

The Effect of Sexual Counseling Program on Pain Level and Sexual Function among Women with Dyspareunia

Suzan E.Mansour¹, Amany M. Shebl², Soheir M. Waheda³

1. Woman's Health and Midwifery Nursing, Faculty of Nursing, Mansoura University, Egypt.
2. Medical-Surgical Nursing Department, Faculty of Nursing, Mansoura University, Egypt.
3. Medical-Surgical Nursing Department, Faculty of Nursing, Alexandria University, Egypt.

* E-mail of the corresponding author: drsuzanelsaid@gmail.com

Abstract: Dyspareunia is a sexual dysfunction manifested as pain in reproductive organs before, during or soon after sexual intercourse. In spite of the fact that this disorder may be found in both genders, it is much more frequent in women. For these women, sexual activity results in burning pain that can alter a woman's sense of sexual competency and identity. **Study aim** was to determine the effect of sexual counseling program on pain level and sexual function among women with dyspareunia. The **study setting** was conducted at obstetrical & gynecological clinics in El-mansoura University Hospital after obtaining hospital director approval. **A subject** was consisted of 392 women: 107 out of them with dyspareunia and 100 women complete counseling program, **Tools** three tools were used by the researchers to collect pertinent data consisted of **Women Structured Interviewing Schedule, Dyspareunia Self Assessment Tool, and Female Sexual Function Index (FSFI)**. **Results** revealed that 27.3% of the study sample was complained with dyspareunia their age was ranged between 20-40 years with a mean age of 33.79 ± 5.92 years. Regards FSFI scores a difference existed between pre and post scores in favor of post scores. $t = 18.7$ ($P < 0.001$) with highly statistical significant difference regarding **Desire** $t = 4.6$, ($P < 0.001$), **Arousal** $t = 7.97$, ($P < 0.001$), **Orgasm** $t = 3.7$ ($P = 0.002$), **Satisfaction** $t = 12.9$, ($P < 0.001$) and **Pain** $t = 26.4$, ($P < 0.001$). **Conclusion** female dyspareunia is an under recognized and significantly affected women and their sexual function, the present study proved also that sexual counseling program was effective on pain level and sexual function improvement among women with dyspareunia. **Recommendations** include application of sexual counseling program on wide range of women complaining sexual problems. Also, sexual health or problem inquiry should be ask as an important part of health care services and the health care team should be encouraged to initiate discussions about dyspareunia and in service education program for nurses about how to deal and manage various sexual problems is must.

Key words: Counseling Pain level Sexual function Dyspareunia

1. Introduction

Dyspareunia is defined as persistent and recurrent urogenital pain occurring before, during, or after sexual intercourse, which is not caused exclusively by lack of lubrication or by vaginismus (Sung et al, 2011). It is reported most typically as a unique problem to women, although it can also occur in men with a relatively rare instance (Kinsberg & Althof, 2009). Dyspareunia has been identified as the most common sexual complaint in women spontaneously reported to gynecologists (Steege, 1984). Dyspareunia affects 8–22% of women at some point during their lives, making it one of the most common pain problems in gynecologic practice. A mixture of anatomic, endocrine, pathologic, and emotional factors combine to challenge the diagnostic, therapeutic, and empathetic skills of the physician (Steege & Zolnoun, 2009).

Pain is a subjective experience with the heterogeneity of its etiology, and therefore, careful measurement and description of pain is necessary (McCall & DeGregorio, 2010). The causes of dyspareunia may be mixed between physiological and psychological, the common physical causes of dyspareunia include interstitial cystitis, irritable bowel syndrome, pelvic inflammatory disease, chronic pelvic pain, and endometriosis (Meana et al, 2009), while Psychological one result from fear of pain, interpersonal disturbance, and sexual abuse (Desrochers et al, 2009). Women usually report higher levels of catastrophizing; fear of pain; hypervigilance and mood disturbance, such as nervousness and depression (Valadares et al, 2008). Also may experience embarrassment, shame, guilt, loss of self-esteem, frustration, anxiety, nervousness, depression (Goldstein, 2009).

Deleting the sexual component would mean missing a fundamental aspect for understanding both pathophysiology and meaning of dyspareunia (*Graziottin A, 2005*). Moreover, dyspareunia may place a woman at risk for the development of vaginismus as well as secondary desire, arousal, and orgasmic dysfunctions (*Wincz & Carey, 20001*). Talking with patients about sexual pain disorders requires special attention to the sensitivity of the issue and an empathic attitude to the biological “truth” of pain this is the basis of a very rewarding clinician-patient relationship and is the basis of an effective therapeutic alliance (*Pukall et al, 2005*).

A number of sexual-counseling frameworks are available for health care providers to use as supportive and effective strategies to conduct sexual intervention in clinical practice (*Quinn & Browne, 2009*). PLISSIT model for sexual counseling on a woman experiencing dyspareunia has been used extensively in clinical practice (*Mosley & Jett, 2007*) and can easily be incorporated into routine practice to assist the health care providers in gradually discussing the topic of sexual health and providing short-term supportive *counseling* (*Ohl, 2007*).

The PLISSIT Model is one of the most commonly used and effective models used for the assessment and intervention for sexual problems, the PLISSIT model, also known as the PLISSIT model of sex therapy (*Power & Paul, 2007*). It is a modeling system used in the field of sexology to determine the different levels of intervention for individual clients. The model was created in 1976 by Jack S. Annon. The letters of the name refer to the four different levels of intervention that a sexologist can apply: *permission (P)*, *limited information (LI)*, *specific suggestions (SS)*, and *intensive therapy (IT)* (*Davis & Sally, 2006*).

The first level is *permission*, which involves the sexologist giving the client permission to feel comfortable about a topic or permission to change their lifestyle or to get medical assistance. This level was created because many clients only require the permission to speak and voice their concerns about sexual issues in order to understand and move past them, often without needing the other levels of the model. The sexologist, in acting as a receptive, nonjudgmental listening partner, allows the client to discuss matters that would otherwise be too embarrassing for the individual to discuss (*Blonna et al, 2005*).

The second level is *limited information*, wherein the client is supplied with limited and specific information on the topics of discussion. The third level is *specific suggestions*, where the sexologist gives the client suggestions related to the specific situations and assignments to do in order to help the client fix the mental or health problem. The fourth and final level is *intensive therapy*, which has the sexologist refer the client to other mental and medical health professionals that can help the client deal with the deeper, underlying issues and concerns being expressed (*Davis & Sally, 2006*).

Sexual counseling requires interpersonal skills, knowledge, and effective communication. The PLISSIT model can be used in a tailored and patient-centered approach in conducting sexual assessment and management of female dyspareunia. It can also assist health care providers to understand what a patient experiences, what matters to her, and how to improve her sexual health (*Sung et al, 2011*).

Significance of the Study

Dyspareunia is one of the most common complaints in gynecologic practice, it is also one of the more difficult clinical problems to assess and successfully treat. a systematic review of the worldwide prevalence of chronic pelvic pain reported that the rate of dyspareunia ranges between 8 and 21.8% (*Ferrero et al, 2008*). While in Egypt 31.5% of women were suffered from dyspareunia (*Elnashar et al, 2007*).

Shame and embarrassment play big role in Egypt, to address women concerns about sexuality effectively, nurses need to know how to act proactively in providing opportunities for women to present concerns. Therefore, sexual-counseling strategies can be used by the nurses during the assessment and treatment processes (*Jiwa et al, 2010*). Embarrassment prevents many women from seeking help and leads to unnecessary suffering and problems with their partner. Hence this study carried out to determine the effect of sexual counseling program on pain level and sexual function among women with dyspareunia.

Aim

The study aim is to determine the effect of sexual counseling program on pain level and sexual function among women with dyspareunia.

Research Hypotheses

- Women exposed to sexual counseling program exhibit moderate or no pain than pre-program implementation.
- Women exposed to counseling program exhibit improved sexual functioning than pre-program implementation.

2. Materials and Method

Study Design

Quasi- experimental research design had been used (pre& post test case study).

Setting

This study was conducted at Obstetrical & Gynecological clinics in El-mansoura University Hospital, Mansoura.

Subjects

Purposive sampling technique was used through taking all available women attended to Obstetrical & Gynecological clinics for six months. The sample was consisted of 392 women attending for obstetrical& gynecological clinics at El-mansoura University Hospital. 107 women with dyspareunia selected according to inclusion criteria and exclusion Criteria, 7 women drop of the study).

Inclusion Criteria

- Woman who complaining of dyspareunia on the questionnaire during their initial evaluation.
- Premenopausal woman.
- Free from any gynecological disorders that may initiate dyspareunia or sexual dysfunction.
- Had a telephone.
- Willingness to participate in the study.

Exclusion Criteria

- Pregnant women or Lactating women.

Tools of the Study:

Three tools were used by the researchers to collect pertinent data related to the study purpose:

Tool I: Women Structured Interviewing Schedule:

It was developed by the researchers after reviewing of related literatures (*Steege & Zolnoun 2009*). Its

purpose was to collect the necessary data which cover the aim of the study. The questionnaire was in the form of multiple choices (MCQ), closed ended questions. The time allowed to fill it was it included the 15-20 minutes. It consists of 14 questions divided into three parts:

It was divided of three parts:

Part I: demographic data. It was used to assess demographic data of the study sample and it was include the following items (participant's age, occupation, place of residence and educational level).

Part II: This part is concerned with medical & obstetrical history and it was include the following items parity status, dysmenorrhea, birth control method, history of episiotomy and chronic diseases.

Part III: It concerned with sexuality as frequency of sexual intercourse and dyspareunia sensation.

Tool II: Dyspareunia Self Assessment Tool:

This tool is used to assess clinical features about dyspareunia such as the severity, location, onset and form of pain. The degree of severity of pain is determined a according to the Facial Pain Rating Scale (FPRS) that developed by **Donna Wong and Connie Baker, 2001**. The FPRS consists of six cartoon-like faces ranging from a smiling face representing "no pain" to a tearful face representing "worst pain." And referring to Mild, Discomforting, Distressing, Horrible, Excruciating. Researchers asked women to choose the face that best describes their own pain and to record the appropriate number.

Scoring System:

In this subjective scale, pain feeling ranges from 0 to 10, 0 indicated the absence of pain, while 10 represented the most intense pain possible. The score distance between 0 and 2 is a mild pain while between 4 and 6 indicated moderate pain and between 8 and 10 score indicated sever.

Tool III: Female Sexual Function Index (FSFI). Rosen et al., (2000)

The FSFI is a brief questionnaire has been developed as a brief, multidimensional self-report instrument for assessing the key dimensions of sexual function in women. It designed to measure sexual functioning in women with a specific focus on sexual desire, arousal, orgasm, lubrication, satisfaction, and pain. It has been shown to have high reliability and psychometric and clinical validity. It was used as pre-assessment and post-assessment tool.

It is consisted of 19-question self-report measure that assesses six domains (desire, lubrication, arousal, orgasm, pain with sex, and sexual satisfaction). Respondents rate the frequency or degree to which they experienced different problems in sexual functioning within the past four weeks.

Scoring System:

Scores range from 0 to 5 or 1 to 5, depending on the item (e.g., "Over the past 4 weeks, how confident were you about becoming sexually aroused during sexual activity or intercourse" to which scores range from 0 = no sexual activity to 5 = very high sexual life" to which scores range from 1 = very dissatisfied to 5 = very satisfied. Six domain scores (questions 1-2 for **Desire**, questions 3, 4, 5, 6 for **Arousal**, questions 7, 8, 9, 10 for **Lubrication**, questions 11, 12, 13 for **Orgasm**, questions 14, 15, 16 for **Satisfaction**, and 17, 18, 19 for **Pain**) are calculated by adding the scores of the items for each domain and multiplying the sum by the domain's factor. The overall sexual functioning score is calculated by summing the domain scores. Lower domain and overall sexual functioning scores indicate more sexual dysfunction and higher score indicating greater level of sexual functioning.

Written Approval

A letter containing the title and aim was directed to the director of El-mansoura University Hospital then the approval for data collection was obtained. The aim of the study was explained to each woman before applying the study to gain their confidence and trust. Witten consent was obtained from each woman to participate in the study, after ensuring that data collected will be treated confidentially. All ethical considerations were clarified to each woman before explaining the nature of the study.

Operational Design

The study to be completed has passed through different phases: The preparatory phase and lastly the counseling implementation of the program.

Preparatory Phase:

Development of Study Tools Validity

- Tools used in the study were developed by the researchers after reviewing of the current local and international related literatures using books, articles and scientific magazines. This helped them to be acquainted with the problem, and guided them in the process of tools' designing.
- Tools were translated into Arabic and reviewed by jury of 5 expertises in the field of the study to test its contents and face validity.

Reliability

Reliability of methods and tools were tested using Cronbach's Alpha coefficient test which revealed that reliability of Female Sexual Function Index FSFI was (0.708).

Pilot study

- It was carried out on 10 women those were included in the main study sample to test the simplicity, clarity, applicability and feasibility of the developed tools.
- It also helped in the estimation of the time needed to fill in the forms. According to the results of the pilot study, necessary modification were done, women included in the study were excluding from the study.

Data Collection

Data collection process had done through different phases:

Assessment Phase

The study consumed six months, started from April 2013 to September 2013, the researchers were fill interviewing schedule sheet to women has the inclusion criteria and attending obstetrical and gynecological clinics and their total number were 392 women. The interviewing process was done 3 days/ week starting from 9 to 2 pm by the researchers, each woman was interviewed individually. The number of interviewed women per week was 15-17 women. The average time taken for filling each sheet was around 15- 20 minutes depending on the response of the women. Each woman was reassured that information obtained would be confidential and used only for the purpose of the study.

107 women were complaining of dyspareunia, then the researchers help the participants to fill dyspareunia self assessment tool and apply pre test to those women by using Female Sexual Function Index to assess their sexual functions.

Planning Phase

The program was conducted to determine effect of sexual counseling on pain level and sexual function among women with dyspareunia by using PLISSIT Model. Participants were classified in 4 groups of women. The researchers and women attend the gynecological clinic for four times/ week from Saturday to Tuesday with alternative. The duration of the educational program was 8 weeks for each group. Program was classified into 8 sessions each session was planned to provide specific information about dyspareunia causes and body image, basic anatomy of the genital organ and sexual function, explain how disease affect sexual functioning and how to deal. Each session was conducted for 1 hour, these sessions were applied at lectures room of El-mansoura University Hospital.

Implementation Phase

Then the researchers follow up women and performed counseling program using PLISSIT model technique. Only 100 women were agreeing to attend the educational program through multiple sessions and 7 cases were dropped.

PLISIT Model Technique:

The P-LI-SS-IT model, developed in 1976 by Jack S. Annon, is a commonly used method of assessing and discussing sensitive and critical issues and concerns with patient in health care settings It involve acronym PLISSIT for four basic forms of counseling therapy: *Permission*,

Limited Information, Specific Suggestions, and Intensive Therapy.

The researchers follow counseling program through The P-LI-SS-IT model steps:

Permission:

The researchers gave the women the permission to initiate sexual discussion and empower the patient to make choices and changes and performing the assessment and create a comfortable and open-minded climate, demonstrate active listening, freely interact with the woman, simply ask question about all aspects of sexual health to gave the woman the opportunity to share her sexuality and what it means to them, and identify any concerns.

Limited Information:

The researchers addressed specific women concerns and attempts to correct myths and misinformation about dyspareunia and its treatment and addressed prevalent sexual concerns, norms of behavior, and attempt to correct myths and misinformation.

Specific Suggestions:

The researchers explained the causes of the problems and assist the woman with very specific directions on how to address the problems. Then telling the woman what she can do for herself and what other women have tried or found helpful, and may include psychological intervention (e.g. prescriptions, exercise, multimedia aids) and alternative methods of sexual expression Such as Cross-wise sexual position and Kegel exercises.

Intensive Therapy:

The researchers provide the women guidance for the treatment for severe or more longstanding problem of dyspareunia.

Evaluation Phase

After one month of completion of the program the post test was done to assess and evaluate their pain level and sexual function by using FSFI. Finally the researchers compared between of pre test and post test results of these women to evaluate the effectiveness of the program implementation.

Statistical Analysis

Data entry and statistical analysis was done using Statistical Packages for Social Science (SPSS) version 18.0. Quality control was done at the stages of coding and data entry. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative variables. Qualitative variables were compared using chi-square test. Statistical significance was considered at p-value <0.05, highly significant difference obtained at $P < 0.001$ and non significant difference obtained at $P > 0.05$ (Krzywinski & Altman, 2013).

3. Results

Table 1 shows the socio-demographic characteristics of the study sample. Their age was ranged between 20-40 years, with a mean age 33.79 ± 5.92 years for women with dyspareunia and 33.55 ± 5.73 years for women without dyspareunia. Secondary school education represented the higher percent by (43.1%) followed by those who had university education (21.2%), majority of these women were house wife (51.8%), 53.8% of the study sample were lived in urban areas. There were no statistically significant differences with various demographic characteristics.

Table (1) Socio-demographic Characteristics of the Study Sample

Socio-demographic Data	Dyspareunia (N = 107)		No Dyspareunia (N = 285)		Total (N = 392)		Test of significance	
	No	%	No	%	No	%	χ^2	P
Age								
• 20-	23	21.5	63	22.1	86	21.9	0.353	0.838
• 30-	37	34.6	106	37.2	143	36.5		
• 40	47	43.9	116	40.7	163	41.6		
Education							0.411	0.982
• Illiterate	8	7.5	21	7.4	29	7.4		
• Read and write	16	15	41	14.4	57	14.5		
• Basic	13	12.1	41	14.4	54	13.8		
• Secondary school	46	43	123	43.2	169	43.1		
• University	24	22.4	59	20.7	83	21.2		
Occupation							0.599	0.439
• House wife	52	48.6	151	53	203	51.8		
• Working	55	51.4	134	47	189	48.2		
Residence							0.102	0.749
• Urban	59	55.1	152	53.3	211	53.8		
• Rural	48	44.9	133	46.7	181	46.2		

Mean \pm SD 33.79 \pm 5.92 For Women with Dyspareunia.

Mean \pm SD 33.55 \pm 5.73 For Women without Dyspareunia.

Table (2) Obstetrical & Gynecological History of the Study Sample

Variables	Dyspareunia (N = 107) (%)	No Dyspareunia (N = 285) (%)	χ^2	P
Menstruation			0.024	0.877
• Regular	(48.6)	(49.5)		
• Irregular	(51.4)	(50.5)		
Using of contraceptive method			3.422	0.064
• Yes	(67.3)	76.5)		
• No	(32.7)	(23.5)		
Method used			28.874	<0.001
• Oral contraceptive	19.4	43.1		
• Injectable	27.8	29.8		
• IUD	48.6	18.3		
• Chemical	2.8	5.5		
• Natural	1.4	3.2		
Parity			57.496	<0.001
• Yes	44.9	83.2		
• No	55.1	16.8		
History of Episiotomy			19.955	<0.001
• Yes	66.4	41.1		
• No	33.6	58.9		
Past medical history			266.448	<0.001
• Cardiac	0.9	0		
• Hypertensive	9.3	93.3		
• Renal	16.8	0		
• Diabetes	72.9	6.7		

Table 2 Presenting obstetrical & gynecological history of the study sample. As shown that 51.4% of women with dyspareunia and 50.5% of women without dyspareunia respectively had irregular menstruation and 67.3%, 76.5% of them were use contraceptive methods, 19.4%, 43.1% of

these women respectively take oral contraceptive pills. Result found that 55.1% of women with dyspareunia were nullipara, As regard to previous episiotomy 66.4% and 41.1% respectively were had episiotomy. Also, 72.9% & 6.7% respectively of women were had diabetes. It is Also represents significant relation between parity, past medical history, episiotomy, and type of contraceptive methods and incidence of dyspareunia.

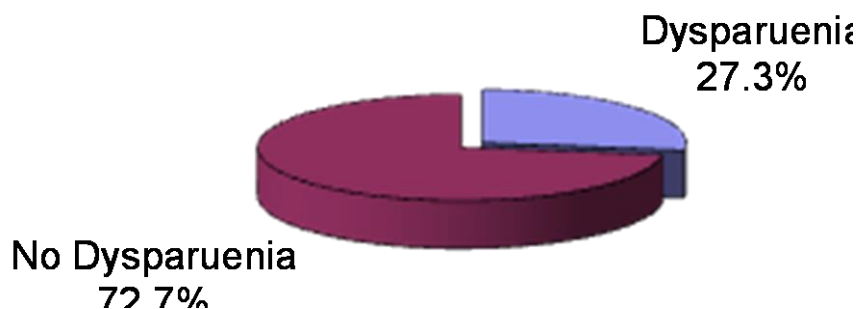


Figure (1) Distribution of Women with & without Dyspareunia

Figure (1) showed distribution of women with & without dyspareunia, it was observed that 27.3% of these cases complain of dyspareunia.

Table (3) Effect of Dyspareunia on Frequency of Sexual Activity

Items	Total (392)		χ^2	P- value
	Dyspareunia N=107	No Dyspareunia N=285		
• < Once per month	0.9	0.5	191.745	<0.001
• 1-2 per month	14	4.1		
• 1-2 per week	52.3	16.6		
• 3-4 per week	26.2	49.7		
• >4 per week	6.5	29.1		

Table (3) shows the effect of dyspareunia on frequency of sexual activity, as shown that 52.3% of women with dyspareunia had sex relation 1-2 times per/week compared with 49.9% of women without dyspareunia had 3-4 times/week sexual relation.

Table (4) Pain Characteristics of Women with Dyspareunia

Items	Women with Dyspareunia N=(107)	%
Onset of pain		
• Before	7	6.5
• During	72	67.3
• After	28	26.2
Location of pain		
• Introital	42	39.3
• Vaginal	32	29.9
• Pelvic	33	30.8
Severity of pain		
• Mild	9	8.4
• Moderate	78	72.9
• Severe	20	18.7
Form of pain		
• Continuous	34	31.8
• Rhythmic	54	50.5
• brief	19	17.8

Analysis of pain characteristics result revealed that 67.3% of women experience pain during sexual

intercourse, 39.3% of these cases had pain at introital opening. As regard severity of pain, 72.9% of women had distressing pain as well as 50.5% of them had rhythmic pain **Table (4)**.

Table (5) Female Sexual Function Index (FSFI) Score among Women with Dyspareunia Pre & Post Counseling Program.

<i>FSFI Items</i>	Pre- No 100	Post- No 100	<i>t</i>	P- Value
	Mean (SD)	Mean (SD)		
Desire (2 items)	5.9(2.1)	7.0 (1.4)	4.6	< 0.001
Arousal (4 items)	10.9(2.0)	13.1 (1.9)	7.97	< 0.001
Lubrication (4 items)	11.2(1.97)	11.3 (1.4)	0.6	0.6*
Orgasm (3 items)	8.4(1.4)	9.2 (1.6)	3.7	0.002
Satisfaction (3 items)	7.9(2.2)	11.2 (1.3)	12.9	< 0.001
Pain (3 items)	5.4(1.6)	11.2 (1.5)	26.4	< 0.001
Full Score	49.7(5.8)	62.98(4.1)	18.7	< 0.001

*= Not Significant

Table 5 Represented FSFI Score among women with dyspareunia pre and post counseling program. The expected range of score is from 0 to 5. There was a difference between pre and post scores for all women. Significance was the favor of post scores. With regard to FSFI, after counseling sessions women's scores were significantly higher than before with regard to *Desire t= 4.6*, ($P<0.001$), *Arousal t=7.97*, ($P<0.001$), *Orgasm t= 3.7* ($P 0.002$), *Satisfaction t=12.9*, ($P<0.001$) and *Pain t=26.4*, ($P<0.001$). Also there were no statistically significant regarding *lubrication t=0.6* ($P 0.6$). The post program counseling mean scores were higher than pre program counseling mean scores 62.98(4.1), 49.7(5.8) respectively) $t=18.7$, ($P< 0.001$).

4. Discussion

Sexual problems and dysfunctions are relatively common experiences which significantly impact on the perceived quality of life; sexual dysfunction has been shown to be associated with anxiety, depression, interpersonal difficulties and overall negative well-being. Recent research has shown that sexual health can be indicative of overall health. Painful intercourse can occur for a variety of reasons ranging from structural problems to psychological concerns. Many women experience painful intercourse at some point in their lives (*Biggs, 2011*).

Pain during intercourse is one of the most common complaints in gynecologic practice. Sexuality is a complicated part; it includes physical and psychological expressions of pleasure and intimacy. Culture, religious beliefs, and family traditions all affect how we are sexually. Sexuality may change with age, experience, and health conditions. When a person is ill, the physical changes caused by illness can change sexual functioning (*American Cancer Society, 2013*)

The current study revealed that minority of the participants complains of dyspareunia. This percent may not reflect the actual percentage of cases due to cultural and traditional believes and embarrassment in discussing the issues of sexuality or the patient's may perceive it as a private topic and must not be discussed with foreigner health care provider. These results are strikingly similar to study finding by other authors *Latthe, et al, (2006)* reported that the prevalence of dyspareunia in women has been found to be varying between 8% and 39.5%, this variation is caused by the following factors: inconsistent use of case definitions, variation in study design and conduct, and different outcome measures used to assess dyspareunia (*Hayes, 2009*).

This is agreed with similar study conducted in Sweden, result found that nurses feel that their patients could be upset (67%), embarrassed (72%), or anxious (68%) if they are asked about sexual concerns (*Jaarsma, et al 2010*) Moreover, in the current clinical environments with constraints on the amount of time that can be spent with each patient, individuals will not likely to

have their sexual concerns addressed during a standard medical encounter (*Ohl, 2007*). Furthermore, prevalence estimates vary depending on the time frame specified by researchers and whether distress is included in the query. Dyspareunia was noted to range from 8% to 22% in a limited review including 18 well-designed studies (*Boardman & Stockdale, 2009*).

Present study also revealed that dyspareunia is common at reproductive age between 20-40 years. This finding are approved by *Steege & Zolnoun, (2009)*, whom stated that Although general surveys of the prevalence of dyspareunia suggest that it is indeed more common in the reproductive years, also substantial numbers of women who are peri-menopausal and post-menopausal and aging women are troubled by this complaint. The fibromuscular tube of the vagina loses elasticity with age and loses lubrication capacity as a product of both hormonal and vascular changes. These finding is also confirmed by the survey of *Semmens & Semmens, (1984)* whom reported 40% of incidence of dyspareunia in premenopausal women and *Berman et al, (1999)* evaluated 48 menopausal women with complaints of sexual dysfunction reported 67% with pain or discomfort during and/or following intercourse. This result is contradicted with another investigator who stated that Young women aged 20-29 suffer from this disorder twice as often as older women aged 50-60 (*Danielsson et al, 2003*).

In the premenopausal population, the incidence of dyspareunia is estimated 15% to 20 %, (*Binik, 2005*). And the most common cause is vulvar vestibulitis syndrome. Approximately 25% of postmenopausal women have some degree of dyspareunia. Although dyspareunia in this population is generally attributed to vaginal dryness and mucosal atrophy secondary to loss of ovarian hormones, prevalence studies suggest a decrement in all aspects of female sexual function associated with midlife (*Dennerstein & Hayes, 2005*).

To understand the factors that predispose women to dyspareunia, the current study illustrated that overall there were no differences with various demographic characteristics and some of obstetrical history, including participant's age, educational attainment, residence, menstruation, and using of contraceptive methods result in women with or without dyspareunia. These results were approved by *Chen & Taneepanichskul, (2003)* in their study done on 112 Women randomly selected from women presenting for gynecologic care at King Chulalongkorn Memorial Hospital, There were no differences with various demographic characteristics, including both participants and partners age, religious affiliation, educational attainment, occupation, parity, drug abuse, illness of partner and satisfactory in relationships result in women with or without dyspareunia.

Moreover, the present study revealed that dyspareunia was increased in nulliparous women by more than half of the studied sample, these are interpreted by dyspareunia occurs in some women without contraception use that may cause the stress or anxiety of pregnancy or some had infertile problems which associated to any pathology or there are certain benefit of hormonal use in women. These results were approved by *Steege & Zolnoun, (2009)* whom stated that the distress associated with painful intercourse is certainly an important factor regardless of the origins of the problem. Anxiety has been shown to be an independent predictor of the pain of dyspareunia.

The current study also revealed that there were significant relation between past episiotomy and dyspareunia as represented by more than half of women had episiotomy complain of dyspareunia, and there were significant relation between past episiotomy and dyspareunia. This result explained by that when the laceration or episiotomy involves the rectal sphincter, there seem to be good evidence of dyspareunia. These result approved by *Signorello et al, (2001)* who noted that at 3 months after delivery, women with second degree tears were 80% more likely to have dyspareunia than those without tears, whereas women with third- and fourth-degree tears were more than 27.0% more likely to have continued pain with intercourse. Approximately 24% of women have de novo dyspareunia at 6 months after delivery, which decreases without focused treatment to about 8% at 1 year after delivery.

As well as majority of the studied cases had diabetes, these result may be related to that women with diabetes is well known to affect the vagina in the sense of increased vulnerability to infection. Less well known is its effect in terms of diminished lubrication, lower orgasmic frequency, and sometimes intrinsic cervical pain. These were approved by *Muniyappa et al, (2005)* whom stated that Systemic illnesses that affect vascularity and/or mucus membranes may also affect the vagina. Examples include Sjögren's syndrome, diabetes, and systemic inflammatory/autoimmune diseases.

As regard types of contraceptive methods used by women with and without dyspareunia, the study revealed that minority of the studied subjects using oral contraceptive methods. The result of present study was in agreement with *Baram, (2002)* who found that women with dyspareunia take

pills less than women without dyspareunia and there are certain benefit of hormonal use in women who had contraception and no dyspareunia. *On other side, Steege & Zolnoun, (2009)* contradicted this result and reported that the oral contraceptive methods had adverse effect on dyspareunia, had very light menses and can be associated with diminished vaginal lubrication, leading to dyspareunia. Simply switching pills to a higher estrogen preparation can resolve this difficulty.

The study represents significant relation between dyspareunia and sexual intercourse frequency, as showed that women with dyspareunia had less sexual relation, this result may be interpreted by fear of pain sensation and its effect on sexual desire. This result is approved by *Mehta & Bachmann, (2009)* whom reported that sexual activity results in increased blood flow to the vagina, improved lubrication, and increased vaginal elasticity separate from local estrogen effects on vaginal tissues. Thus, women who report regular vaginal intercourse or masturbation have less vaginal atrophy and dyspareunia than women who are not sexually active.

In this study most of the women feel distressing rhythmic pain at vaginal entrance during sexual intercourse. These finding are associated with vulvodynia, atrophy, inadequate lubrication, vaginismus, and rigid hymenal ring, scar tissue in an episiotomy repair, a mullerian abnormality, vaginitis, bartholin gland inflammation, radiation vaginitis, human papillomavirus infection, urethral syndrome, cystitis, vaginal trauma, chronic constipation and proctitis (*Baram, 2002*). *Similarly, Graziottin & Brotto, (2004)* stated that introital dyspareunia may be caused by vaginismus, not severe enough to prevent penetration but sufficient to cause genital arousal disorder and coital pain.

Also, *Kellogg-Spadt & Fariello, (2008)*, stated in their study that the most common form of female sexual pain is penetrative superficial dyspareunia. Patients may be completely unable to engage in sexual intercourse or any form of penetrative activity, these patients may state that their pain is positional or limits the length or rigorousness of intercourse.

As regard Female Sexual Function Index (FSFI) result, the current study illustrated difference between pre and post scores in favor of post. All women program mean scores were higher than pre program mean scores. As showed that after counseling session's women's scores were significantly higher than before with regard to desire, arousal, satisfaction, orgasm sexual function and pain. Also the study revealed that there were no statistically significant difference regarding lubrication this result may be related to large number of participants associated with dyspareunia has medical disease such as diabetes which has side effect on lubrication. *Wurn, et al, (2004)* approved this result, they reported that there was a statistically significant improvement on the FSFI full score ($P < .001$), pain domain ($P < .001$), and orgasm domain ($P < .001$) for women without dyspareunia.

Also these results agreed by *Holland, (2003)* who stated that Painful sexual intercourse and inadequate or absence of orgasms are among the most common complaints of women seeking gynecologic care. As well as *Binik, (2005)* said, dyspareunia does interfere with other dimensions of the sexual function: unwanted pain is the strongest reflex inhibitor of genital arousal, thus causing or contributing to vaginal dryness. This increases the vulnerability of the introital mucosa to coital mechanical trauma. It may cause as well secondary loss of sexual desire and central arousal, with further orgasmic difficulties Indeed, in my series of patients suffering from dyspareunia caused by Vulvar Vestibulitis, 58.1% of patients reported acquired desire disorders, 50% acquired arousal disorders and 40,3% acquired coital orgasmic difficulties (*Graziottin et al, 2001*).

Hays et al, (2006) also found that among women who had any sexual difficulty, 26% experienced sexual pain, whereas 64% experienced desire difficulty, 31% experienced arousal difficulty, and 35% experienced difficulty with orgasm. *Abbott-Anderson and Kwekkeboom (2012)* reported also in their review study, more than half of the studies participants identified pain (dyspareunia) as a significant deterrent to participating in sexual activity. In the present study pain was also found as one main symptom affects the sexuality Sexual problems are nearly always caused by a combination of physiological changes and psychological factors.

5. Conclusion

The present study proved that sexual counseling program was effective on pain level and sexual function improvement among women with dyspareunia. Women's scores regards female

sexual function difference between pre and post scores is significant in favor of post scores. All women mean score was higher than pre program mean with high statistically significant difference regarding desire, arousal, orgasm, satisfaction and pain.

6. Recommendations

In the light of the study findings, the following recommendations are suggested:

- Application of sexual counseling program on wide range of women complaining dyspareunia.
- Sexual health or problem inquiry should be ask for a regular and important part of health care service and the health care team should be encouraged to initiate discussions about dyspareunia.
- In service education program for nurses about how to deal and manage various sexual problems.

7. Limitations of the Study

There are, however, certain limitations such as:

- Cultural and traditional believes make women locally tending to had feeling of shame and keeps participants from talking about sexuality.
- Limited sample size according to prevalence of past references as a result of shame and embarrassment and feeling of social stigma regarding sexuality.

8. References

1. Abbott-Anderson, K. & Kwekkeboom, K.L. (2012), "A systematic review of sexual concerns reported by gynecological cancer survivors", *Gynecol Oncol*, 124, 477-89.
2. American Cancer Society, (2013), "Sexuality for the Woman with Cancer (sexual health and dysfunction)", available at www.cancer.org/docroot/MIT/MIT_7_1x_SexualityforWomenandTheirPartners.asp. Accessed at August 2013.
3. Baram, D.A. (2002), "Sexuality, sexual dysfunction and sexual assault", In: Berek JS, editor. *Novak Gynecology*. Philadelphia, Lippincott Williams Wilkins, 295- 321.
4. Berman, J.R., Berman, L.A., Werbin, T. J. Flaherty EE, Leahy NM & Goldstein, I. (1999), "Clinical evaluation of female sexual function: effects of age and estrogen status on subjective and physiologic sexual responses", *Int J Impot Res*; 11 Suppl 1: 31-8.
5. Biggs, W.S. (2011), "Sexual pain disorders. In: Rakel RE. *Textbook of Family Medicine*", Philadelphia, Pa.: Saunders Elsevier; available at: <http://www.mdconsult.com/das/book/body/191205553-4/0/1481/0.html#>. Accessed Nov. 18, 2011.
6. Binik, Y.M. (2005), "Should Dyspareunia be retained as a Sexual Dysfunction in DSM-V? A painful classification decision", *Archives of Sexual Behaviour*. 34: 11-21.
7. Blonna, Richard, Watter & Daniel. (2005), "Health Counseling: A Microskills Approach. Burlington, Massachusetts: Jones & Bartlett Learning", Available at December 17, 2013.
8. Boardman LA & Stockdale, CK. (2009)," Sexual pain", *Clin Obstet Gynecol*; 52:682–90.
9. Chen, O. & Taneepanichskul, S. (2003), "Prevalence of dyspareunia in healthy thai perimenopausal", *Thai J Obstet Gynaecol* 118-2.
10. Danielsson, I, Sjoberg I, Stenlund H. & Wikman M. (2003), "Prevalence and incidence of prolonged and severe dyspareunia in women: results from a population study", *Scand. J. Public Health* 31(2): 113-8.
11. Davis & Sally (2006), "Rehabilitation: The Use of Theories and Models in Practice", Amsterdam: Elsevier Health Sciences. Retrieved December 16, 2013.
12. Dennerstein, L. & Hayes, R.D. (2005), "Confronting the challenges: epidemiological study of female sexual dysfunction and the menopause", *J Sex Med.*; 2(3):118-32.
13. Desrochers, G., Bergeron, S., Khalife, S., Dupuis, M.J & Jodoin, M. (2009), "Fear avoidance and self-efficacy in relation to pain and sexual impairment in women with provoked vestibulodynia", *Clin J Pain*; 25:520 -7.
14. Elnashar A.M, Ibrahim M., EL-Desoky M.M., Ali O.M & Hassanc B. M. (2007), "Female sexual dysfunction in Lower Egypt", *BJOG*; 114:201–06.
15. Ferrero S., Ragni N. & Remorgida V. (2008), "Deep dyspareunia: causes, treatments, and results", *Current Opinion in Obstetrics and Gynecology*.2008, 20:394–99.
16. Goldstein, AT. (2009), "Medical history, physical examination, and laboratory tests for the evaluation of dyspareunia" In: Goldstein A, Pukall C, Goldstein I, *Female sexual pain disorders*. West Sussex, UK: Blackwell Publishing; 14-20.
17. Graziottin, A. & Brotto L.A. (2004), "Vulvar vestibulitis: clinical approach", *Journal of Sex and Marital Therapy*, 30 (3): 125-40.

18. Graziottin, A. (2005), "Why Deny Dyspareunia Its Sexual Meaning?", *Archives of Sexual Behaviour*, 34, (1), 32-34.
19. Graziottin, A., Nicolosi, A. E., & Caliani, I. (2001), "Vulvar vestibulitis and dyspareunia: Addressing the biological etiologic complexity", Poster presented at the International meeting of the Female Sexual Function Forum, Boston.
20. Hayes R.D, Bennett C.M., & Fairley C.K. (2006), "What can prevalence studies tell us about female sexual difficulty and dysfunction?" *J Sex Med*; 3:589-95.
21. Hayes R.D. (2009), "The prevalence of dyspareunia", In: Goldstein A, Pukall C, Goldstein I. *Female sexual pain disorders*. West Sussex, UK: Blackwell Publishing, 4e8.
22. Holland A. (2003), "Physical therapy intervention for dyspareunia: a case report", *J. of the Section on Women s Health*. 27:18-20.
23. Jaarsma, T., Stromberg, A., Fridlund, B., De Geest, S., Martensson, J., & Moons, P. (2010), "Sexual counseling of cardiac patients: nurses' perception of practice, responsibility and confidence", *Eur J Cardiovasc Nurs*; 9:24.
24. Jiwa M, O'Shea C, Merriman G, Halkett G., & Spilsbury K. (2010), "Psychosexual problems in general practice: measuring consultation competence using two different measures", *Qual Prim Care*; 18:243-50.
25. Kellogg-Spadt., S., & Fariello, J. (2008), "Clinical Update: Dyspareunia in Women. *The Female Patient*", (33) 2008.
26. Kinsberg, S. & Althof, S.E. (2009), "Evaluation and treatment of female sexual disorders", *Int Urogynecol J*; 20:33-43.
27. Krzywinski, M. & Altman, N. (2013), "Points of significance: Significance, P values and t-tests", *Nat. Method*, 10, 809-810.
28. Latthe P, Latthe M, Say L, Gulmezoglu M., & Khan KS. (2006), "WHO systematic review of prevalence of chronic pelvic pain: Neglected reproductive health morbidity", *BMC Public Health*; 6:177-83.
29. McCall, J.L. & DeGregorio, M.W. (2010), "Pharmacologic evaluation of ospemifene", *Expert Opin Drug Metab Toxicol*. 6(6):773-9.
30. Meana, M., Benuto, L., & Donaldson, R.L. (2009), "The relevance of dyspareunia. In: Goldstein A, Pukall C, Goldstein I, *Female sexual pain disorders*", West Sussex, UK, Blackwell Publishing; 9-13.
31. Mehta, A., & Bachmann, G. (2009), "Vulvovaginal complaints", *Clin, Obstet Gynecol*; 51:549-55.
32. Mosley R., & Jett K.F. (2007), "Advanced practice nursing and sexual functioning in late life", *Geriatr Nurs*; 28:41-2.
33. Muniyappa, R., Norton, M., Dunn, M.E. & Banerji, M.A. (2005), "Diabetes and female sexual dysfunction: moving beyond "benign neglect", *Current Diab Rep*; 5:230-6.
34. Ohl, L.E. (2007), "Essentials of female sexual dysfunction from a sex therapy perspective", *Urol Nurs* 2007; 27:57e63.
35. Power & Paul W. (2007), "The Psychological And Social Impact Of Illness and Disability", New York City: Springer Publishing Company. Retrieved at 15, 2013.
36. Pukall C., Lahaie M. & Binik Y. (2005), "Sexual pain disorders: Etiologic factors", In: Goldstein I, Meston CM, Davis S, Traish A. *Women's Sexual Function and Dysfunction: Study, Diagnosis and Treatment*. Taylor and Francis: UK.
37. Quinn C., & Browne G. (2009), "Sexuality of people living with a mental illness: a collaborative challenge for mental health nurses", *Int J Ment Health Nurs*; 18:195-203.
38. Rosen. R, Brown. C, Heiman. J., Leiblum. S, Meston. C., Shabsigh. R., Ferguson. D., & D'agostino. R. (2000), "The Female Sexual Function Index (FSFI): A Multidimensional Self-Report Instrument for the assessment of Female Sexual Function", *Journal of Sex & Marital Therapy*, 26:191-208.
39. Semmens, J.P., & Semmens, E.C. (1984), "Sexual function and the menopause", *Clin Obstet Gynecol*; 27: 3.
40. Signorello, L.B, Harlow, B.L, Chekos, A.K., & Repke, J.T. (2001), "Postpartum sexual functioning and its relationship to perineal trauma: a retrospective cohort study of primiparous women", *Am J Obstet Gynecol*; 184:881-8.
41. Steege J. & Zolnoun, D. (2009), "Evaluation and Treatment of Dyspareunia", *Obstet Gynecol*; 113:1124-36.
42. Steege J. (1984), "Dyspareunia and vaginismus", *Clin Obstet Gynecol*; 27: 750-9.
43. Sung, S.C, Jeng, C.J & Lin, Y.C (2011), "Sexual health care for women with dyspareunia", *Taiwanese Journal of Obstetrics & Gynecology*; 50 .268-274.
44. Valadares, A.L, Pinto-Neto, A.M, Conde, D.M, Sousa, M.H, Osis, M.J, & Costa-Paiva, L. (2008), "A population-based study of dyspareunia in a cohort of middleaged Brazilian women", *Menopause*; 15:1184-90.
45. Wincz JP & Carey MP. (2001), "Sexual dysfunction: a guide for assessment and treatment", New York: The Guilford Press.
46. Wong D.L, Hockenberry-Eaton M., Wilson D., Winkelstein M.L., & Schwartz P. (2001), "Wong's Essentials of Pediatric Nursing", Louis, P. 1301.
47. Wurn, L. J., Wurn, B.F., Roscow, A.S, King, C.R., Scharf, E. & Shuster, J. (2004), "Increasing Orgasm and Decreasing Dyspareunia by a Manual Physical Therapy Technique", *Med Gen Med*, 6(4): 47.