relations. To better tease out the causality, we encourage future research to use multiple waves of longitudinal dyadic data to assess changes in partners' sexuality and well-being over time. Currently, even NSHAP, the most comprehensive population-based data set on sexuality and health among older adults, has not collected oral sex information in couples over time. This study limitation highlights that more data collection effort is warranted to advance knowledge in this direction. Second, the second wave of NSHAP has some sample attrition from the first wave due to mortality, disability, and relocation to care facilities, which may bias our results. Those who were in poor health, less sexually active, and perhaps less happy and more depressed were less likely to participate in the second wave. In this sense, our results may be conservative. Third, the analysis is based on self-reported data on sexuality and relationship quality. Gender differences in reporting style may lead to bias on the gendered findings. Fourth, about three quarters of the couples in our sample have sexual health problems for either or both partners. We control sexual health problems in the analysis, but it is also likely that sexual problems may modify the linkages among oral sex, relationship quality, and well-being. Future research should assess this possibility using larger data sets to compare couples with different levels of sexual problems. Finally, our measures of psychological well-being are correlated and may reflect one underlying dimension of mood or depression. Future research should consider other dimensions of well-being, such as life satisfaction.

Conclusion

Our findings suggest that using oral sex to complement penile–vaginal sex or to revive an asexual relationship is linked to enhanced well-being and happiness of elderly adults. This information is increasingly pertinent to policy makers as the life expectancy of Americans increases, and the aging population grows. Many older adults still want to be sexually intimate and remain close to their partners in old age (National Institute on Aging, 2013). As our findings suggest, oral sex may be an alternate way to maintain an active sexual life, a high-quality relationship, and psychological vibrancy. Health care providers may suggest oral sex to their older patients, particularly those who experience some sexual dysfunctions, as a way to achieve better quality of life. In view of the dearth of research on social and psychological aspects of older sexuality, this study encourages more research efforts in this direction.

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