

Does Quality of Marital Sex Decline With Duration?

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Does the quality of marital sex increase or decrease with marital duration? Previous research assumes that it decreases; however, there is no empirical evidence of declining quality of marital sex with duration in the literature. This study theoretically and empirically examines how the quality of marital sex changes with duration. Theoretically, two effects may influence the change of quality of marital sex: the effect of diminishing marginal utility (the marginal utility of consuming a good or service diminishes as the consumption of that good or service increases) and the effect of the investment in the marriage-specific human capital (including the “partner specific” skills that enhance the enjoyment of marital sex and the knowledge about the spouse’s sexual preferences, desires, and habits). The quality of marital sex could either increase or decrease depending on which effect is dominant. The multivariate analysis of the National Health and Social Life Survey data shows that marital duration has a small and negative effect on the quality of marital sex. The gender difference in the quality of marital sex is discussed.

KEY WORDS: gender; marital sex; marital adjustment.

INTRODUCTION

An assumption concerning the decline in the quality of marital sex with marital duration appears to be implicit in studies of marital sex. Previous research reports that the frequency of marital sex declines with marital duration, net of the age effect (Blumstein & Schwartz, 1983; Call, Sprecher, & Schwartz, 1995; Greenblat, 1983; Jasso, 1985; Kinsey, Pomeroy, & Martin, 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953; Masters, Johnson, & Kolodny, 1992; Trussell & Westoff, 1980; Udry, Deven, & Coleman, 1982). According to the typical explanation given to this phenomenon, the declining frequency of marital sex is due to the loss of novelty (Blumstein & Schwartz, 1983; Call et al., 1995; James, 1981). This is often referred to as the “honeymoon effect,” meaning that the frequency of marital sex decreases because the satisfaction with marital sex declines with marital duration.

There is, however, no empirical evidence of declining quality of marital sex with duration in the literature. In other words, we do not know how the quality of marital sex changes with marital duration. Edward and Booth

(1994) reported that the quality of marital sex declines with age. Some scholars think that the effect of marital duration is identical to that of age (Christopher & Sprecher, 2000); however, these two effects are totally different. For example, both individuals A and B are 30 years old, and A is married for 10 years, while B is married for just 1 year. Other things being equal, if the quality of A’s marital sex differs from that of B’s, the difference must be due to the effect of the duration but not to the effect of age (since they are of the same age). Apparently, the age effect is not equivalent to the duration effect.

In this article, I empirically analyze how the quality of marital sex varies with marital duration with the National Health and Social Life Survey data (Laumann, Gagnon, Michael, & Michaels, 1994). This study will provide empirical knowledge of how the quality of marital sex changes with duration. Such knowledge will improve our understanding of marital sex. In addition, we know that men and women express themselves sexually in different ways and have different preferences or tastes (Laumann et al., 1994); therefore, the quality of marital sex may vary by gender. This study will provide new empirical evidence of the gender difference in the quality of marital sex.

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THEORETICAL ANALYSIS

Effect of Diminishing Marginal Utility and Human Capital Investment

Theoretically, two effects may influence the change of quality of marital sex: one is the effect of diminishing marginal utility, the other is the effect of the investment in the marriage-specific human capital. In the social sciences, it is typically assumed that other things being equal, the marginal utility (or satisfaction) of consuming a good or service diminishes as the consumption of that good or service increases. This assumption is also called the law of diminishing marginal utility (DMU). Applying this law, Liu (2000) developed his DMU explanation: "Marital sexual actions between a husband and a wife initially bring about a relatively high level of satisfaction; therefore, one can expect sexual activity to be more frequent. As marital sex increases, the level of satisfaction lowers; thus, fewer resources will be allocated to it. Consequently, the frequency of marital sex declines" (p. 949). In other words, the quality of marital sex declines with marital duration.

In the social sciences, a marriage is viewed as a long-term relationship (Becker, 1991; England & Farkas, 1986). Both partners have incentives to invest in the marriage specific human capital—abilities to provide empathy, companionship, sexual pleasure, intellectual pleasure, social status, or earnings (Becker, 1991). The accumulation of relationship-specific human capital raises the expected gain and makes both parties better off (England & Farkas, 1986). Specifically, the human capital stock associated with marital sex includes the "partner specific" skills that enhance the enjoyment of marital sex and the knowledge about the spouse's sexual preferences, desires and habits, that is, what pleases the spouse, what excites, what frustrates, and what angers (Laumann et al., 1994). As marital sex increases, the human capital stock also increases. The increase in this type of human capital stock could increase the marginal utility of marital sex. In other words, the quality of marital sex could increase with marital duration. However, because of the law of diminishing marginal returns of investment (i.e., the marginal return of an investment decreases as the investment increases, holding other factors constant), marginal returns on the investment in the relationship-specific human capital could also diminish.

The DMU effect and the human capital effect may separately or jointly affect the quality of marital sex. Therefore, theoretically these two effects may result in four patterns of change of the quality of marital sex over the course of marriage: (1) if the quality of marital sex is

affected by the DMU effect only, we expect it to decline at a constant rate; (2) if it is affected by the human capital effect only, we expect it to increase at a constant rate; (3) if it is affected by both the DMU effect and human capital effect and the DMU effect dominates the human capital effect, we expect it to decrease less and less steeply (in this case, the role played by human capital effect is to offset some of the DMU effect); (4) if the human capital effect dominates the DMU effect, the quality of marital sex will increase at a decreasing rate (in this case, the role played by the DMU effect is to offset some of the human capital effect). Thus, how the quality of marital sex changes with duration becomes an empirical question.

Other Variables

While examining how duration affects the quality of marital sex, we need to consider other factors that might affect the quality of marital sex. Prior research on sexual behavior has identified several social and demographic variables that influence sexual behavior, including gender, race, age, education, marital status, and religion. These variables organize individuals' patterning of social relations, shape their understanding of the social world, and influence their sexual behavior (Laumann et al., 1994). In addition, the presence of children, health, and premarital cohabitation may also influence the quality of marital sex. Children normally require an intense and continuing contribution in time and effort from both parents. Their presence, therefore, may negatively affect the quality of a couple's marital sex. Health is also an important factor that affects marital sex. It is plausible to expect that good (poor) health has a positive (negative) effect on the quality of marital sex. Previous research finds that those who cohabit premaritally tend to have a weaker commitment to marriage (Bennett, Blanc, & Bloom, 1988), suggesting they have less incentive to invest in the marriage-specific human capital because the level of investment is closely associated with the level of commitment (Laumann et al., 1994). Therefore, one can expect cohabitation to have a negative effect on the quality of marital sex. All of the above variables will be taken into account in the empirical analysis.

METHOD

Data and Model

The empirical analyses presented below are based on the married respondents of the National Health and

Social Life Survey (NHLS), which is a probability sample of 3,159 noninstitutionalized U.S. residents ages 18–59 (Laumann et al., 1994). The survey was conducted by the National Opinion Research Center at the University of Chicago in 1992. The respondents were asked about their socioeconomic background, health, number of children, sexual activities, and attitudes, among many other things. In a face-to-face interview, they were also asked to fill out a self-administered questionnaire that contained more personal attitude and behavior questions. The analysis below is based on 1,550 respondents, including those who had not yet experienced divorce and those who had experienced divorce by the time of the interview. For the latter respondents, the analysis focused on the quality of marital sex of the most recent marriage.

A few words about using cross-sectional data to study behavioral change are in order. Some readers may think that one may need time-series data to study how the quality of marital sex changes with duration. Actually, cross-sectional data are sufficient for such a study. Social scientists frequently use cross-sectional data (though they are not ideal) to study social and behavioral change. For example, Jasso (1985) and Call et al. (1995) used cross-sectional data to study how the frequency of marital sex changes with marital duration. The rationale is as follows. Suppose there are two couples, A and B. The marital duration for A is 10 years; B, 15 years. It is hypothesized that, other things being equal, B's frequency of marital sex is lower than A's (due to the DMU effect), *regardless of their initial frequencies*. (Note that the systematic bias in the initial frequency cancels out in a random sample. In other words, the sample is representative of the population from which it was drawn. Also, see Klusmann [2002] for a discussion of using cross-sectional data to study the changes in sexual behavior.) The same can be said of this current study of the changes in the quality of marital sex. Hence, in this study, the NHLS data are used to estimate an ordinary least squares (OLS) regression equation to examine the relationship between the quality of marital sex and marital duration.

Independent Variable

In this study, marital duration, the major explanatory variable, was measured by years and was obtained by subtracting the date of the marriage from the date of the interview. If the DMU effect and the human capital effect jointly affect the quality of marital sex, the relationship between the quality of marital sex and duration will become nonlinear. A quadratic term of marital duration was

incorporated into the analysis to capture the potential nonlinear relationship between the two variables. If the quality of marital sex declines (increases) at a constant rate with marital duration (i.e., a linear relationship), the coefficient for the duration will be negative (positive) and statistically significant and the coefficient for the quadratic term will not be statistically significant. If the quality of marital sex declines less and less steeply (the slope becoming successively less steep), the coefficient for marital duration will be negative and the coefficient for the quadratic term will be positive; both will be statistically significant. Finally, if the quality of marital sex increases at a decreasing rate (again, the slope becoming successively less steep), the coefficient for marital duration will be positive and the coefficient for the quadratic term will be negative; both will be statistically significant.

Dependent Variable

The quality of marital sex, the dependent variable, consists of two aspects of marital sex: physical pleasure and emotional satisfaction. To examine how the quality of marital sex changes with marital duration, one needs a dependent variable that measures the quality of marital sex at a particular time so that one can examine if individuals with a longer marital duration tend to experience higher or lower satisfaction than those with a shorter marital duration, holding other factors constant. Such information is available in the NHLS. It asks respondents (during the last 12 months): “How physically pleasurable did you find your relationship with (PARTNER) to be: extremely pleasurable, very pleasurable, moderately pleasurable, slightly pleasurable or not at all pleasurable?”; and “How emotionally satisfying did you find your relationship with (PARTNER) to be: extremely satisfying, very satisfying, moderately satisfying, slightly satisfying, or not at all satisfying?” (For married respondents, partner means spouse.) The quality of marital sex was measured by a summated scale of the above two questions regarding physical pleasure and emotional satisfaction of marital sex, with higher scores indicating higher quality. These two items are highly correlated ($r = .85$). Hereafter, quality and satisfaction are used interchangeably.

Control Variables

Among the social and demographic variables, this present study controlled for age, gender, race, education,

and religiosity. Gender was included as a dummy variable, and male served as the reference group. Age was included as a continuous variable, ranging from 18 to 59. There was no severe collinearity between age and duration, mainly because those who are in their second marriage were included. (Age at the first marriage was perfectly correlated with marital duration and so was not included in the model.) Race (White, Black, and Other racial group) was included as a dummy variable; "Other racial group" served as the reference group. Education, measured by the respondent's highest grade completed, was included as a continuous variable, ranging from 1 (*grade 8 or less*) to 8 (*other advanced degree than college*). Religiosity, measured by attendance at religious service (attendance), was included as a continuous variable, ranging from 0 (*never*) to 8 (*several times a week*).

The presence of children under age 18 was included as a dummy variable. Health was included as a continuous variable. The NHSLs asks respondents to describe their general health. The response categories are (1) excellent, (2) good, (3) fair, or (4) poor. Cohabitation was measured by asking the respondents if they had lived together before the marriage and was included as a dummy variable. The frequency of marital sex was measured by asking respondents how often they had sex with their partner or spouse during the past year: once a day or more, three to six times a week, once or twice a week, two to three times a month, once a month or less. The categories were coded from 1 to 5, with higher scores indicating a higher frequency. Theoretically, this variable could affect the satisfaction with marital sex either positively or negatively. The DMU explanation predicts that frequency of marital sex lowers the satisfaction with marital sex, while the human capital explanation predicts that it will increase the satisfaction. Therefore, how the frequency of marital sex affects its quality is an empirical question and needs to be empirically determined. Finally, though marital happiness is an important variable that affects a couple's marital sex, it was not included because it was not available in the NHSLs.

RESULTS

Table I presents the descriptive statistics of the variables used in the analyses. Table II reports the results of the regression analysis. This multivariate regression model shows that the coefficient for marital duration was negative and statistically significant and the coefficient for the quadratic term [(marital duration)²] was positive but not statistically significant. This result indicates that duration has a significant negative effect on the quality of marital

Table I. Means and Standard Deviations for Variables Used in the Analysis of NHSLs Data ($N = 1,550$)

Variable	<i>M</i>	<i>SD</i>
Quality of marital sex	8.66	1.39
Marital duration	13.80	9.91
(Marital duration) ²	288.50	360.98
Gender (0 = male; 1 = female)	0.57	0.49
Respondent's age	38.29	9.88
White	0.82	0.38
Black	0.10	0.30
Other	0.078	0.27
Education	4.29	1.66
Religious service attendance	4.22	2.66
Presence of children (0 = no; 1 = yes)	0.652	0.48
Health	1.67	0.70
Frequency of marital sex	3.09	0.89
Cohabitation (0 = no; 1 = yes)	0.359	0.48

Note. See text for response scales.

sex and that the quality of marital sex was affected by the DMU effect.

Among the control variables, the frequency of marital sex had a negative effect on the quality of marital sex. As expected, cohabitation had a negative effect on the dependent variable. Education had a small positive effect on the quality of marital sex. The coefficient for gender was negative. Since men serve as the reference group, the negative coefficient for gender indicated that women were less satisfied with their marital sex than their male counterparts. The other control variables had no significant effects.

Table II. OLS Regression Model of Quality of Marital Sex ($N = 1,550$)

Variable	Coefficient	<i>SE</i>
Marital duration	-0.176***	.013
(Marital duration) ²	0.107	.365
Control variables		
Gender	-0.198***	.071
Respondent's age	0.001	.006
White	0.041	.131
Black	0.004	.125
Education	0.044*	.022
Religious service attendance	0.026	.014
Presence of children	-0.038	.085
Health	-0.031	.050
Frequency of marital sex	0.157***	.041
Cohabitation	-0.029**	.008
Constant	9.678***	.279
<i>F</i> -statistics	7.151***	
<i>R</i> ²	0.05	

* $p < .10$. ** $p < .05$. *** $p < .01$ (two-tailed tests).

DISCUSSION

Previous research assumes that the quality of marital sex declines with marital duration. The empirical analyses of NHLS data conducted in this study show that duration does have a small and negative effect on the quality of marital sex. That the coefficient for the quadratic term of marital duration is not statistically significant suggests that the quality of marital sex declines slowly over the course of marriage. In addition, the finding that the frequency of marital sex during the past year negatively affects the quality of marital sex provides additional empirical evidence supporting the DMU explanation.

The empirical analysis also shows that married women are less satisfied with sex in marriage than married men. This gender difference is a very complicated issue and involves many variables (Edwards & Booth, 1994; Laumann et al., 1994). Laumann et al. (1994) provide one explanation. The two measures of the quality of marital sex are respondents' subjective evaluations of the levels of both physical and emotional satisfaction experienced in their marriage. The fact that women's rating of their satisfaction is lower than that of men is correlated with their lower rate of orgasm compared to that of men. Laumann et al. (1994) argue that a new sexual script that emphasizes the mutual right to orgasm as well as equality throughout the sexual process between men and women evolved in the 1960s and 1970s; the new script raised women's expectation so that "if orgasm is not associated with (or the product of) reciprocal and mutually attentive sexual action, it may not be considered sufficient to assign high satisfaction to a sexual event" (p. 119).

Based on the notion that higher expectation lowers one's rating of a sexual event, another explanation of women's lower satisfaction with marital sex can be derived from human capital theory. Since married women typically invest more heavily in the relationship-specific human capital than married men who typically invest more in their career (England & Farkas, 1986), women's expectation is higher than that of men. Consequently, women tend to rate their marital sex lower than do men (even though the investment may have a positive effect on their satisfaction). Like any other theoretical implications, this one needs to be empirically tested in the future.

It is worth noting some of the limitations of this study due to the theoretical and data limits. First, the DMU assumption is applied to deduce or explain why the quality of marital sex declines with duration. However, a deeper question why the marginal utility of marital sex declines is not answered. Current economic and sociological theory may not be able to answer this question; thus, DMU is typically assumed. This question is more likely to be

answered from the perspective of evolutionary theory. For example, it is likely that men developed a taste of sexual variety over the course of evolution (for a review, see Posner, 1992). However, a detailed discussion of this issue is beyond the scope of this study, and I will study this question in the future. Second, other variables (including marital happiness, hormonal changes, etc.) that affect the quality of marital sex are not available in the data set; therefore, they are not included in the model. This might be one of the reasons why the model estimated in the analyses do not account for much of the variation in the quality of marital sex. Third, we know that a substantial proportion of marriages dissolve at an early stage for a range of reasons, including financial problems, emotional incompatibility, domestic violence, etc. These factors also affect the quality of marital sex. However, unstable marriages at high risk of termination drop out over time and thus cannot be included in the analyses. This partly explains why the dependent variable has a high mean and a low variability. (To overcome this limitation, separate analyses were conducted to examine the effects of marital duration on the quality of marital sex at different periods of the relationship, 1–5 years, 6–10 years, 11–15 years, etc. However, none of the coefficients were significant.)

The quality of marital sex is very important to the quality of a marriage. Though the relationship between the quality of marital sex and the quality of marriage and how the major social and demographic variables (e.g., gender, age, religion, and race) affect marital sex satisfaction have been studied extensively (Blumstein & Schwartz, 1983; Edward & Booth, 1994; Greeley, 1991; Laumann et al., 1994), little attention has been devoted to the changes in the quality of marital sex with marital duration. Because of the lack of the knowledge about the subject, researchers frequently have to make implicit assumptions about such a change in their studies of other aspects of marital sexual behavior. This present research contributes to the literature by providing some empirical findings on how the quality of marital sex changes with duration. The change in sexual satisfaction is a very complicated subject that involves more variables than those considered in this present study. Needless to say, the issue demands further theoretical exploration as well as more empirical analyses when new and better data become available.

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