Original Article

Gender and Sexual Dysfunction in Thai Cancer Patients: A Comparative Study

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Objective: To compare sexual dysfunction between male and female who have cancer in Thailand.

Materials and Methods: The present study was a comparative descriptive research. Participants included 55 females with breast cancer and 55 males with cancer at prostate, bladder, and colon. They were all completed treatment for six months to two years from a university hospital, and two cancer hospitals. The instruments were the personal information and disease related treatment questionnaire and the Sexual Health Dysfunction developed by Kumdaeng (2007). Data were collected between March and June 2013. Cronbach's alpha coefficient of the sexual health dysfunction was 0.90. Data were analyzed by descriptive statistic and Mann-Whitney test.

Results: There was no significant difference of overall sexual dysfunction between male and female patients. For six subscales of sexual dysfunction, desire, arousal, orgasm, pain, mental support, and love were significant different between male and female at 0.05.

Conclusion: Result findings can provide evidence for appropriate management to improve sexual health and quality of life in both sexes of Thai cancer patients.

Keywords: Sexual dysfunction, Gender, Thai cancer patients

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Cancer diagnosis and treatment have an impact on people's physical, psychosocial, and social life[1]. Up to date, diseases and symptom management usually are the central focus[1,2]. In many places, people are still uncomfortable to discuss about sexual issues or it is a taboo topic[1,3-5]. As a result, sexual health problems in male and female cancer patients have been less addressed, possibly due to differences in belief, tradition, culture, or religion in upbringing and fostering. People are reluctant to accept this matter as a normal subject and unable to discuss the problems concerning sexual desires. As a result, sexual dysfunction is left to be the later concern or unaddressed in cancer care that can affect patients' quality of life[5-7].

Sexual function means "the ability to express one's sexuality in a manner that is consistent with personal needs and preferences" (p.1597)[8]. Sexual dysfunction cause by cancer and its treatment (loss or decreased function of organs) can affect quality of life of patients both genders[9-12]. The prevalence of sexual dysfunction was about 20% to 100% in patients with cancer[12-14].

For female with breast cancer, during treatment especially receiving chemotherapy, many physical problems such as fatigue, nausea, hot flashes, decreased of vaginal lubrication, or vaginal irritation leading to decrease women's sexual interest or desire[15,16]. Sexual issues remained after treatment as in the study of sexual well-being in 180 Chinese with breast cancer survivors reported changes of body image (83.3%), no desire (63.9%), and vaginal dryness relate to painful sex (50%)[5]. In a long duration, loss of breasts results in a decline in sexual interests, making it difficult for the women to be sexually aroused. They may not feel relaxed or satisfied during intercourse, and they may be unable to have orgasms. As a result, sexual functioning will be adversely affected after undergoing mastectomy, and receiving chemotherapy especially when they are compared to normal people[16].

For male with cancer of prostate, bladder, colon, and rectum with drain opening at the stomach, it has been indicated that treatments for all three types of cancer can affect sexual health such as sexual desire, difficult to arouse, and difficulty in maintaining normal sexual function[12,17]. For prostate cancer, the problems

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were stressed on erectile function after surgery[12], loss of libido and muscularity(14), which are considered significant impact on sexuality[18,19] and result in impact on sexual satisfaction and quality of life in male cancer patients[14,18].

Previous studies had been conducted on separate gender or types of cancer related to sexual dysfunction, cancer treatment, or quality of life[11,20-23]. Presently, in Thailand, there are few studies of sexual dysfunction in female with either breast or cervical cancer and their partners[23-25]. There is only one study of male cancer patients and their spouses[26]. Therefore, little is known about the gender differences in sexual dysfunction studies on cancer in Thailand. Thus, the purpose of the present study was to compare sexual dysfunction between male and female cancer patients after treatment.

Materials and Methods

The present study was a comparative descriptive research. Fifty-five females with breast cancer and 55 males with cancer of prostate, bladder, or colon participated in this study. They all complete their treatment for six months to two years from a university hospital, and two cancer hospitals. Sample sizes were determined by using Cohen's table[27]. The power 0.80, alpha 0.05, with small effect size (r = 0.29) were utilized to employ the sample sizes. Then, fifty-five participants per gender were selected. Data was collected between March and June 2013.

Instruments

Two instruments were used, 1) Personal information and disease related treatment questionnaire, 2) The sexual health dysfunction questionnaire originally developed by Kamdaeng (2007)[28]. The personal information and disease related treatment questionnaire were developed from literature review. This instrument included personal data, diseases and treatment such as types, stages of cancer and its treatment, time after treatment, and underlying disease.

The sexual health dysfunction questionnaire was developed by Kumdaeng (2007)[28]. The permitted instrument was originally used to assess sexual health dysfunction in gynecology patients. It included six subscales of sexual dysfunction, which were desire, arousal, orgasm, pain, mental support, and love. This instrument was modified to fit with cancer patients in general both male and female. There were 38 items with four levels of Likert-scale with 17 positive perceptions and 21 negative perceptions. The score in each item ranked from 0 (not at all) to 3 (have problems all the time). There were six components, desire with 10 items, arousal with five items, orgasm with five items, pain (discomfort) with three items, mental (psychosocial) with nine items, and relations and love with six items. The interpretation of summed score of each subscale were interpreted (higher score means high sexual dysfunction). Three oncology nurse-experts validated content and the content validity index [CVI] was 0.90. The reliability of the instrument with Cronbach's alpha coefficient was 0.91.

Protection of human rights

For protection of human rights, investigators submitted the study to the Committee on Human Subjects from one university-affiliated hospital and two cancer hospitals before collecting data. Then, data collection began after the study was approved by these committees. These procedures were followed the Helsinki Declaration of 1975, as revised in 2000, number 08-60-61.

Data analysis

Data were analyzed by Statistical Package for Social Sciences [SPSS] for window version 21 by using the statistics as followed:

1) Personal information and disease related treatment in Thai cancer patients such as age, years of marriage were analyzed by mean and standard deviation. Meanwhile educational level, types, stages of cancer, and its treatment, income were analyzed by frequency and percent.

2) The overall and six subscales of sexual dysfunction, which were desire, arousal, orgasm, pain, mental support, and relationship and love, were analyzed by median and inter quartile range.

3) Comparison overall and six subscales of sexual dysfunction, which were desire, arousal, orgasm, pain, mental support, and relationship and love between genders, were analyzed by Mann-Whitney test because data did not pass the assumption of the independent t-test.

Results

The patients' age ranged between 20 to 60 years old, with a mean age of 48.45 years (SD 7.17). Of all the patients, 49.1% had elementary school education and 43.6% had incomes lower than 10,000 baht/month. They were all married, and average duration of their marriage was 21.42 years (SD 9.05). All females had breast cancer (50%), while males had cancer of colon

Table 1. The perception of sexual dysfunction of male and female patients with cancer after treatment (n = 110)

Sexual dysfunction	Male			Female		
	Median	IQR*	Level	Median	IQR*	Level
Sexual dysfunction (overall)	35.00	27 to 43	Low	36.00	27 to 46	Low
Desire	10.00	8 to 13	Moderate	12.00	10 to 17	Moderate
Arousal	6.00	5 to 7	Moderate	5.00	4 to 6	Moderate
Orgasm	7.00	6 to 8	Moderate	5.00	3 to 7	Moderate
Pain	0.00	0 to 2	Low	2.00	0 to 3	Low
Mental support	7.00	6 to 9	Low	9.00	7 to 11	Moderate
Relationship and Love	3.00	2 to 5	Low	2.00	0 to 4	Low

* Interquartile range (quartile 25 to quartile 75)

or rectum (26.4%), prostate (12.7%), and bladder (10.9%). Half of them were in early stages (I to II). All of them had operation and most of them received chemotherapy (90%). About sexual dysfunction, 31.8% of patients perceived moderate degree and 11.8% of them rated high degree.

According to the findings, most of the patients had sexual dysfunction and were not significant different between male and female at low level (Table 1). However, there were significant differences in six subscales of sexual dysfunction, which were desire, arousal, orgasm, pain, mental support, and relationship and love at 0.05 (Table 2). Female patients had more desire problems than male patients (at moderate level), while arousal and orgasm tend to occur in male patients more than female patients (at moderate level). For pain, and relationship and love subscales were at low level in both genders. The mental support in female (moderate level) was higher than male (low level) (Table 1, 2).

Table 2. The comparison of sexual dysfunction between male and female patients with cancer after treatment by Mann-Whitney test (n = 110)

Sexual dysfunction	Gender	Median	IQR*	*p*-value
Sexual dysfunction (overall)	Male	35.00	27 to 43	0.834
	Female	36.00	27 to 46	
Desire	Male	10.00	8 to 13	0.024
	Female	12.00	10 to 17	
Arousal	Male	6.00	5 to 7	0.021
	Female	5.00	4 to 6	
Orgasm	Male	7.00	6 to 8	0.001
	Female	5.00	3 to 7	
Pain	Male	0.00	0 to 2	0.048
	Female	2.00	0 to 3	
Mental Support	Male	7.00	6 to 9	0.028
	Female	9.00	7 to 11	
Relationship and Love	Male	3.00	2 to 5	0.005
	Female	2.00	0 to 4	

* Interquartile range (percentiles 25 to percentiles 75)

Discussion

The findings of characteristics of the patients were similar to previous studies[23,25,26,28] in which most of them were middle aged, had elementary education, and low economic status.

Both male and female shared the same problems of sexual dysfunction congruent with the previous studies, which separately focused cancers on each gender where the female cancer patients had breast[29,30] or cervical cancer[23,31,32], and male cancer patients had prostate, colon, or bladder cancer[12,33,34]. Since no study comparing both male and female cancer patients was reported, thus it will be discussed on each gender.

In the present study, female's desire, arousal, and orgasm were affected in moderate level, which is similar to the study of sexual health dysfunction in cervical cancer patients[23]. It might be the effects from chemotherapy in breast cancer, which was not different from radiotherapy in cervical cancer. However, the desire in breast cancer patients was affected more than cervical cancer patients[23]. Chemotherapy can decrease vaginal lubrication, or cause vaginal irritation leading to lower women's sexual interest or desire[15,16].

For orgasm, cervical cancer patients seemed facing more problems than breast cancer patients. However, breast cancer patients had less pain than cervical cancer patients. This is because the functions affecting sexual organ are different in breast and cervical cancer. Interestingly, in the present study, mental support for breast cancer patients was required more often than for cervical cancer patients. This might occur from self-image alteration in breast cancer[14]. In relationships and love, both cancers were similar, reflecting that their relationships and love were not affected. It could be from their long period of marriage that help bonding their relationship and love with their spouses[25].

In male's cancer patients, the result supported the

previous studies in male cancer patient[18,35-37] in which it affected desire, arousal, and orgasm at moderate level. This can be explained since cancer and its treatment in male reduces the sexual desire, inhibit arousal, and makes less or difficult erection/orgasm. In the present study, there was either no or little pain while having sex. There was no effect on their mental support and relationship and love. This can be explained as before for the female cancer patients, from their long period of marriage.

When comparing male and female cancer patients, female had more problems in desire and mental support than male cancer patients. Female seemed concerned about their disease and treatment especially the side effects such as lack of energy as it disturbed their sexual desire[38]. However, arousal and orgasm seemed to be affecting male more often, which is related to the direct effect from their treatment leading to erectile dysfunction. Interestingly, female cancer patients need more mental support than male cancer patients.

Following treatment, both male and female patients found their sexual health declined. Combinations of treatment caused impacts on patients' physical, self-image, and emotional status as well as impacts to sexual emotions and health. The present findings confirmed many studies that cancer and its treatment have effects on personal sexual health especially cancer that relate to sexual organs and functions[18,39-41].

The issue of male and female's sexual health is an issue that both genders give importance but cannot openly addressed because the Thai society considers sexual issues a taboo, unworthy of discussion during ordinary times or times of sickness. Result findings can provide evidence for appropriate management to improve sexual health and quality of life in both genders of Thai cancer patients after treatment.

Conclusion

The results emphasized the difference of sexual dysfunction between male and females with cancer. This study provided evidence for appropriate management based on different genders to improve sexual health and quality of life in both genders of Thai cancer patients after treatment.

What is already known on this topic?

The descriptive of sexual health dysfunction in women with breast cancer and cervical cancer have been studied in Thailand. However, few reported the sexual health dysfunction in men with cancer of prostate, bladder, or colon. A study to compare the sexual health dysfunction between genders of cancer patients in Thailand was needed. The results can provide evidence to promote quality of life especially for the sexual health in both sexes of Thai cancer patients.

What this study adds?

This is the first study in Thailand that compared sexual dysfunction between female with breast cancer and male with cancer. The difference of sexual dysfunction subscales between male and female in Thai cancer patient's context will help care provider to evaluate and manage for the sexual dysfunction after cancer treatment for both genders. Female with breast cancer related to less or no desire while male focused on arousal and orgasm. Thus, health care providers should promote supporting clinic specifically for each gender based on their difference in sexual dysfunction subscales. This would help improve the cancer patients' sexual life leading to improve quality of life.

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Potential conflicts of interest

The authors declare no conflict of interest.

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