Factors affecting sexual satisfaction in Korean women who have undergone a hysterectomy

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KEY WORDS

hysterectomy, sexual satisfaction, spousal support, body image

ABSTRACT

Objective
This study was undertaken to examine the factors affecting sexual satisfaction in women who had undergone a hysterectomy.

Design
The descriptive correlational study was conducted. The model contained three stages including antecedents (stage 1), interpersonal influence (stage 2), and outcome perception (stage 3). The antecedents included perception variables (eg negative body image and depression) and individual characteristics (eg age, education, employment and physical state before and after the hysterectomy). Stage 2 focused on social support. In stage 3, the outcome perception variable was sexual satisfaction.

Setting
The setting was a gynaecology outpatient clinic in a suburban general hospital in Korea.

Subjects
A total of 118 women who have had a hysterectomy participated.

Main outcome measures
The instruments used for this study were the Body Image Scale, the Self-Rating Depression Scale, the Spousal Support Scale, and the Korean version of the Sexual Satisfaction Subscale.

Results
Results show spousal support (β=-.419, p=.00) and negative body image (β=-.301, p=.02) explained 30% of the variance in sexual satisfaction. Spousal support, as a mediating variable, was the highest factor predicting sexual satisfaction of women who have had a hysterectomy.

Conclusions
Findings suggest the causal relationships of sexual satisfaction can guide researchers and gynaecology nurses to understand the relative strength of predictors for sexual satisfaction. Nurse practitioners should play a leading role in assisting women who undergo hysterectomy to ensure they have emotional support from their spouse, as this can dramatically impact their sexual satisfaction.

INTRODUCTION

As in other advanced countries, hysterectomy is the most common major surgical procedure performed in Korea. The problems associated with a hysterectomy are now recognised as important health problems for women and a major issue for sexual activity with their spouse. Studies on the relationship between hysterectomy and sexual functioning have produced contradictory conclusions. Some studies report hysterectomy has a positive effect on sexual functioning (Vomvolaki et al 2006; Goetsch 2005; Rhodes et al 1999), whereas in other studies hysterectomy was found to have a detrimental effect on sexual functioning (Flory et al 2005; Jeng et al 2005). The sexual function of women who undergo hysterectomy ultimately has an influence on the quality of their lives (Hartmann et al 2004). Sexual satisfaction is regarded as part of a good quality of life (Gelfand 2000).

In an effort to increase sexual satisfaction, many studies have hypothesised and tested various etiological factors of sexual satisfaction: interpersonal, personal, physical and psychological factors. It is expected to reveal associations and the impact of various factors on the sexual satisfaction of women who have undergone hysterectomy which could be used for developing better guidelines for more successful interventions in women following a hysterectomy.

Across cultures, many studies (Wróbel 2008; Dennerstein et al 2003; Bancroft et al 2003; Moon 2002) reported emotional relationships with their spouse impacted on sexual satisfaction. In other words, spousal support was strongly associated with sexual satisfaction of women who have had a hysterectomy. Hence emotional support from their spouse was an essential predicting factor for positive perception of sexual activity. In addition to interpersonal factor, recent investigations have repeatedly shown that demographic characteristics of the women who had undergone a hysterectomy profoundly influenced sexual satisfaction (Parish et al 2007; Aslan et al 2008; Hayes et al 2008; Fajewonyomi et al 2007; Chang 1989).

Several studies (Haney and Wild 2007; Rhodes et al 1999) suggest the removal of ovaries during a hysterectomy negatively affects sexual and psychological well-being. Some studies (Wang et al 2006; West et al 2004; Malacara et al 2002) show women who were still menstruating before their hysterectomy experienced less sexual well-being than those in menopause. Some studies (West 2004; Nobre and Pinto-Gouveia 2008) also suggested a high correlation between psychological factors and sexual satisfaction of women following a hysterectomy. Women have many different beliefs about the importance of the uterus; their beliefs have an impact on perceptions or feelings about having a hysterectomy. These emotional reactions to hysterectomy, such as body image or depression, have an influence on sexual well-being (West 2004; Nappi et al 2002). Some women believe if they no longer have a uterus, they will not be attractive, resulting in negative body image. Many studies (Wang 2006; West 2004; Malacara et al 2002) have shown that women with a negative body image after a hysterectomy report less sexual satisfaction.

A critical limitation of previous studies is that sexual satisfaction was considered as a uni-dimensional concept resulting from simple predictive factors; rather than as complex multi-dimensional indicator for sexual satisfaction of women following a hysterectomy. Future studies addressing the multi-faceted nature of sexual satisfaction would allow for a much richer understanding of sexual satisfaction, comprehensive assessment as well as better-targeted interventions.

There is little research on the grounded theory explanation for causal relationship affecting sexual satisfaction experienced by women undergoing a hysterectomy. As an initiation of such trials in Korea, the present study was designed to test a staged theoretical model designed to explain relationships between individual factors, physical and psychological factors, and interpersonal factors affecting sexual satisfaction in Korean women following a hysterectomy.

PURPOSE

The purpose of this study was to test a theoretical staged causal model of sexual satisfaction in Korean women who have undergone a hysterectomy.

CONCEPTUAL FRAMEWORK

The model used to test the theoretical assertion relationships among specific determinants of sexual satisfaction of women who have undergone a hysterectomy were examined. There are two assumptions in this model. One is that contextual antecedents are sufficient to explain the causal factors affecting the sexual satisfaction. The other assumption is that spousal support is a mediating factor in sexual satisfaction for these women. The proposed hypotheses were developed based on findings from previous empirical research (Aslan et al 2008; Fajewonyomi 2007; Chang 1989).

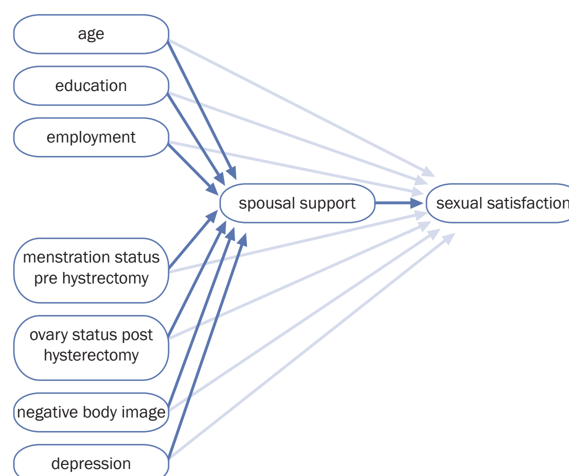
The model in figure 1 contains three stages comprised of antecedents (stage 1), interpersonal influence (stage 20) and outcome perception (stage 3). Stage 1 contains individual characteristic variables, physical and psychological factors. Individual characteristics include the woman's age (WA), education (WE), and employment (WJ). Physical variables include menstrual status before hysterectomy (MS) and ovary status after hysterectomy (OS). Psychological factors include negative body image (NBI) and depression (DEP).

In stage 2, the interpersonal variable was spousal support (SS). Spousal support is viewed as an interpersonal influence, a cognition focused on behaviours, beliefs, and attitudes of the spouse (Chang 1990; Chang 1989). Spousal support is defined as a subjective feeling of belonging, being loved, esteemed, valued, and needed, and that both spouses have an absolute obligation to support each other during the marriage (Patel et al 2008). In the theoretical staged model, a direct positive relationship was anticipated between spousal support and sexual satisfaction of women who have had a hysterectomy (Zobbe et al 2004; Chang 1989), with higher spousal support being associated with higher sexual satisfaction. Spousal support is predicted by the individual characteristics and by the psychological variables such as negative body image (Barelds-Dijkstra and Barelds 2008) and depression (Lee 2003). Hence, psychological factors had an indirect impact on the sexual satisfaction of these women through spousal support (Dove and Wiederman 2000).

In stage 3, the outcome variable was sexual satisfaction. Sexual satisfaction refers to a subjective perception that is congruent with subjective anticipation in sexual activity with their spouse (Chang and Jeong 1995). Sexual satisfaction has emerged as an important concept for determining the impact of community-based care on women following a hysterectomy (Gorlero et al 2008; Jongpipan and Charoenkwan 2007). The proposed hypothesis is that sexual satisfaction is predicted by spousal support, and by psychological factors and by the personal factors of each woman.

Spousal support was chosen as a mediating variable to test the implicit assumption that spousal support is associated with sexual satisfaction and that psychological factors and personal factors have a positive impact on sexual satisfaction through spousal support.

Figure 1: a staged theoretical model



Research Question

What is the magnitude and direction of the relationships between the dependent variable (sexual satisfaction), one endogenous variable (spousal support) and seven exogenous variables (WA, WE, WJ, MS, OS, NBI, DEP)?

METHOD

Design and Sample

A cross-sectional descriptive research design was used to test a staged theoretical model intended to explain factors influencing sexual satisfaction. Data were collected with a non-probability sampling strategy using structured format face-to-face interviews. A convenience sample of 118 community dwelling married women was recruited from a gynaecology outpatient clinic in a suburban Korean hospital. The sampling criteria were: 1) had a total hysterectomy with or without oophorectomy in the preceding 3-12 months, 2) been medically diagnosed with uterine myoma, adenomyosis, endometriosis, or no uterine cancer, and 3) having no complications and no hormone therapy after the hysterectomy. The study protocol was approved by the Institutional Review Board of Inje University Paik Hospital, Korea. All participants were informed of the purpose and procedures of the study and verbal approval was obtained from each woman. Participants were assured their responses would remain anonymous and confidential and they could refuse to participate in the study at any time.

Description of sample

As shown in table 1, the women ranged from 30 to 63 years of age, with a mean of 42.3 years (SD =10.4). Seventy-three percent of the women had graduated high school or higher (n=86, 72.8%). Approximately one third of the women (n=41, 34.7%) had an occupation. One third of the women (n=81, 68.6%) were still menstruating at the time of their hysterectomy and sixty-two percent of the women (n=73, 61.9%) did not have their ovaries removed.

Table 1: Demographic characteristics of the subjects (N=118)

Characteristics	Classification	Frequency(%)	Mean
Age (years)	<34	23(19.5)	42.3
	35-44	50(42.4)	
	45-54	33(28.0)	
	>55	12(10.1)	
Education	Elementary school graduate	14(11.9)	
	Middle school graduate	18(15.3)	
	High school graduate	63(53.4)	
	Over college graduate	23(19.4)	
Employment	Yes	41(34.7)	
	No	77(65.3)	
Menstruation status pre hysterectomy	Yes	81(68.6)	
	No	37(31.4)	
Ovary status post hysterectomy	Yes	73(61.9)	
	No	45(38.1)	

INSTRUMENTS

Body Image

The Korean Version of the Body Image Scale (K-BIS; Jeong 1988) was designed to measure body image in women who had undergone a hysterectomy. K-BIS was composed of 17 items. Example items from the K-BIS are: 'My body is perfect,' and 'My body is precious.' Each item is rated on a 5-point Likert type scale ranging from one (strongly agree) to five (strongly disagree). The possible range of scores is 17 to 85, with a higher score indicating poor body image. Evidence of homogeneity for the K-BIS includes a Cronbach alpha of 0.80 in the study by Jeong (1988). In this study, Cronbach's alpha value was 0.80.

Depression

To assess the degree of depression, the Korean version of the Self-Rating Depression Scale (K-SDS) (Song 1977) originally developed by Zung (1965) was used. This instrument consists of a 20-item self-report

questionnaire, covering affective, psychological and somatic symptoms associated with depression. Each item is scored on a 4-point Likert scale ranging from one (strongly disagree) to four (strongly agree). A total score is derived by summing the individual item scores, and ranges from 20 to 80. A total score of 70 or above indicates severe depression. A coefficient alpha of 0.81 was found in this study.

Spousal Support

The Spousal Support Scale (SSS; Chang 1989) consists of a 13-item, five-point Likert-type scale (one strongly disagree to five strongly agree) designed to measure spousal support behaviour for women with hysterectomies. The scores range from 13 to 65 and high total scores indicate a higher level of support from spouse. In the study by Chang (1989) the internal consistency coefficient of alpha was 0.85. In this study, the Cronbach's alpha value was 0.77.

Sexual Satisfaction

The translated Korean version of the Sexual Satisfaction Subscale (K-SSS; Chang 1989) was used to measure sexual satisfaction. The Sexual Satisfaction subscale from the DeRogatis Sexual Functioning Inventory (Derogatis and Melisaratos 1979) was translated and validity testing was done (Chang 1989). K-SSS consists of 10 items with a 5-point Likert type scale (one strongly disagree to five strongly agree). Total scores range from 10 to 50, and a higher score indicates a greater sexual satisfaction. In the study by Chang (1989), the Cronbach's alpha value was 0.78. In this study, internal consistency for the scale was 0.81

Procedure

Approval was obtained from the director of nursing in the general hospital, lists of eligible women were provided by referring doctors and nurses. With permission from the physicians, data collectors approached women in the waiting rooms of the gynaecology clinic to explain the study and asked potential participants for permission to describe the study to them. After informed consent was obtained from the woman, trained data collectors interviewed the participants. Data collectors requested the woman complete the questionnaire themselves, under the supervision of a data collector. The women completed the questionnaire in a private room to minimise distraction and enhance privacy and dignity.

Data Analysis

The research question was answered using path analysis. Data were managed and analysed utilising the SPSS-WIN program (version 11.0). Using the enter method of regression, model variables were entered into the equation based on stage and their bivariate relationship to the dependent variable. Women's education, employment, menstruation and ovary state were included as dichotomous data in this model. Education was scored as zero (less than high school education) or one (equal and greater than high school education). Occupation, menstruation and ovary status were scored as zero (no) or one (yes). Beta weights statistically significant at the 0.05 level were included in the analysis.

Results

Descriptive statistics for psychological variables, interpersonal variable and outcome variable, calculated as the total item score, are shown in table 2. For the K-BIS, the mean of total scores was 54.57 (SD=-.81). For K-SDS, the mean score was 45.14 (SD=.75), which was considered as an indication of not being depressed. For SSS, the mean of total scores was 36.07 (SD=.80). For K-SSS, the mean score was 28.22 (SD=.67).

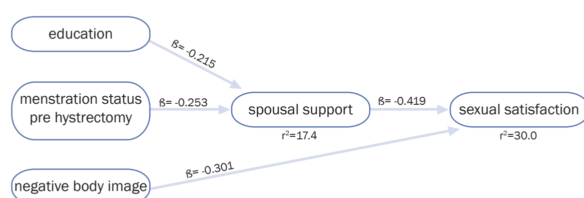
Table 2: Descriptive statistics of sexual satisfaction, body Image, depression and spousal support

	Mean	SD	Maximum	Minimum
Sexual satisfaction	28.22	0.67	50	10
Body image	54.57	0.81	74	38
Depression	45.14	0.75	61	24
Spousal support	36.07	0.80	69	21

Figure 2 shows the empirical results in the staged theoretical model on sexual satisfaction of Korean women post hysterectomy. For the dependent variable 'sexual satisfaction (SS)', the following equation was tested: SS=a+SS+WA+WE+WJ+MS+OS+NBI+DEP. In the final model (figure 2), spousal support (β=.419,

p=.00) in stage 2 and NBI (β=-.301, p=.02) in stage 1 explained 30% of the variance in sexual satisfaction. These relationships indicate the more spousal support and the more positive body image, the more sexual satisfaction of women post hysterectomy. The other six exogenous variables made no significant contribution to the explained variance.

Figure 2: Empirical results, a staged theoretical model



For the mediating variable 'spousal support,' the following equation was tested: spousal support =a+WA+WE+WJ+MS+OS+NBI+DEP. In the final model (figure 2), WE (β=-.215, p=.04) and MS (β=-.253, p=.03) explained 17.4% of the variance in spousal support. Women who had high education levels and were pre-menopausal prior to undergoing a hysterectomy were found to have less spousal support than those with low education levels and in menopause. Other exogenous variables in stage 1 made no significant contribution to the explained variance. Personal variables (eg education) of the women and physical state (eg in menopause) had indirect effects on sexual satisfaction through spousal support.

DISCUSSION

A theoretical staged model was posited to explain the causal relationships affecting sexual satisfaction in Korean women who have undergone a hysterectomy. Sexual satisfaction was evident in response to the impact of spousal support, and physical and psychological factors. The study was limited as the results cannot be generalised to Korean women, post-hysterectomy as this study was a randomly sampled population-based study. The results of this study, however offer preliminary insights into the nature of sexual satisfaction experienced by Korean women following a hysterectomy.

There are several interesting findings from this study. First, woman's education and menstrual status before hysterectomy had a negative indirect impact on sexual satisfaction through spousal support. This result indicates women who had low education levels had high spousal support, which resulted in sexual satisfaction experienced by the women even post hysterectomy. Women with high levels of education, who had less support from their spouse, had a perception of less satisfactory sexual activity. One possible explanation of this finding is that women with high levels of education may experience low passionate love for their partners, perhaps related to occupational stress. The result is supported by Tomic et al's (2006) study, in which higher education levels was significantly associated with lower levels of sexual satisfaction in midlife women. However there are inconsistencies in the literature on the relationship between high levels of education and sexual satisfaction (Aslan et al 2008; Chang 1989). These findings suggest no matter what the education level of the women, nurses can play an important role in encouraging women to get emotional support from their spouses. This is found to improve the perception of sexual satisfaction even for women who have undergone a hysterectomy. Further studies with a variety of samples to examine the relationship between individual characteristics and various facets of sexual satisfaction would be valuable.

In this study the results show women who were menopausal prior to undergoing a hysterectomy had a higher perception of sexual satisfaction even following the hysterectomy, through higher support from their spouse. Physical change such as menstruation status prior to hysterectomy could be a very important factor on emotional support from their spouse, resulting in subjective satisfaction in sexual activity with their spouse. This finding may mean sexual satisfaction ultimately, is indirectly influenced by physical factors (eg menstruation status prior to hysterectomy), as documented in previous studies (Wang et al 2006; West et al 2004; Malacara et al 2002). Although previously untested and despite the results of only a small percentage of sexual

satisfaction being accounted for by the proposed model, these results support the assumption that spousal support mediates the relationships between individual characteristics or physical factor and sexual satisfaction as a positive outcome.

Secondly, antecedent variables, the negative body image and depression in our study did not have an indirect negative influence on sexual satisfaction through spousal support, indicating the psychological variables, both negative body image and depression, were not associated with spousal support. This is inconsistent with findings from some studies across cultures, in which spousal support was influenced by body image and depression affecting women following a hysterectomy (Barelds-Dijkstra and Barelds 2008; Sung et al 2007; Lee 2003). The results of this study however, support the findings of other studies (Knoll et al 2007; Chun and Kim 1996), in which interpersonal factors such as spousal support was not significantly related to body image or depression. Accordingly, studies on the relationship between spousal support and psychological factors of women have contradictory conclusions. On the other hand, the results of this study support the findings of some researchers who determined only positive body image had a positive direct impact on sexual satisfaction (Nobre and Pinto-Gouveia 2008; Gütl et al 2002), indicating positive body image was related to higher sexual satisfaction. These findings imply that regardless of emotional relationship with their spouse, the emotional reactions to hysterectomy may influence only subjectively on sexual satisfaction with their spouse. The other possible culturally based explanation of this finding in terms of the Korean traditional family system is that hysterectomy is associated with low self-esteem, impaired body image, shame and indignity. Kim and Jang's (1998) study reported Korean women post hysterectomy are not willing to share their body image concerns with their spouse and thus do not get emotional support from their spouse because these women may have a fear they would be rejected by their spouse. The findings of this study suggest positive perception of body image in Korean women is directly related to subjective perception of sexual activity with their spouse, without intervening spousal support. Therefore, it is important for gynaecology nurses to support and encourage positive perception of body image for women undergoing a hysterectomy. Further studies may provide useful information to better understand sexual satisfaction of women post-hysterectomy.

Thirdly, comparing the strength of the relationship among the antecedent variables, spousal support and sexual satisfaction, striking differences were apparent. In this study, the positive effect of spousal support on sexual satisfaction was the strongest in this model. As in many of the previous studies where spousal support was associated with high perception of sexual satisfaction (Molton et al 2008; Wang et al 2006; Koh and Kim 2004; Shokrollahi et al 1999; Chang 1990; Chang 1989) this study revealed a high SSS score was correlated with high sexual satisfaction. In addition, it was found the strength of the negative relationship between personal factors and spousal support was similar to the strength of the negative relationship between physical factors and spousal support.

Lastly, of the psychological variables, depression was not in this model. This may indicate depression has little influence on the perception of satisfaction in sexual activity. It may also indicate there might a problem of sampling, in which the sample was positively distributed on the depression variable. Measurement of depression is another issue. The measure of Zung (1965) is an indicator that can be widely used to identify affective psychological and somatic symptoms associated with depression. In future research, specific dimensions of depression in relationship to sexual satisfaction of women post-hysterectomy need to be considered.

IMPLICATIONS AND CONCLUSIONS

The findings in this study have several implications. Firstly, the findings have implications for nursing practice designed to help women following a hysterectomy to increase their satisfaction in sexual activity. In this study, individual characteristics

and physical status of the women were causal factors affecting sexual satisfaction through spousal support, which was a mediating variable. These causal relationships of sexual satisfaction can guide researchers and gynaecology nurses to understand the relative strength of predictors for sexual satisfaction. Such knowledge will enable us to understand emotional support with spouse as a mediating factor and to develop more nursing interventions to improve sexual satisfaction. Secondly, these findings have implication for strategies and suggest the need to increase positive emotional reactions to hysterectomy. Positive self-esteem might be a significant component in strategies to improve body image in women so that sexual satisfaction can be improved. Thirdly, these findings have implications for training gynaecology nurses in inpatient, surgical or outpatient settings. Specialised training in the care of women undergoing hysterectomy is a critical factor. The training program should include an understanding about the nature of post hysterectomy and applying care strategies in systematic ways. Nurses should play a leading role in assisting women who undergo a hysterectomy to ensure they have emotional support from spouse as this will dramatically impact on their sexual satisfaction.

In conclusion, replication of the study with a larger sample needs to be considered to further enrich specific knowledge regarding spousal support and sexual satisfaction experienced by women who have undergone a hysterectomy. Whether sexual satisfaction is culturally relevant to other ethnic groups has not been identified as yet. Cross-cultural differences or similarities in the theoretical model to explain the physical status that affect sexual satisfaction through spousal support need to be examined. The findings of this study suggest further refinement of the underlying the model is warranted.

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