

## Effectiveness of PLISSIT Model on Sexual Dysfunction and Psychological Distress among Women Using Hormonal Contraception

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### Abstract

**Background:** Use of hormonal contraceptives in clinical settings and in the general public, may exacerbate pre-existing anxiety and depressive symptoms. The PLISSIT model is a sex therapy counseling model which can aid any persuasive practitioner to tackle women's sexual health. **Aim:** Evaluating the Effectiveness of PLISSIT Model on Sexual Dysfunction and Psychological Distress among Women Using Hormonal Contraception. **Research design:** A quasi experimental research design was used in this study. **Research setting:** Family Planning and Gynecological Clinics at Woman's Health Hospital, Assiut University. **Sample:** In this study a purposive sample of 100 women. **Tools:** three tools were used in this study, (1) women assessment sheet, (2) Female Sexual Function Index tool (FSFI), (3) Depression Anxiety Stress Scales tool (DASS-21). **Results:** There were highly statistically significant differences between pre and post implementation mean scores of female sexual function among women ( $p=0.000^{**}$ ) with a significant increase of the total mean score of female sexual function from pre-test ( $15.09\pm 6.24$ ) to ( $28.49\pm 5.08$ ) in post-test among women. **Conclusion:** PLISSIT model had positive effect on sexual dysfunction and psychological distress among Women using hormonal contraception. **Recommendations:** Nurses should provide counseling through PLISSIT model for women using hormonal contraception to optimize the sexual health and sexual quality for life.

**Keywords:** Hormonal Contraception, Psychological Distress, PLISSIT Model, Sexual Dysfunction, Women.

### Introduction

Hormonal contraceptives are pharmaceutical or advices which can eliminate the danger of unintended pregnancy. it contains the hormones as estrogen or progestin and a combined,

some birth control pills contain a mix of these hormones, while others forms contain only progestin hormone. Some types of combination of birth control methods are oral contraceptives (defined as a birth control pills or "pills"), patches which are put on the skin, and rings which are inserted

into the vagina. Progestogen-only methods include tablets, injections, implants put under the skin, intrauterine devices (IUDs) (Kaunitz et al 2021).

Hormonal contraceptives (HC) not only lower the circulating levels of androgens, but also lower the baseline serum levels regarding estradiol and progesterone, inhibiting oxytocin function. However, levels of hormones of follicle-stimulating hormone (FSH) and luteinizing hormone (LH) are similar in women who are free-cycling

and women who are using HC. Reduce circulatory androgen levels and adverse effects on sexual life with combined hormone oral contraceptives (CHC) (Casado-Espada et al, 2019).

Use of hormonal contraceptives in the general public and in the clinical settings, may exacerbate pre-existing anxiety and depressive symptoms, psychological side effects are a factors of disapproval about hormonal contraception. The interruption rates for hormonal contraception are particularly superior between the adolescents, with mood claims being one from the most common causes of discontinuation (Raeder et al, 2019).

Sexuality is an important element of human life with crucial effects on psychological, physical health and the quality of life (QOL). Women's sexual function is often multi-agent and may contain a many of psychological defects like as fatigue, anxiety, stress, depression and relationship conflict relating to physical or sexual disturbance, medicines like as antihypertensive & hormonal contraceptives, and some physical conditions such as menopause, genitourinary syndrome and endometriosis (de Castro Coelho & Barros 2019).

Dysfunction in female sexual health is a term of pain at intercourse (dyspareunia) and desire less. Dysfunction in female sexual health is affected by some factors like as advanced age, hormonal changes, vaginal delivery, endocrine disorders, genital surgery, and psychological disturbance as anxiety, negative body image, emotional neglect, distraction, depression and sexual abuse (Caruso, and Monaco, 2019).

The PLISSIT model is a sex therapy counseling model that can help any persuasive practitioner to tackle women's sexual health. The four levels of the PLISSIT model are: Permit (P): Gives a woman permission to discuss these which adversely affect her Limited Information (LI), sexual function: Provides limited information on the physiological and anatomical issues of sexual function without entering in detail. Specific Suggestions (SS) on how to deal with common problems encountered during management. In some cases, such as when the first three steps fail to resolve the problem, B. Internal conflict or psychological problems (Buehler, 2021).

Nurses are key members of the health team, advising women on sensitive and high-load areas of sexuality functions. Sexual health issues are limited way for caregivers, so care must be neared in a manner which respects the women's confidentiality and carefully examines their demands. Nursing care as sex teaching and advices which used to help women solve sexual disturbance (Lowdermilk et al, 2019).

#### **Significance of the study**

Worldwide, Sexual problems are reported to be approximately 40% and approximately 12 % (one in every eight women) have a sexual Problem (Shifren, 2020)

In Egypt, the prevalence of female sexual Dysfunction among women who used

Hormonal contraception was 51.5%, whereas the prevalence among women who used Non hormonal contraception was 29.6%. (Mugore, 2020)

Female hormone contraceptive users were found to be more likely to suffer from depression, anxiety, fatigue, neurological symptoms, sexual dysfunction, urges, anger, and adverse effects on menstruation (Al-Mass et al, 2018).

Negative experiences related to mood and sexual function has been reported in observational studies as the main reason for stopping or switching contraceptives. The demand to know women's experiences for side effects of mental health is highlighted by the qualitative research like critical to breaking down obstacles to ideal contraceptive use (Claringbold et al, 2019).

PLISSIT model is a framework for helping healthcare providers order and treat sexual problems. PLISSIT is an acronym for the model's four stages: first stage: permission, second stage: limited information, third stage: specific suggestions, fourth stage: intensive therapy. This four-step framework helps caregivers discuss and deal with sexual issues. Each step requires increasing caregiver skills and knowledge (Karimi et al, 2021). For that, our study may be helpful in relieving sexual dysfunction and psychological distress among women using hormonal contraception through application of PLISSIT Model.

#### **Aim of the study**

Evaluate the Effectiveness of PLISSIT Model on Sexual Dysfunction and Psychological Distress among Women Using Hormonal Contraception through the following objectives:

- Assessing sexual Dysfunction and Psychological Distress among Women

Using Hormonal Contraception.

- Sexual counseling through PLISSIT model
- Evaluating effectiveness of PLISSIT model on sexual dysfunction and psychological distress among women using hormonal contraception.

#### **Research Hypotheses:**

PLISSIT Model will be effective in relieving sexual dysfunction and psychological distress among women using hormonal Contraception.

#### **Subjects and methods**

##### **Research Design:**

A quasi-experimental research design with Pre-test and post-test was used in this study.

##### **Setting:**

This study was done in Family Planning and Gynecological Clinics at Woman's Health Hospital, Assiut University.

##### **Subjects:**

##### **Sample type:**

A purposive sample was used in this study

##### **Sample size calculation:**

The calculation of the sample was done through (Epi-info statistical package and version 7.2, which designed by Center for Disease Control and Prevention (CDC) by power equal 80%, the 2.5 value was chosen according the acceptable limit of precision (D) according 95 % confidence level (C1), with the expected prevalence of 10 %, the worst acceptable 25 %. As a result, the size of sample was estimated to be 100 women.

##### **Sample size:**

The study sample consisted of 100 women that were using any method of hormonal Contraception and have sexual dysfunction.

##### **Inclusion criteria**

- Healthy married women between 21- 45 years' old
- Women were using any hormonal contraceptive methods for at least 4 weeks and have sexual dysfunction

and agreed to participate in the study.

### **Tools of the study: -**

**Tool I: Women assessment sheet:** To assess socio-demographic characteristics & health history of woman: it included: -

- **Part I: Personal data:** name, age, occupation, educational level, residence.
- **Part II: Obstetric history:** gravidity, parity, number of living children, and number of abortion.
- **Part III: Family planning history:** method used, duration of use, complications while using it.

### **Tool II: Female Sexual Function Index (FSFI):**

The FSFI questionnaire a reliable and valid scale and developed through **Wiege et al., (2005)** to measure female sexual dysfunction and contained 19 questions which evaluate the function of female sexual health about 6 parameters such as pain, sexual desire, orgasm, satisfaction, lubrication and arousal. The total score is the sum of the scores in all parameters. Items are rated on 5-point Likert scale (from 1 to 5), the highest score about 36, and scores less than 28 indicate an undesirable sexual function.

### **Tool III: Depression Anxiety Stress Scales (DASS-21):**

This scale has been originally developed by **Henry & Crawford, (2005)**, and modified by **Lyrakos et al., (2011)**. This tool is a set of three self-report scales designed to Measure the psychological distress through assessing depression, anxiety and stress.

Each of the three DASS sub scales contains 7 items. The Depression scale assesses dysphoria, hopelessness,

devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. The Anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Subjects are asked to use 4-point Likert scale to rate the extent to which they have experienced each state over the past week which range from 0 which did not apply to me at all to 3 which applied to me very much, or most of the time. Scores for Depression, Anxiety and Stress are calculated by summing the scores for the relevant items.

Score are presented as a total score and a score for the three subscales. For each of the three subscales percentiles and computed based on a community sample (Henry & Crawford, 2005).

In addition, scores for each subscale are categorized into five severity ranges: normal, mild, moderate, severe and extremely severe. Normal (0-7), Mild (8-9), Moderate (10-14), Severe (15-19), Extremely Severe (20+)

### **Content validity:**

The study tools were tested for content validity by just a panel of four experts in the fields of maternity and newborn health nursing, and psychiatric Nursing and modifications were done as needed.

### **Content reliability:**

Cronbach's Alpha was used to assess the reliability of the tools., it was (0.811) for tool II & (0.74) for tool III.

### **Ethical and legal considerations:**

Before starting the research, the ethical approval was obtained from the scientific research ethical committee of faculty of nursing. An official permission was obtained from the manager of Family

Planning and Gynecological Clinics at Woman's Health Hospital, Assiut University. Before data Collection, the participants were informed about the aim and the nature of the study which don't cause any harm or pain & agreement for participation in the study was taken from them. Also, they were assured that the Information was confidential and used only for purpose of research. Also, they were informed which participating in the study is voluntary, they have the right to withdraw from the study at any time.

#### **Pilot study:**

A pilot study was conducted at on 10% of the total sample (10 women) to assess the clarity and applicability of the tools. No changes were made in the tools. Ten women were recruited for the pilot study and were included in the total sample.

#### **Procedure:**

Actual fieldwork was carried out in a period of Six months from May 2022 to November 2022 involving application and evaluation of PLISSIT model.

#### **The preparatory phase:**

The researchers reviewed past and current available literature relevant to the study topic in order to acquire in-depth knowledge of theoretical of the different aspects of the problem. Then the study tools were designed after extensive review of literature.

An official letter approval was obtained from the Dean of the Faculty of Nursing, to the manager of Woman's Health Hospital at Assiut University. This letter includes a permission to conduct the study and explained the aim and nature of the study.

#### **The implementation phase:**

This phase included the following stages

##### **Pre intervention stage (assessment)**

Upon securing an official permission to conduct the study. The researcher

interviewed with each woman individually in waiting area of family planning clinic, explained the purpose of the study, and took her oral consent for participation in the study. After that the personal data was assessed and the researcher asked them to fill Female Sexual Function Index& Depression Anxiety Stress Scales (DASS-21) Scale as a form of assessment of sexual Dysfunction and Psychological Distress. This took a time from 15-20 minutes.

##### **Intervention stage (PLISSIT model)**

The intervention involved interactive session for each woman individually and the session was conducted for One hour in waiting area of family planning clinic. The session was run based up on PLISSIT Model consisting of 4 steps first stage: permission, second stage: limited information, third stage: specific suggestions, fourth stage: Intensive Therapy) as following

**Step (1) Permission:** At first phase ,the researchers discussed an open –ended questions and general question like as: what is your experience about sexual issues, the women are allowed to start speaking about sensitive aspects and sexual problems, the researcher listen to women without any sentence .

**Step (2) limited information:** The researcher explains the response of female sexual cycle and the effect of Hormonal Contraception on female sexual function. The researcher focuses on correcting myths and addressing regarding sexuality

**Step(3) specific Suggestions:** in this step the researchers introduced solutions to manage some conditions such as anticipatory anxiety toward sexual intercourse, fear of pain and discomfort, the researchers improved relaxation strategies technique like as distraction and recreation, breathing exercise, appropriate healthy life style such as healthy nutritional style as

(high vegetables/fruits diet, low fat diet, high fiber diet, promote body image through support and physical activity, Psychological counseling and walking for at least 30 minutes / day, making shoulders range of motion exercise. In this level of intervention should provide advanced knowledge and experience as a wide range thoroughly of a particular health aspect and practice to evaluate a women's unique situation depend on this health aspect and to develop a plan.

**Step (4) Intensive Therapy:** The researchers detect services to which women can be referred for more intensive or comprehensive management as sex therapist, social worker, medical and psychological specialist.

The most common sexual problems of cases were lack of sexual desire, impaired arousal, inability to achieve orgasm, or pain with sexual activity. The following advices were provided as More open communication between Woman and her partner, making time for intimacy with her partner, Healthy habits, such as getting exercise and eating a healthy diet, Vaginal lubricant for dryness or lessen pain during sex Vibrators and other tools to enhance arousal & Techniques on how to reduce distractions and be more present during sex. There are no cases that need referral to sex therapist, social worker, medical and psychological specialist.

#### **Post intervention stage (Evaluation)**

To evaluate the effect of the PLISSIT Model application on sexual dysfunction and psychological distress, a post-test (one month from the application of the PLISSIT Model) was done using the same two tools through telephone.

#### **Statistical analysis**

Data entry and statistical analysis will be done using the statistical package for social science program (SPSS. version 22).

qualitative variables will be presented as number and percentage. Quantitative variables will be presented as mean +SD. Comparison between qualitative variables will be done by using chi-square. Comparison between quantitative variables will be done by using student t-test

### **Results**

#### **Results:**

**Table (1):** Illustrates the distribution of the studied women regarding to their Personal data. As regard age, the mean age of the women was  $31.06 \pm 4.47$ . About 54.0% of the women were  $\leq 30$  years old. As regard residence, 58.0% of the women were from rural area. Regarding occupation, 54.0% of the women were Housewives. As regard level of education ,52.0% of the women graduated from secondary school.

**Table (3):** Reveals the distribution of the women regarding to their obstetrical history. Regarding number of gravida, it was observed that 58.0% of the women were gravida three. Regarding number of para, it was observed that 42.0% of women were para three and had three living children.

**Table (2)** Reveals the distribution of the women regarding to their Family planning history, Regarding Family planning method, 52.0% of women were used implanon. As regard duration of use family planning, the mean duration of use family planning of the women was  $25.14 \pm 11.51$ . About 70.0% of women were used family planning from 6 – 24 months.

**Table (3)** shows a comparison mean scores of female sexual function among women at pre and post-implementation of the PLISSIT Model. There were highly statistically significant differences between pre and post implementation of the PLISSIT Model for mean scores of female sexual function among women ( $p=0.000^{**}$ ). **Figure (1)** shows a comparison of levels of

sexual function among women at pre and post-implementation of the PLISSIT Model. There were statistically significant differences between pre and post-implementation of the PLISSIT Model among women regarding levels of sexual function ( $p=0.000^{**}$ ).

**Table (4)** shows a comparison of levels of depression, anxiety and stress among women at pre and post-implementation of the PLISSIT Model. There were

statistically significant differences between pre and post -implementation of the PLISSIT Model of women regarding levels of depression, anxiety and stress ( $p=0.000^{**}$ ).

**Table (5)** shows that there was a negative significant correlation between the female sexual function score and the depression & stress level among women at pre and post-implementation of the PLISSIT Model.

**Table (1): Distribution of women according to personal data (N=100)**

Variables	Studied women (N=100)	
	No	%
<b>Age groups:</b> Mean $\pm$ SD (range)	<b>31.06<math>\pm</math>4.47 (22-39)</b>	
• $\leq$ 30 year	54	<b>54.0</b>
• >30 years	46	46.0
<b>Residence</b>		
• Rural	58	<b>58.0</b>
• Urban	42	40.0
<b>Occupation</b>		
• Housewife	54	<b>54.0</b>
• Employed	46	46.0
<b>Level of education</b>		
• Read and write	4	4.0
• Secondary	52	<b>52.0</b>
• University	44	44.0

**Table (2): Distribution of women according to obstetric history (N=100)**

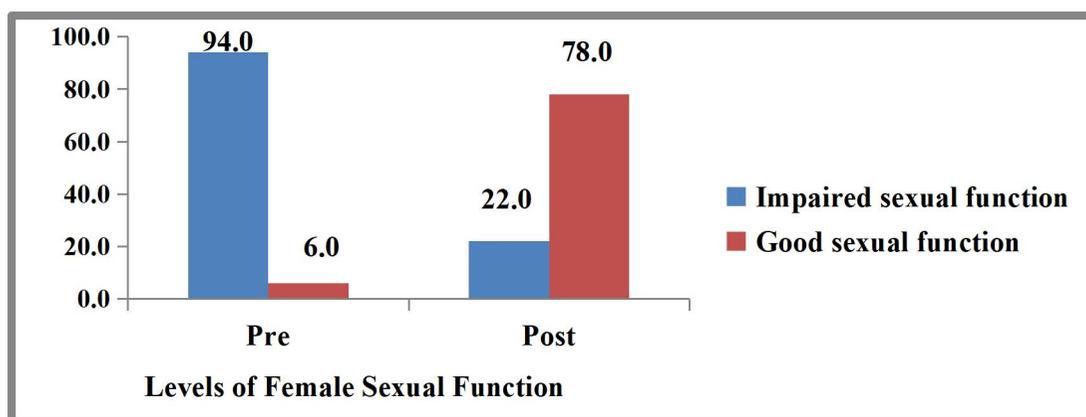
Variables	Studied women (N=100)	
	No	%
<b>Gravidity: Mean ± SD</b>	<b>2.86±0.73</b>	
• Once	4	4.0
• Twice	22	22.0
• Three times	<b>58</b>	<b>58.0</b>
• Four times	16	16.0
<b>Parity: Mean ± SD</b>	<b>2.62±0.83</b>	
• Once	8	8.0
• Twice	36	36.0
• Three times	<b>42</b>	<b>42.0</b>
• Four times	14	14.0
<b>Number of living children: Mean ± SD</b>	<b>2.52±0.81</b>	
• One	10	10.0
• Two	38	38.0
• Three	42	<b>42.0</b>
• Four	10	10.0
<b>Number of abortion:</b>		
• None	72	<b>72.0</b>
• One time	26	26.0
• Twice	2	2.0
<b>Family planning method</b>		
• Pills	46	46.0
• Implanon	52	52.0
• Injections	2	2.0
<b>Duration of use family planning: Mean ± SD</b>	<b>25.14±11.51</b>	
• 6 – 24 months	70	<b>70.0</b>
• > 24 months	30	30.0

**Table (3): Comparison mean scores of female sexual function among women at pre and post-implementation of the PLISSIT Model (N=100)**

Female Sexual Function Index		Pretest	Post	P. value
Desire	Mean±SD	2.47±1.15	4.62±0.93	<b>0.000**</b>
	Median (Range)	2.40 (1.2-6.0)	4.80 (1.2-6.0)	
Arousal	Mean±SD	2.46±1.22	4.73±1.00	<b>0.000**</b>
	Median (Range)	2.40 (0.0-6.0)	4.80 (1.2-6.0)	
Lubrication	Mean±SD	2.37±0.94	4.77±0.87	<b>0.000**</b>
	Median (Range)	2.40 (0.0-4.8)	4.80 (2.7-6.0)	
Orgasm	Mean±SD	2.65±1.13	4.74±0.96	<b>0.000**</b>
	Median (Range)	2.40 (0.0-6.0)	4.80 (1.6-6.0)	
Satisfaction	Mean±SD	2.71±1.34	4.78±1.11	<b>0.000**</b>
	Median (Range)	2.40 (1.2-6.0)	4.80 (1.2-6.0)	
Pain	Mean±SD	2.43±1.11	4.85±0.93	<b>0.000**</b>
	Median (Range)	2.40 (0.0-4.8)	4.80 (2.4-6.0)	
<b>Total Female Sexual Function Score</b>	Mean±SD	<b>15.09±6.24</b>	<b>28.49±5.08</b>	<b>0.000**</b>
	Median (Range)	14.25 (2.4-33.6)	29.10 (10.6-36.0)	

Wilcoxon signed ranks test

\*\* Highly statistically significant difference (p<0.01)



Chi-square test

\*\* Highly statistically significant difference (p<0.01)

**Figure (1): Comparison of levels of sexual function among women at pre and post-implementation of the PLISSIT Model (N=100)**

**Table (4): Comparison of levels of depression, anxiety and stress among women at pre and post-implementation of the PLISSIT Model (N=100)**

Items	Depression				Anxiety				Stress			
	Pretest		post		Pretest		post		pretest		post	
	No	%	No	%	No	%	No	%	No	%	No	%
Normal	6	6.0	60	60.0	8	8.0	76	76.0	8	8.0	90	90.0
Mild	10	10.0	26	26.0	28	28.0	2	2.0	2	2.0	2	2.0
Moderate	28	28.0	8	8.0	20	20.0	20	20.0	38	38.0	6	6.0
Severe	36	36.0	6	6.0	8	8.0	2	2.0	34	34.0	2	2.0
Extremely severe	20	20.0	0	0.0	36	36.0	0	0.0	18	18.0	0	0.0
Mean±SD	10.96±3.93		4.24±2.83		7.94±4.65		2.60±1.86		13.24±3.77		5.42±2.73	
Median (Range)	11.50 (2.0-21.0)		4.00 (0.0-12.0)		7.00 (1.0-21.0)		2.00 (0.0-8.0)		13.00 (5.0-21.0)		5.00 (1.0-15.0)	
P. value	0.000**				0.000**				0.000**			

Chi-square test

Wilcoxon signed ranks test

\*\* Highly statistically significant difference (p<0.01)

**Table (5): Correlation between female sexual function score, depression anxiety and stress among women at pre and post-implementation of the PLISSIT Model (N=100)**

Correlations	Depression				Anxiety				Stress			
	Pre		Post		Pre		Post		Pre		Post	
	r	P	r	P	r	p	r	P	r	P	r	P
Total Female Sexual Function Score	-0.233	0.020*	-0.387	0.000**	-0.193	0.054	-0.242	0.015*	-0.396	0.000**	-0.584	0.000**

Spearman correlation

\*\* Highly statistically significant correlation (p<0.01)

\*Statistically significant correlation (p<0.05)

## Discussion

The PLISSIT model is a framework for assisting healthcare providers order and treat sexual problems, thus this study aimed to evaluate effectiveness of PLISSIT Model on Sexual Dysfunction and Psychological Distress among women using hormonal contraception.

Regarding to the Personal data of the studied women, the mean age of the women was 31.06±4.47 and more than half of the women were ≤ 30 years old, from rural area, housewives & graduated from secondary school. This was similar to the findings of (Abdelhakhm et al.,2018) who conducted their study in Egypt , Benha city to Evaluate

the impact of PLISSIT Model Sexual advising intervention on Sexual Quality of Life for the postpartum women and reported the most of studied women were from age of 20 to 30 years about the mean age of  $25.02 \pm 4.47$ , more than one-third of them were had middle education level, more than two-thirds of the women were living in the rural areas and the majority of studied women were housewives.

Regarding to female sexual function among women at pre and post-implementation of the PLISSIT Model. There were highly statistically significant differences between pre and post implementation mean scores of female sexual function among women ( $p=0.000^{**}$ ) with a significant increase of the total mean score of female sexual function from pre-test ( $15.09 \pm 6.24$ ) to ( $28.49 \pm 5.08$ ) in post-test among women. This was similar to the findings of (**El-Sadawy et al.,2020**) who conducted their study in Benha Egypt to Evaluate the impact of PLISSIT model Application between primi-para with pain during sexual intercourse following puerperium and reported highly statistical significant difference between study group in pre and post intervention.

Also with (**Abdelhakm et al.,2018**) who reported that there were highly statistical significant differences between women according sexual experiences Arizona pre and post PLISSIT Model Also with (**Abd-Ella et al.,2019**) who conducted their study in El-Mansoura Egypt and reported highly statistical significant improvement and higher PSRI subdomains scores on sexual activity between women in the study group compared to women in the control group.

Also with (**Ghodsi et al.,2021**) who conducted their study in Iran to identify the effect of sexual advice on sexual

satisfaction in women of cyclic mastalgia and reported a statistically significant increase in the mean (SD) score of female sexual satisfaction by PLISSIT sex counseling lead to optimizing in sexual satisfaction.

From the Researcher's perspective, this result is due to providing the women with focused & directed advice toward their sexuality and their sexual problems & concerns through PLISSIT model.

Regarding the levels of anxiety, stress, and depression among women at pre- and post-implementation of the PLISSIT Model. There were statistically significant differences between pre and post - implementation of the PLISSIT Model of women regarding levels of depression, anxiety and stress ( $p=0.000^{**}$ ). Where nearly one third of the women have extremely severe level of anxiety and moderate level of stress in pre-implementation of the PLISSIT Model while in post-implementation of the PLISSIT Model; nearly more than two thirds of the women have normal level of depression, anxiety and stress. This was consistent with (**karma et al.,2021**) who conducted their study to evaluate the effect of advice depend on the PLISSIT model on anxiety, stress, and depression between postpartum women with sexual defect and reported the PLISSIT model decreases the DASS-21 Total score by the optimizing of sexual dysfunction in women with sexual dysfunction after delivery.

This result may be back to Improvement in sexual function after PLISSIT Model application reflects on improvement in psychological status and relieving the levels of depression, anxiety and stress among women. Where sexual dysfunction not affects women's sexual life only, but, also woman's quality of life and social life as pain acts as a hinder in woman's life that

may enter her in stress, anxiety and depression.

Concerning Correlation between female sexual function score, depression anxiety and stress among women at pre and post-implementation of the PLISSIT Model , there was negative significant correlation between the female sexual function score and depression and stress level among women at pre and post-intervention of the PLISSIT Model .This was consistent with the findings of (**Hassanin et al .,2020**) who conducted their study to evaluate anxiety and depressive features according to sexual functions in female with psoriasis compared with healthy group in Beni-suef, Egypt and noticed sexual dysfunction is accompanied with anxiety but not with depression in female with psoriasis.

This was different with (**Harding and Ueda,2022**) who conducted their study to clarify correlation between female sexual function and anxiety or depression in Japan and reported no clear association between female sexual function and depression or anxiety by correlation coefficient in all participants. This difference may back to racial and ethnic disparities in study subjects.

#### **Strengths of the research**

Its novelty and the prospective design of the study.

Improving counseling sessions and a good sample size

#### **Limitations of the Research**

Lack of national and International researches that study the current research topic.

Sometimes the sessions were protracted due to noise and other individuals'

#### **Conclusion**

There was a significant improvement in sexual dysfunction and psychological distress after PLISSIT Model application

among women using hormonal contraception evidenced by improvement in FSFI and DASS-21 scores

#### **Recommendations**

1-Nurses should provide counseling through PLISSIT model for women using hormonal contraception to promote sexual health and sexual quality of life.

2-A training program about how to deal and manage various sexual problems by utilizing PLISSIT Model should be designed for nurses in family planning clinics

3-providing booklet and posters as a way to rise female and women sexual awareness in out Patient clinics.

4-Further studies on the effect of PLISSIT model application on sexual satisfaction of Spouses of affected women should be conducted

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