

The lifetime number of sex partners and sexual satisfaction of young adults: the roles of gender, relationship status, motivation and self-esteem

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Program: Youth Studies

Date: June 11, 2019

Wordcount: 4999

Abstract

Due to a cultural shift, the lifetime number of sex partners and sexual satisfaction are growing topics of interest. However, research on the direct association between these factors is rare and inconsistent. The current cross-sectional study aims to examine whether there is an association between the lifetime number of sex partners and being sexually satisfied, with gender, the current relationship status and approach- and avoidance sexual motivations as possible moderators of this association. Furthermore, the role of self-esteem within this relationship is investigated. As part of the study 'Seks onder je 25e', a survey was conducted among 9,652 heterosexually identified, sexually active, Dutch 18–24 year-olds ($M = 21.07$ $SD = 1.97$). Regression analyses revealed that there was no direct association between the lifetime number of sex partners and sexual satisfaction. Gender and relationship status did moderate the association between the lifetime number of sex partners and sexual satisfaction, but approach- and avoidance motivation and self-esteem did not. There was a negative association for women and a positive association for men between the lifetime number of sex partners and sexual satisfaction. Moreover, in contrast to people with a relationship, single people reported to be more sexually satisfied when having had more sex partners. The results are discussed in light of traditional gender norms.

Keywords: sexual satisfaction; sexual double standard; traditional gender norms; number of sex partners; relationship status; self-esteem; sexual motivation.

Samenvatting

Vanwege een culturele verschuiving zijn het aantal sekspartners en seksuele tevredenheid steeds belangrijkere onderwerpen voor wetenschappelijk onderzoek geworden. Onderzoek naar de directe relatie tussen deze factoren is echter zeldzaam en inconsistent. De huidige cross-sectionele studie onderzoekt of er een verband bestaat tussen het aantal sekspartners en seksuele tevredenheid, met geslacht, de huidige relatiestatus en *approach*- en *avoidance* motivaties als mogelijke moderatoren van deze associatie. Verder wordt de rol van eigenwaarde in deze relatie onderzocht. Als onderdeel van de studie "Seks onder je 25^e", werd een onderzoek uitgevoerd onder 9.652 heteroseksueel geïdentificeerde, seksueel actieve, Nederlandse 18-24-jarigen ($M = 21,07$ $SD = 1,97$). Regressieanalyses brachten aan het licht dat er geen direct verband was tussen het aantal levenslange sekspartners en seksuele tevredenheid. Gender- en relatiestatus modereerden de associatie tussen het aantal levenslange sekspartners en seksuele tevredenheid, maar *approach*- en *avoidance* motivaties en eigenwaarde deden dat niet. Er was een negatieve associatie voor vrouwen en een positieve associatie voor mannen tussen het aantal levenslange sekspartners en seksuele tevredenheid. Bovendien waren alleenstaanden, anders dan mensen met een relatie, meer seksueel tevreden wanneer ze meer sekspartners hadden. De resultaten worden besproken in het licht van traditionele gendernormen.

Kernwoorden: seksuele tevredenheid; traditionele gendernormen; aantal sekspartners; relatiestatus; eigenwaarde; seksuele motivatie.

Introduction

Since the mid-1960s, a major change in sexual practices has occurred. A shift has taken place where sex is not just seen as a means for reproduction, but also as a way to achieve sexual desire and pleasure. Today, technological innovations and mobile apps like Tinder seem to support and intensify the possibility to explore one's sexuality with different people (Timmermans & Courtois, 2018). Because of this cultural shift, it is important to investigate sexual satisfaction of adolescents, as it plays a big role for a healthy sexual development (Higgins, Mullinax, Trussell, Davidson, & Moore, 2011). Therefore, both the lifetime number of sex partners and sexual satisfaction are growing topics of interest in research.

As far as known, there is no previous research on the direct association between the lifetime number of sex partners and sexual satisfaction, probably due to the fact that personal factors seem to play an important role within this association. Previous studies, however, have investigated this association among subgroups, but found contradictory results (Auslander, Rosenthal, Fortenberry, Biro, Bernstein, & Zimet, 2007; Carvalheira & Costa, 2015; Heiman, Long, Smith, Fisher, Sand & Rosen, 2011; Pedersen & Blekesaune, 2003). To gain a clear insight in the association between the lifetime number of sex partners and sexual satisfaction, it is necessary to take a closer look at these personal factors. The current study, therefore, aims to examine whether gender, the current relationship status and approach- and avoidance sexual motivations moderate the association between the lifetime number of sex partners and sexual satisfaction. Furthermore, the role of self-esteem within this association is investigated. In the following sections, these possibly influencing personal factors will be further elaborated.

The role of gender

When it comes to the association between the lifetime number of sex partners and sexual satisfaction, there may very well be differences for men and women. For instance, from an evolutionary perspective, it is suggested that men and women confront different adaptive problems in either short- or long-term mating strategies, which result in different strategic mating preferences (Buss & Schmitt, 1993). This sexual-strategies theory states that men tend to have sex with multiple women to achieve greater reproductive success, while women, whose parental investment is much higher than for men, prefer to selectively mate with men who are able and willing to invest in producing resources for their offspring. Based on this evolutionary theory, it can be assumed that men feel more satisfied when having had multiple sex partners than women.

Another theoretical notion for differences in sexual behaviour and sexual satisfaction between men and women, is provided by the sexual double standard. Across the world, traditional gender norms, which refer to norms promoting sexual modesty and passiveness for females and sexual boldness and activeness for males, are recognized in numerous cultures. These norms are often referred to as the sexual double standard (Emmerink, van den Eijnden, Vanwesenbeeck & ter Bogt, 2016; Sanchez, Fetterolf, & Rudman, 2012; Vanwesenbeeck, 2009). This sexual double standard entails that men are less frowned upon when having had multiple sex partners than women. These norms may have an influence on how sexually satisfied men and women feel when having had more sex partners.

The findings of previous research on the association between the number of sex partners and sexual satisfaction have been inconsistent when it comes to gender differences. For instance, a study among adult Portuguese and Croatian men showed that the number of sex partners emerged as a significant positive predictor of sexual satisfaction (Carvalho & Costa, 2015). However, Heiman and colleagues (2011) found that, for male adults, the lifetime number of sex partners was negatively associated with sexual satisfaction. Heiman and colleagues (2011) found no significant association for women, and neither did a study among Australian women aged between 18 and 25 years old (Zimmer-Gembeck, See & O'Sullivan, 2015).

Because the recent empirical findings on the association between the number of sex partners and sexual satisfaction seem to inconclusively differ for men and women, the present study examines the possible moderating role of gender. In light of the sexual strategies theory and the sexual double standard, *a positive association between the lifetime number of sex partners and sexual satisfaction can be expected for men and a negative association for women* (Hypothesis 1). This is schematically shown in Figure 1.

The role of relationship status

It may be the case that the current relationship status plays a role in the association between the lifetime number of sex partners and sexual satisfaction. A study among male and female young adults who were currently in a romantic relationship, showed that participants who had fewer sex partners over their lifetime, were more likely to be sexually satisfied in their current relationship (Auslander et al., 2007). Pedersen and Blekesaune (2003), on the other hand, found a positive association between the lifetime number of sex partners and sexual satisfaction for both men and women who were in a relationship at present. They explained this by hypothesizing that having sexual experience with more partners, may lead to increased skills and better sexual competence.

Additionally, in light of gaining more sexual skills and experience, it seems plausible that single people will feel more sexually satisfied when having had more sex partners as well. Moreover, when young people are single, the existence of a sex life depends on the number of sex partners they have, while for people within a romantic relationship, this is not the case. Therefore, there is more at stake in terms of the number of sex partners and sexual satisfaction for single people.

On the basis of having had more sexual experience leading to increased skills and better sexual competence (Pedersen & Blekesaune, 2003), *it can be expected that both people with and without a romantic relationship feel more sexually satisfied when they have had more sex partners, but that this association is stronger for single people* (Hypothesis 2), since there is more at stake for them when they do not have a lot of sex partners. This hypothesis is graphically presented in Figure 1.

The role of approach- and avoidance motives for sex

Another personal factor that might influence the association between the lifetime number of sex partners and sexual satisfaction is the individual's approach- or avoidance motivation for sexual engagement (Gable & Impett, 2012). Approach motives are about obtaining incentives when engaging in sex, such as personal physical pleasure, while avoidance motives are about avoiding threats, such as conflict within the relationship (Impett, Peplau & Gable, 2005). Previous research has shown that approach motives tend to be positively associated with sexual well-being, while avoidance motives are negatively associated with sexual well-being (Impett, Peplau & Gable, 2005; Muise, Boudreau & Rosen, 2017; Muise, Impett & Desmarais, 2013; Sanchez, Moss-Racusin, Phelan & Crocker, 2011; Stephenson, Ahrold & Meston, 2011).

Consequently, it can be assumed that individuals who score highly on approach motives are more sexually satisfied when they have had more sex partners, because they choose to have sex in order to gain pleasure. In addition, it can be assumed that individuals who score highly on avoidance motives are less sexually satisfied when they have had more sex partners, because they probably have had sex in order to avoid negativity. Therefore, *it is hypothesized that having approach motives for sex will positively moderate the association between the lifetime number of sex partners and sexual satisfaction, whereas avoidance motives will negatively moderate this association* (Hypotheses 3 and 4). These two hypotheses are illustrated in Figure 1.

The role of self-esteem

A final personal factor that will be investigated is self-esteem. As far as known, there is no previous research on the role of self-esteem within the association between the lifetime number of sex partners and sexual satisfaction. However, it is assumed, that people who have a higher self-esteem, feel more empowered to feel sexually free and pursue their sexual desires, without feeling suppressed by societal norms. Therefore, *self-esteem is expected to be a positive moderator in the association between the lifetime number of sex partners and sexual satisfaction* (Hypothesis 5). This is illustrated in Figure 1.

Since there is not a lot known about the association between the lifetime number of sex partners and self-esteem, the present study investigates this association as well. According to an American study among 300 students, both men and women with high self-esteem had a significantly higher number of sex partners than participants with low self-esteem (Walsh, 1991). Yet, as far as known, there is no recent research investigating the association between the number of sex partners and self-esteem. Moreover, in light of the sexual double standard and the sexual strategies theory, it may very well be the case that in terms of traditional gender norms, men have a higher self-esteem when they have had more sex partners, while for women this is not the case. *Therefore, it is hypothesized that there is stronger positive association between the lifetime number of sex partners and self-esteem for men than for women* (Hypothesis 6).

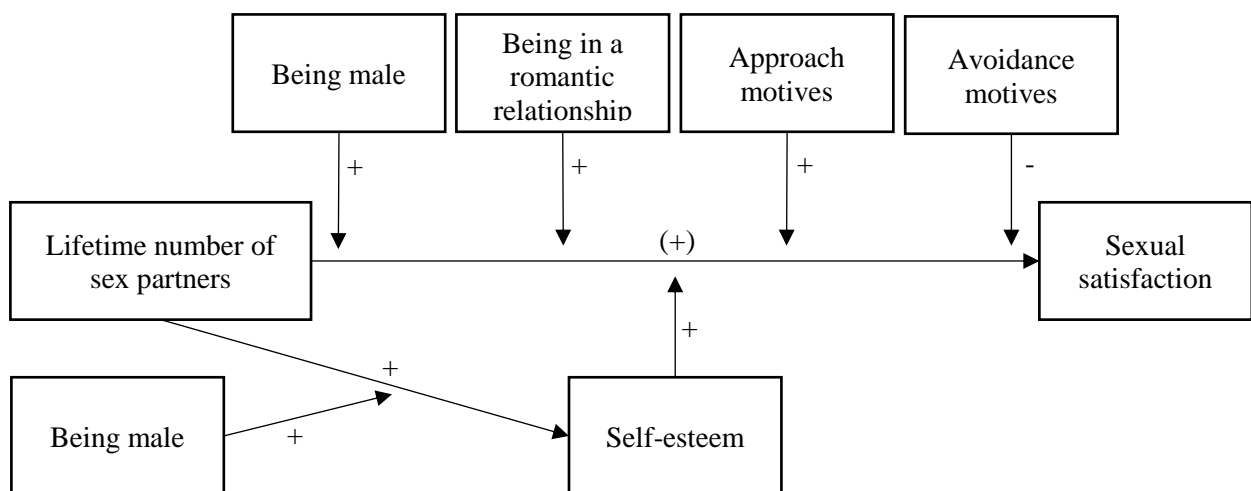


Figure 2. Research Model of the Current Study.

Methods

Participants, design and procedure

The current study had a cross-sectional design and utilized the data of the study 'Sex under the age of 25, 2017'. This is a national survey consisting of 222 questions on a wide range of sexual health issues (De Graaf et al., 2017). The Basic Registration of Persons (BRP, the 'population register') was used to recruit the participants. Statistics Netherlands (CBS) selected and weighted the sample. All selected respondents received an information letter and a digital survey. Of the total amount of 20,500 respondents, of which 9,652 met the inclusion criteria for this study (heterosexual young adult men and women between 18 and 24 years old who are sexually active). The mean age of these respondents was 21 ($M = 21.07$, $SD = 1.97$) and 95.8% of the respondents was born in the Netherlands and of 17.6% of the respondents, either the father or mother was not born in the Netherlands. Of the total sample, 64.1% was female and 35.9% male.

Of all respondents, 26.1% was in or had finished university, 36% was in or had finished university of applied research (HBO), 27.5% was in or had finished higher vocational training (MBO) and 9.3% was in or had finished high school or elementary school. 23.3% of the respondents reported to be religious, with 10.4% being Catholic, 8% being Protestant, 1.6% Islamic and 2.9% other religious convictions.

Measures

Demographics. Participants were asked about their age, education level and the importance of religion to them. To measure the level of education, participants were asked about their highest finished education level or in which level of education they were currently in. For further analyses the education level was dichotomized: Elementary school, preparatory vocational education (VMBO), MBO were regarded lower education and higher general secondary education (HAVO), pre-university education (VWO), HBO, and university were regarded as higher education. The importance of religion was measured on a scale between 1 (very important) to 3 (not important).

Lifetime number of sexual partners. The lifetime number of sex partners was measured with the question 'with how many different boys/girls have you had sex until now?'. Participants indicated their answers by completing the sentence 'with ... different boys/girls'. Because of the large tail of the right skewed distribution of scores for this variable, the highest three percent of scores were categorized as '27 or more' sex partners.

Gender. The gender of the participants was measured by asking whether they were born as either a boy or a girl.

Current relationship status. To measure current relationship status, participants were asked whether they currently had a boyfriend, a girlfriend or no relationship.

Approach- and avoidance motives for sex. Avoidance- and approach motivation was measured with a scale of nine items based on a study by Meston and Buss (2007). The participants were asked why they have sex, indicating their answers on a scale between 1 (never) and 5 (very often). A factor analysis showed three different factors: one about avoidance motives, one about approach motives and one about love motives. When the items of the factors approach and love motives were put together to a scale of six items, the Cronbach's Alpha was .79, which is very reliable. Deleting one of the items would not increase this reliability. Therefore, these items were put together to a final approach scale. Examples of the items are 'because I feel in love' and 'because I feel excited'. The avoidance scale consists of three items: 'to let the other person enjoy', 'to make the other person happy' and 'to avoid losing the other person'. These items together had a Cronbach's Alpha of .59, which is not very reliable. Due to theoretical reasons this scale is still used in the analyses, but the lower reliability must be taken into account when drawing conclusions. The mean scores of these scales were used for the analyses.

Self-esteem. The self-esteem of the participants was measured by using a simplified Rosenberg (1965) Self-esteem Scale. Participants were asked to which extent they agree with the following ten statements. Participants indicated their answers on a scale ranging between 1 (totally agree) to 5 (totally disagree). Examples of the statements are 'in general, I feel satisfied with myself' and 'sometimes I think I am not good for anything'. For further analyses, the items were coded in such a way that a higher score indicated that the respondent had a higher self-esteem. The Cronbach's Alpha of the scale was .89 and therefore very reliable. The mean score of this scale was used for the analyses.

Sexual satisfaction. To measure the extent to which participants feel sexually satisfied, the question 'how satisfied are you with your sex life' was asked. Participants indicated their answers on a scale ranging between 1 (very satisfied) to 5 (very unsatisfied). For further analyses, the scores were reversed in such a way that a higher score indicated that the respondent was more satisfied. Because the distribution of the scores of 'sexual satisfaction' was left-skewed, this variable was dichotomized for further analyses. The scores 1 to 3 indicated that the participant is not sexually satisfied and 4 to 5 that the participant is sexually satisfied.

Statistical analyses

Statistical analyses were performed using SPSS 24. Throughout the study, because of the large sample of almost 10.000 participants, a significance level of $\alpha < .001$ was used. There were no big outliers in the data set that needed to be deleted. First of all, it was assessed whether there were any confounding demographic variables, by means of Spearman correlations. Demographic variables that correlated with either the lifetime number of sex partners or sexual satisfaction were added to the analyses as control variables. Also, group differences for gender, relationship status and sexual satisfaction were investigated by using independent samples t-tests.

In order to measure the association between the lifetime number of sex partners and sexual satisfaction, a hierarchical binary logistic regression was used. In the first step, the confounding variables were entered. The variables used for measuring the main effects were added in the second step of the analyses. The moderation effects of gender, relationship status, approach motives, avoidance motives and self-esteem were analysed by creating an interaction term between the lifetime number of sex partners and the moderator. These interaction terms were entered in the third step of the logistic regression analysis. A linear regression analysis was used to measure the association between the lifetime number of sex partners and self-esteem and the moderation of gender in this association. Since self-esteem was the only variable with missing data, listwise deletion of missing values was used for the analyses.

To graphically present the interaction effects, line charts were made by using trichotomisation. The lifetime number of sex partners was trichotomised into the categories low, medium and high, based on the cumulative percentages of the scores: 30 percent of the respondents reported having had 1 sex partner (low), 30 percent reported having had between 2 and 4 sex partners (medium) and 30 percent reported having had 5 or more sex partners (high).

Results

Descriptive statistics

The descriptive statistics showed that the mean lifetime number of sex partners of the respondents was 4.47 ($SD = 4.92$), with a maximum of 27. On average, respondents scored relatively high on approach motives for sex ($M = 3.83$, $SD = .74$) and self-esteem ($M = 3.75$, $SD = .67$), and moderately on avoidance motives for sex ($M = 2.84$, $SD = .83$).

Group differences

Group differences regarding gender, relationship status and sexual satisfaction are shown in Table 1, 2 and 3. Table 1 shows that women scored significantly higher on approach motives for sex and reported to be more sexually satisfied than men. However, men scored significantly higher on the lifetime number of sex partners, avoidance motives for sex and self-esteem. Furthermore, all research variables differed significantly for relationship status (Table 2). Respondents without a romantic relationship have had more sex partners, but scored lower on approach and avoidance motives for sex, self-esteem and sexual satisfaction than respondents within a romantic relationship. Lastly, Table 3 shows that respondents who were sexually satisfied scored higher on approach and avoidance motives and self-esteem than respondents who reported not being sexually satisfied.

Table 1

Mean Group Differences of Gender for the Independent and Dependent Variables

	Gender				<i>t</i>
	Men		Women		
	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	
Number of sex partners	3462	4.63	6190	4.38	2.34
Approach motives	3462	3.80	6190	3.85	-3.06
Avoidance motives	3462	3.05	6190	2.72	18.62*
Self-esteem	3413	3.87	6115	3.69	12.70*
Sexual satisfaction	3462	1.69	6190	1.76	-8.01*
Relationship status	3463	1.44	6190	1.36	7.77*

Note. * $p < .001$

Table 2

Mean Group Differences of Relationship Status for the Independent and Dependent Variables

	Relationship				<i>t</i>
	Yes		No		
	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	
Number of sex partners	5945	3.94	3707	5.31	-12.90*
Approach motives	5945	4.01	3707	3.53	31.14*
Avoidance motives	5945	2.92	3707	2.71	12.00*
Self-esteem	5869	3.78	3659	3.71	5.73*
Sexual satisfaction	5945	1.89	3707	1.50	42.40*

Note. * $p < .001$

Table 3

Mean Group Differences of Sexual Satisfaction for the Independent Variables

	Sexual satisfaction				<i>t</i>
	Low		High		
	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	
Number of sex partners	2538	4.36	7114	4.51	-1.30
Approach motives	2538	3.48	7114	3.95	-26.81*
Avoidance motives	2538	2.75	7114	2.87	-5.78*
Self-esteem	2506	3.56	7022	3.83	-17.08*

Note. * $p < .001$

Correlations

Table 4 presents the correlations between the demographic and research variables. All demographic variables correlate with either the lifetime number of sex partners or sexual satisfaction. Therefore, gender, age, level of education and importance of religion were added to the analyses as control variables.

When looking at the research variables, Table 4 shows that there is no significant correlation between the lifetime number of sex partners and sexual satisfaction. Avoidance- and approach motives positively correlate with sexual satisfaction, but there is a negative correlation between approach motives and the lifetime number of sex partners. Also, self-esteem positively correlates with approach motives, but negatively with avoidance motives.

Table 4

Correlation Matrix of Demographic Variables, the Lifetime Number of Sex Partners and Sexual Satisfaction.

	1	2	3	4	5	6	7	8	9	10
1. Gender ^a	1.00									
2. Age	-.03	1.00								
3. Education ^b	.02	.10*	1.00							
4. Religion	-.05*	.05*	.01*	1.00						
5. Number of sex partners	-.01	-.22*	-.04*	.10*	1.00					
6. Relationship status	-.08*	-.07*	-.02	-.03	.15*	1.00				
7. Approach motives	.04	-.01	.02	.03	-.04*	-.31*	1.00			
8. Avoidance motives	-.19*	-.00	-.06*	-.01	-.00	-.12*	.39*	1.00		
9. Self esteem	-.14*	.03*	.11*	.00	-.01	-.01*	.11*	-.07*	1.00	
10. Sexual satisfaction	.08*	-.02	.01	.00	-.01	-.43*	.27*	.07*	.17*	1.00

Note. ^aReference category = men. ^bReference category = low. * $p < .001$

Regression analyses

The role of gender

The logistic regression analyses shown in Table 5, illustrate that of all included control variables, only gender was a significant predictor of sexual satisfaction, indicating that women experience a higher sexual satisfaction than men. Moreover, Table 5 shows no direct association between the lifetime number of sex partners and sexual satisfaction.

However, Model 3 of the hierarchical regression shows that gender significantly moderated the association between the lifetime number of sex partners and sexual satisfaction. Consequently, Figure 2 illustrates that women were more sexually satisfied when they had had a low or medium number of sex partners, whereas men were more sexually satisfied when they had had a high number of sex partners.

The role of relationship status

Model 3 of Table 5 also shows that relationship status significantly moderates the association between the lifetime number of sex partners and sexual satisfaction. Consequently, Figure 3 illustrates that respondents without a romantic relationship were more sexually satisfied when they had had a high number of sex partners than a low number, while this association was not found for respondents within a romantic relationship. Moreover, there is a significant direct association between relationship status and sexual satisfaction, indicating that respondents within a romantic relationship are overall more sexually satisfied than respondents who were single.

Table 5

Logistic Regression Analysis for Sexual Satisfaction in Interaction with Gender and Relationship Status

	OR	95% CI			OR	95% CI	
		Lower	Upper			Lower	Upper
<i>Model 1: Control</i>							
<i>Variables</i>							
Gender ^a	1.46*	1.33	1.60				
Age	.98	.96	1.01				
Education ^b	.94	.85	1.04				
Religion	1.00	.92	1.08				
<i>Model 2: Predictor</i>							
Number of sex partners	1.01	.99	1.02	Number of sex partners	1.05*	1.04	1.06
				Relationship status ^c	.11*	.10	.13
<i>Model 3: Interaction</i>							
Gender*Number of sex partners	.95*	.94	.97	Relationship status*Number of sex partners	1.06*	1.04	1.08

Note. ^aReference category = men. ^bReference category = low. ^cReference category = relationship yes. * $p < .001$

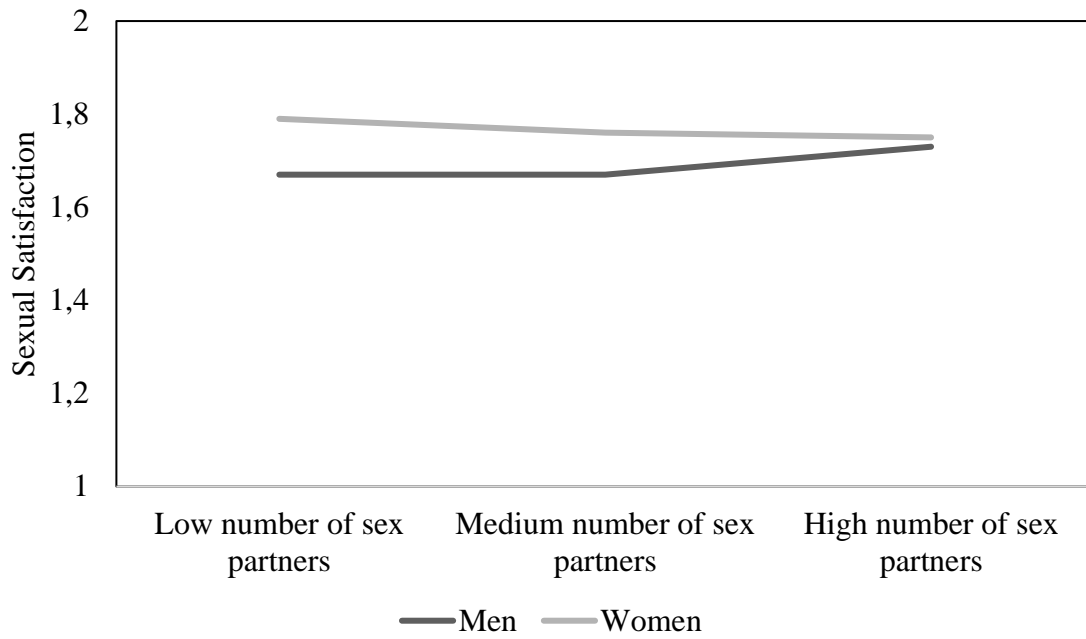


Figure 2. Interaction Effect of Lifetime Number of Sex Partners and Gender on Sexual Satisfaction.

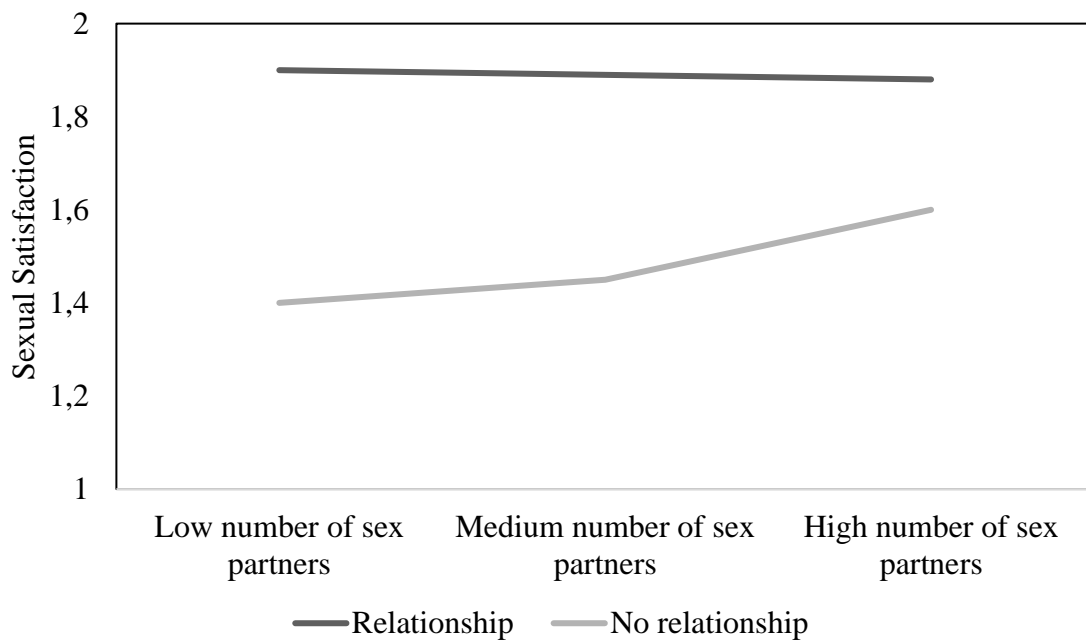


Figure 3. Interaction Effect of Lifetime Number of Sex Partners and Relationship Status on Sexual Satisfaction.

The role of approach- and avoidance motives for sex

Another logistic regression analysis in Table 6 showed that approach- and avoidance motives did not significantly moderate the association between the lifetime number of sex partners and sexual satisfaction. However, a significant positive direct association between approach motives and sexual satisfaction and between avoidance motives and sexual satisfaction was found. Respondents with either high approach- or avoidance motives were more sexually satisfied than respondents with low approach- or avoidance motives (Table 6).

Table 6

Logistic Regression Analysis for Sexual Satisfaction in Interaction with Approach and Avoidance Motives for Sex

	OR	95% CI			OR	95% CI	
		Lower	Upper			Lower	Upper
<i>Model 1: Control</i>							
<i>Variables</i>							
Gender ^a	1.46*	1.33	1.60				
Age	.98	.96	1.01				
Education ^b	.94	.85	1.04				
Religion	1.00	.92	1.08				
<i>Model 2: Predictor</i>							
Number of sex partners	1.02	1.01	1.03	Number of sex partners	1.01	.99	1.02
Approach motives	2.45*	2.29	2.62	Avoidance motives	1.26*	1.19	1.33
<i>Model 3: Interaction</i>							
Approach motives* Number of sex partners	.98	.97	1.00	Avoidance motives* Number of sex partners	1.00	.99	1.01

Note. ^aReference category = men. ^bReference category = low. * $p < .001$

The role of self-esteem

Table 7 shows that self-esteem did not moderate the association between the lifetime number of sex partners and sexual satisfaction. However, there was a significantly positive association between self-esteem and sexual satisfaction, indicating that respondents with high self-esteem were generally more sexually satisfied than respondents with low self-esteem.

The linear regression analysis shown in Table 8 illustrates that there was no direct association between the lifetime number of sex partners and self-esteem. Moreover, Model 3 of this analysis shows that gender did not moderate this association either.

Table 7

Logistic Regression Analysis for Sexual Satisfaction in Interaction with Self-Esteem

	OR	95% CI	
		Lower	Upper
<i>Model 1: Control Variables</i>			
Gender ^a	1.46*	1.33	1.60
Age	.98	.96	1.01
Education ^b	.94	.85	1.04
Religion	.99	.91	1.07
<i>Model 2: Predictor</i>			
Number of sex partners	1.01	1.00	1.02
Self-esteem	1.97*	1.84	2.12
<i>Model 3: Interaction</i>			
Self-esteem*Number of sex partners	1.01	.99	1.02

Note. ^aReference category = men. ^bReference category = low. * $p < .001$

Table 8

Linear Regression Analysis for Self-Esteem in Interaction with Gender

	<i>B</i>	<i>SE B</i>	<i>Beta</i>
<i>Model 1: Control Variables</i>			
Gender ^a	-.18*	.01	
Age	.00	.00	.01
Education ^b	.17*	.02	.12
Religion	-.03	.01	-.03
<i>Model 2: Predictor</i>			
Number of sex partners	-.00	.00	-.01
<i>Model 3: Interaction</i>			
Gender*Number of sex partners	-.01	.00	-.06

Note. ^aReference category = men. ^bReference category = low. * $p < .001$

Additional analyses

Since gender and relationship status were both significant moderators of the association between the lifetime number of sex partners and sexual satisfaction, an additional logistic regression analysis was conducted to test whether there was a three-way interaction between gender, relationship status and the lifetime number of sex partners. An additional logistic regression revealed that this three-way interaction was not significant.

Table 10

Logistic Regression Analysis for Sexual Satisfaction in a Three-Way Interaction with Gender and Relationship Status.

	OR	95% CI	
		Lower	Upper
<i>Model 1: Control Variables</i>			
Gender ^a	1.46*	1.33	1.60
Age	.98	.96	1.01
Education ^b	.94	.85	1.04
Religion	.99	.92	1.08
<i>Model 2: Predictor</i>			
Number of sex partners	1.05*	1.04	1.06
Relationship status ^c	.11*	.10	.13
<i>Model 3: Interaction</i>			
Gender*Relationship status	1.26	1.01	1.56
Gender*Number of sex partners	.95*	.93	.97
Relationship status*Number of sex partners	1.06*	1.03	1.08
<i>Model 4: Three-way interaction</i>			
Gender*Relationship status *Number of sex partners	.97	.92	1.01

Note. ^aReference category = men. ^bReference category = low. ^cReference category = relationship yes. * $p < .001$

Discussion

Because of a cultural shift on sexuality, the lifetime number of sex partners and sexual satisfaction are growing topics of interest in research. However, research on the direct association between these factors has been rare and inconsistent. The aim of this study was to investigate the association between the lifetime number of sex partners and sexual satisfaction, and whether this association is moderated by gender, relationship status, approach- or avoidance motives and self-esteem. The results showed that there was no direct association between the lifetime number of sex partners and sexual satisfaction. However, gender and relationship status significantly moderated this association. This resulted in a negative association between the lifetime number of sex partners and sexual satisfaction for women and a positive association for men, and singles being more sexually satisfied when they had had a high number of sex partners, while this association did not exist for people within a romantic relationship. Approach- and avoidance motives and self-esteem did not moderate the association between the lifetime number of sex partners and sexual satisfaction. However, there were significant positive direct associations between all the moderators and sexual satisfaction, which indicated that being a woman, being in a romantic relationship, higher approach- and avoidance motivation and higher self-esteem were related to higher sexual satisfaction.

The role of gender

The findings showed that, as expected, men reported to be more sexually satisfied when they had had a high number of sex partners, while women reported to be more sexually satisfied when they had had a low number of sex partners. This finding is in line with the 'sexual strategies theory' of Buss and Schmitt (1993), which states that men tend to have sex with multiple women to achieve higher reproductive success. It is also in line with the sexual double standard, which refers to traditional gender norms promoting sexual boldness and activeness for males and sexual modesty and passiveness for females.

These findings show that, in a time where casual sex is more approachable with upcoming apps like Tinder, gender differences are still present. Nevertheless, it is interesting to see that women, in general, report to be more sexually satisfied than men. This may be due to the fact that men feel like they have more to live up to when it comes to sexuality than women. In terms of the sexual double standard, men may be more performance oriented when it comes to their sex lives. Therefore, it may take more for them to feel sexually satisfied in comparison to

women. In this light, traditional gender norms still play a role. Future research could focus on the possible explanations for this particular difference between men and women.

The role of relationship status

The current study showed that respondents without a romantic relationship were more sexually satisfied when they had had a high number of sex partners, while, in contrast to the findings of Pedersen and Blekesaune (2003) or Auslander and colleagues (2007), the number of sex partners did not play a role for people within a romantic relationship. Additional analyses showed that gender did not moderate this interaction effect either, indicating that the interaction of relationship status within the association between the lifetime number of sex partners and sexual satisfaction did not differ for men and women. Moreover, the findings showed that people within a romantic relationship were, in general, more sexually satisfied than single people. This may be due to the fact that many young people prefer to have a stable sex life with one partner than being single and having sex within short-term relationships or not having sex at all (Pedersen, Miller, Putcha-Bhagavatula, & Yang, 2002).

The role of approach- and avoidance motives for sex

The findings showed that neither approach- or avoidance motives for sex moderated the association between the lifetime number of sex partners and sexual satisfaction. However, in line with previous research (Impett, Peplau & Gable, 2005; Muise, Boudreau & Rosen, 2017; Muise, Impett, & Desmarais, 2013; Sanchez, Moss-Racusin, Phelan & Crocker, 2011; Stephenson, Ahrold, & Meston, 2011), there was a significant positive direct association between approach motives and sexual satisfaction.

Nevertheless, avoidance motives appeared to be positively related to sexual satisfaction as well, while this association was expected to be negative. This may be due to the fact that the current avoidance-scale differs content wise from the validated avoidance scale (Impett, Peplau & Gable, 2005). The scale that was used for the current study could be conceptualised as other-oriented instead of avoidance-oriented motives. These results therefore indicate that people who scored high on either approach motives or other-oriented motives were more sexually satisfied. These kinds of motives are all intrinsic motives of the individual for having sex, by which we may conclude that intrinsic motivation relates to higher sexual satisfaction. A validated scale of approach- and avoidance motivation should be used in future research addressing motivations for having sex.

The role of self-esteem

Unexpectedly, the findings showed that self-esteem did not significantly moderate the association between the lifetime number of sex partners and sexual satisfaction. Therefore, the association between the lifetime number of sex partners and sexual satisfaction did not differ for people with either a high or low self-esteem. Nevertheless, there was a significant positive association of self-esteem and sexual satisfaction, indicating that the higher their self-esteem the more sexually satisfied young people are. This is in line with previous research (Anticevic, Jokic-Begi & Britvic, 2017; Higgins, Mullinax, Trussell, Davidson & Nelwyn, 2011; Impett & Tolman, 2006; Ménard & Offman, 2009; Peixoto, Amarelo-Pires, Pimentel Biscaia & Machado, 2018; Pujols, Meston, Brooke & Seal, 2009).

Lastly, the findings showed that there was, unexpectedly, no direct association between the lifetime number of sex partners and self-esteem and gender did not moderate this relationship either. Therefore, the lifetime number of sex partners appears to be unrelated to the self-esteem of either men or women. It is interesting to see that traditional gender norms seem to play a role within the association between the lifetime number of sex partners and sexual satisfaction, but not within the association between the lifetime number of sex partners and self-esteem. Other possibly non-sexual mechanisms seem to play a role in these associations, which future research could explore.

Strengths and limitations

This study contained several strengths and limitations. First of all, this study was very innovative and generated new insights into the role of traditional gender norms within the association between the lifetime number of sex partners and sexual satisfaction. Also, the study included a large random, diverse sample of 9,652 respondents, which increased the generalisability of the results for Dutch young adults.

However, there were also some limitations. First of all, only cross-sectional data were used, which do not allow causal interpretations. It would be valuable if future research could look at the different associations and moderations with longitudinal data to gain more insight in the direction of the significant associations. Furthermore, because of the large sample size, a strict significance level ($p < .001$) had to be used to reduce the chance of a type I error. Another limitation is the fact that the scale for avoidance motivation was conceptually not validated and, with a Cronbach's Alpha of .59, not very reliable either. This may have had an influence on the results. Moreover, the outcome variable, sexual satisfaction, had to be dichotomised, because the scores were not normally distributed. Because of this dichotomisation, some information

might have gotten lost. Also, sexual satisfaction was measured with only one item. Future research should preferably use a scale to measure sexual satisfaction, in order to strengthen the validity of the variable. Lastly, the validity might have been lower because of the self-reported data. It may be possible that the respondents did not fully understand the questions or might have given socially desirable answers, especially because the survey involved a sensitive topic.

Conclusion

In conclusion, the present study showed that traditional gender norms may still influence whether people feel sexually satisfied. The findings show that men feel more sexually satisfied when they have had a high number of sex partners, while women feel more sexually satisfied when they have had a low number of sex partners. Furthermore, single people feel more sexually satisfied when they have had a high number of sex partners, while people within a romantic relationship were more sexually satisfied than singles, regardless of their lifetime number of sex partners. Nevertheless, approach- and avoidance motives for sex and self-esteem did not moderate the association between the lifetime number of sex partners and sexual satisfaction. However, there were significant positive direct associations between all the moderators and sexual satisfaction, which indicate that being a woman, being in a romantic relationship, higher approach- and avoidance motivations and higher self-esteem were related to higher sexual satisfaction.

As a result of this study, it is suggested that sex education should focus more on sexual satisfaction of young people than on sexual risks. By giving attention to the importance of being intrinsically motivated to have sex, apart from sexual standards, people might feel more sexually satisfied. Especially for boys, it is very important that their expectations about the high ideal number of sex partners is tempered, since, according to this study, this pressure seems to decrease their sexual satisfaction. This study has shown that the sexual double standard plays a role when it comes to the sexual satisfaction of individuals, while ideally, young people should be sexually satisfied regardless of whether they meet these standards.

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