

A Psycho-Sexual Educational Health Program based on BETTER model for Chronic Obstructive Pulmonary Disease Women: A Nursing Intervention Model

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Abstract: **Background:** Chronic Obstructive Pulmonary Disease (COPD) is a general term referring to lung diseases and conditions which restrict or obstruct air flow. The desire for sexuality and intimacy are fundamental human needs that continue despite the diagnosis of (COPD) **Aim of the study:** This study aim to evaluate the effect of psycho-sexual educational health program for chronic obstructive pulmonary disease women: A nursing intervention model. **Subjects and method:** Quasi-experimental design, one group with pre-post assessment was used in this study conducted on 80 COPD women to test the effectiveness of a (PSHE-COPDW) program designed to elevate breathing painful symptoms experienced by COPD women during the practice of their sexual relation. **Results:** This study showed that there was a highly statistically significant difference at study participants sexuality, marital satisfaction and psychological status pre and post intervention of Psycho-sexual Educational Health Program for COPD Women (PSEH-COPDW) based on BETTER model.

Keywords: COPD, Marital Satisfaction, Nursing Intervention, Psychological status, Sexuality.

1. INTRODUCTION

Sex is a big part of life, self-identity, and general well-being for most individuals. Many people are well aware that many of them carry on with their sexual lives far into old age. Even though sexual interest and activity do tend to decline with age, really old people can still love sex and include it into their close relationships. A relatively recent poll found that 38.5% of men and 16.7% of women in the 75–85 age bracket had slept with a partner 10 years before, and that 54% of those who were sexually active did so more than twice or three times a month. (Potki, Ziaei, Faramarzi, Moosazadeh, & Shahhosseini, 2017).

However, both men and women with Chronic Obstructive Pulmonary Disease (COPD) experience problems with their sexual health. Breathing issues can cause physical discomfort and anxiety, which can make engaging in sexual activity seem unachievable. If a person with COPD is afraid of women, it will be more challenging for them to get past these barriers. Although the clinical manifestations of chronic lung diseases (CLDs) are now more accurately recognized and treated, the psychological toll is still commonly disregarded (Farver, Frederiksen, Zachariae, Rubio & Løkke, 2022).

Severe dyspnea frequently causes the patient's activities to be disrupted. Dyspnea often results in anemia and weight loss since it makes eating difficult. Even when at rest, dyspnea happens as COPD worsens. With time, the effort rises and the accessory muscles are used to help with breathing. (PRASAD, 2020).

Having a satisfying sexual life is very important to many people with COPD, regardless of their age or level of disability. Hormonal malfunction, exercise-induced deconditioning, exertional dyspnea, and the psychological and social consequences of having a chronic illness are among the many interrelated causes of problems with sexual functioning that can affect desire in individuals with COPD. (Wiśnicka et al., 2021).

Patients with COPD who have problems with sexual dysfunction can get assistance from a psychosocial nurse. Giving instructions on how to manage respiratory impairment on a daily basis, go back to your exercise ability, and use posture to breathe and move as efficiently as possible. Sexual dysfunction is often disregarded by nurses and other medical professionals since it is a silent symptom of COPD. Understanding the detrimental effects that sexual dysfunction has on an individual's quality of life and the vital role that nurses may play in helping patients come to terms with this delicate subject are essential. (Wiśnicka et al., 2021).

There are a number of models available for discussing sexual health, including the PLISSIT model, which consists of permission, restricted information, targeted suggestions, and intensive therapy. These models are excellent communication tools that potentially complement interventional approaches. Furthermore, the BETTER Counseling Model put forth by Mick and colleagues (2004). The BETTER model is a structured technique that nurses can use to address sexual concerns with clients who are cancer patients. While this model was created with a particular population and set of professions in mind, all health professionals can use its components to their work with clients who have different types of disabilities. There are six steps in the model: Bring up, Explain, Tell, Time, Educate and Record (Quinn, C. & Happell, B., 2012).

Significance of the study:

Chronic tobacco use and long-term exposure to harmful chemicals and particles are risk factors for COPD. Chronic lung infections, genetics (anti-protease inhibitor deficiency), air pollution, and occupational exposure. To lower hospital readmission rates, patients bear the majority of the daily care obligations. Even with the best pharmacologic treatment, COPD patients frequently experience symptoms that are severe enough to interfere with everyday activities and negatively impact quality of life self-management. However, COPD medications do not affect sexual performance and can prevent attacks that may be triggered by engagement in sexual activity. As with any chronic illness, interventions improve a variety of outcomes for many chronic conditions, including COPD. (Yang, Jenkins, & Salvi, 2022).

According to World Health Organizations (WHO) and Global Burden of

Disease (GBD) (2022), (COPD) is regarded as a serious community health issue and a significant contributor to morbidity and mortality worldwide (Franssen et al., 2018). Approximately 300 million people have COPD globally, with a prevalence of approximately 12.2%, three million Egyptians, or around 8% of the population have COPD. This disease represents the fifth leading cause of death worldwide and it is estimated that by 2030 it will be the fourth. 80% of COPD deaths occur in low- and middle-income countries. Tobacco is the main cause, contributing to other co-morbidities and fatal outcomes. In addition, the disease represents a high economic burden, with costs of approximately \$ 5600 per patient per year, which increase according to the severity of the disease (Iheanacho, Zhang, King, Rizzo & Ismaila, 2020).

Patients with respiratory muscle weakness or Chronic Lung Disease generally have limited sexual activity due to lower exercise tolerance and fear of dyspnea. Moreover, sexual dysfunction is exacerbated by misconceptions, illiteracy, and poor physical or mental health, all of which are prevalent in this group. The reduction of sexual activity is frequently associated with exertional dyspnea. Based on patient assessments, 80% of patients link a decrease in sexual activity to the physical side effects of a long-term lung illness. Increased tidal volume and breathing frequency brought on by sexual activity are linked to an increased cardiovascular burden. (Boehm et al., 2019). So this research is conducted to evaluate the effect of nursing counseling guided by BETTER model on sexuality, marital Satisfaction and psychological status among Chronic Obstructive Disease women.

Operational definition of BETTER counseling model: Sexual counseling model address sexual issues with chronic diseases clients. This model is composed of six stages: Bring up, Explain, Tell, Time, Educate and Record.

Aim of the study:

The aim of this study was to evaluate the effect of psycho-sexual educational health program guided by BETTER model on sexuality, marital Satisfaction and psychological status among chronic obstructive pulmonary disease women: A nursing intervention model.

Objectives

- Assess the knowledge of COPD women about sexual relation, intimacy and the effect of shortness of breath on it.
- Develop a psycho-sexual educational health program for COPD women.
- Implement a health program for COPD women.
- Evaluate the effect a psycho-sexual educational health program on sexual, marital satisfaction and psychological status of COPD women.

Research hypothesis

The current research hypothesis was developed to achieve the study's aim: The COPD women who attend the designed educational health program "Psycho-Sexual Educational Health for COPD Women"(PSEH-COPD) may demonstrate statistically significant improvements in their sexual performance and marital QOL.

2. SUBJECTS AND METHODS

Study Design:

A quasi-experimental research design one group with pre-post assessment was used in this study.

The sample of the study:

The study subjects consisted of 87 COPD women were eligible for inclusion Criteria. Study Setting:

The study was conducted at Outpatients Chest Clinic (CC) at Suez Canal University Hospital (SCU), Ismailia governorate, Egypt.

Tools of data collection:**Tool I.**

Structured questionnaire designed by researchers and containing two parts.

Part 1: Socio-demographic data: It included age, level of education, duration of marriage, oldest off spring, work, housing, another wife, and offspring.

Part 2: COPD Sexual Nature Questionnaire:

This part was a self-rating questions intended to assess COPD women sexual relation, intimacy and the effect of shortness of breath on it before and after the intervention. It was designed by the researcher based on the literature review such as: (Ghafoori, et al., (2022); Gold (2020); Hevesi, Gergely Hevesi, Kolba& Rowland (2019); Kaptein, et al., (2008). And supervisors' opinions. It tested COPD women knowledge regarding COPD and its effect on their sexuality. It consisted of twenty-nine questions within the sort of two points ranging as 1= Yes, 0= No. which 1 mean positive answer 0 mean negative answer, the score is 0-29 overall. The questionnaire was categorized into three domains including the following:

- First domain includes: Information about the nature of the intimate relationship it contains (15 items).
- Second domain includes: Conceptual information about participants as a female, it contains (4 items).
- The third domain includes: The effect of breathing shortness on intimacy relationship it contains (10 items).

Tool II: Arabic Female Sexual Function Index (AFSFI)

It was originally constructed by Rosen, (2000) in an English language to assess the six sexual aspects; sexual desire, arousal, lubrication, orgasm, satisfaction and pain during the sexual intercourse. An Arabic version of the index (AFSFI) was

translated by Anis et al., (2011). The index consists of 19 items, modifications were administrated on AFSFI index to be relevant with Egyptian culture to include 14 items that cover all the aspects of the sexual function which are used to assess the extent of women's sexual function. It tests six domains: Desire (2 items), Arousal (3 items), lubrication (2 items), orgasm (3 items), satisfaction (2 items), pain (2 items).

AFSFI Scoring System

The individual domain scores and overall score of the AFSFI can be derived from the computational formula outlined in the table below. For individual domain scores, add the scores of the individual items that comprise the domain and multiply the sum by the domain factor (see below). Add the six domain scores to obtain the full index score. It should be noted that within the individual domains, a domain score of zero indicates that the subject reported having no sexual activity during the past month. Subject scores can be entered in the right-hand column.

Scoring system:

Domains Score	Desire 1, 2	Arousal 3, 4, 5	Lubrication 6, 7	Orgasm 8, 9, 10	Satisfaction 11, 12	Pain 13,14	Full index Score
Score range	0-2	0-2	0-2	0-2	0-2	0-2	
Factor	*0.6	*0.3	*0.3	*0.4	*0.4	*0.4	
Minimum	0	0	0	0	0	0	
Maximum	6.6	1.8	1.2	2.4	1.6	1.6	15.2

Inclusion Criteria:

- Sexually active married COPD female patients.
- Mild and moderate COPD women
- Age group from 18 to 60 years old.

Exclusion Criteria:

- Severe COPD women.
- COPD females with mental or other physical disorders or with handicaps.
- Health conditions that may affect female sexual functioning such as gynecological problems.

Sample size n = $[(DEFF * Np(1-p)) / ((d^2 / Z^2) - \alpha / 2 * (N-1) + p * (1-p))]$

With the following assumptions:

Population size (for finite population correction factor or fpc) (N) = 1000

Hypothesized % frequency of outcome factor in the population (p) = 40% +/- 5

Confidence limits as % of 100 (absolute +/- %) (d) = 5%

Design effect (for cluster surveys-DEFF) = 1

90% zconfidence intervals

The calculated sample size equals 87

women diagnosed with chronic obstructive pulmonary disease.

Tools Validity:

A panel of seven professionals evaluated the tools based on their clarity, relevance, applicability, comprehensiveness, comprehension, and ease of use. The group evaluated the psychosexual educational health program's content validity as well. There were four experts in psychiatry in the group: two chest experts from the Faculty of Medicine Zagazig University, one from the Faculty of Medicine Suez Canal University, one from the Faculty of Nursing Suez Canal University, and one from the Faculty of Nursing Cairo University. The group of women with COPD also evaluated the program's content validity. Expert comments guided the application of minor adjustments.

Tools reliability:

By assessing their internal consistency, the pilot project tested the produced tool's dependability. They showed outstanding degrees of dependability in the following ways:

Table (1) COPD Sexual Nature Questionnaire reliability

COPD Sexual Nature Questionnaire	N of Items	Cronbach's Alpha
First domain	15	0.718
Second domain	4	0.847
Third domain	10	0.773

Pilot study

Eight women with COPD participated in a pilot study to check the study tools' clarity, applicability, and feasibility as well as to find any unforeseen issues or concerns. It was clear from the pilot study that some of the questions were unclear to the women with COPD, therefore these were rephrased; other items were left out. It was discovered that the tools took between 25 and 35 minutes to complete. The main study's sample did not contain any of the pilot study participants.

Field work

From the beginning of September 2019 to the end of February 2020, fieldwork was conducted. Two days a week, in the morning, the researchers gathered the data. In the aforementioned context, the researcher made her introduction to the medical and nursing staff. The study's purpose and character were made very evident. The study was implemented in four phases: the planning phase, the intervention phase (application of nurse counseling guided by the BETTER model), the evaluation phase, and the interviewing and data gathering phase

.Interviewing and data collection phase:

Researcher identify women who match the inclusion criteria and attend the outpatient clinic at Suez Canal University's Chest Institute. Data collection occurs once informed consent is obtained. The information gathered revealed that women with COPD had psychological and sexual issues related to their condition.

Planning Phase:

The overall goal is to improve women's psychological well-being, marital satisfaction, and sexuality through the use of nursing therapy under the BETTER model. The learning objectives of the nursing intervention are determined at this stage by the researchers. Suitable teaching techniques, including role-playing, debate, presentation, and the use of basic Arabic language, were chosen. As a tool for disseminating information and promoting conversation, educational media are developed and made available, including laptops, photos, videos, and textual materials (books). In order to guarantee adherence to the chosen interventions, the researchers also planned the duration and frequency of counseling sessions for each of the women who were chosen.

The intervention phase: It included “Application of psycho-sexual educational health program for chronic obstructive pulmonary disease (PSEH-COPDW) women guided by BETTER Model.

Eight counseling sessions were done following BETTER counseling model stages. Two sessions per week and the session lasting 2 hrs.

Stage One: Bring up

During this stage, the researchers bring up the topic of sexuality. While some women may feel uncomfortable discussing this topic, bringing the topic up ensures the women knows the researchers is willing to discuss this area, if they ever do want to express their concerns.

Stage Two: Explain

The researchers inform and explain to women that sexuality is a crucial and meaningful aspect of their lives through open discussion with the women. This helps the women to feel less embarrassed and also informs her that sexual problems may have an impact on woman psychological status and marital satisfaction.

Stage Three: Tell

During this stage, the researchers inform women that if intervention was not effective in resolving her problem, then a referral will be made to another professional who can address the problem

Stage Four: Time

The researchers assure that previously selected scheduled time is suitable for women. If not, the session can bring it up at a later point.

Stage Five: Educate

At this stage the researchers provide education to the women consistent with her needs about the followings:

- Female reproductive system and the components of the sexual response cycle.
- COPD treatment, its potential side effects.
- Measures to enhance sexuality as exercises for improving sexual fitness (such as breathing exercise,,,,,,) and various technical positions during sexual intercourse and using lubricants.
- Measures for managing bad body image perception as wearing attractive clothes, reconstruction of breast makeup and special lingerie.
- Measures for managing and reducing anxiety and stress as using relaxation techniques including breathing exercise, guided imagery and recreation. Also, provide education regarding regular exercise/ walking for at least 30 minutes / day and diet therapy as high fruit diet.
- Measures for management of COPD treatment side effects dyspnea, including the following: physical activity; performing body range of motion exercise, breathing exercise, diet therapy (high fiber diet, low-fat diet, high vegetables/fruit diet) and mouth care.

Stage Six: Record

At the end of each session the researchers record data obtained and intervention giving to each woman

The evaluation phase:

Post-intervention data collection occurred at the end of the study period. All tools were measured after application of (PSEH-COPD) women.

Statistical design:

The collected data were organized, tabulated and statistically analyzed using SPSS software, version 22 .For quantitative data, comparison between pre and post intervention was done using Chi-square test (χ^2) and Fisher's Exact Test. Significance was adopted at $p < 0.05$.

3. RESULTS

Table 1: The demographic data on COPD women's frequency distribution revealed that a greater percentage of research participants were between the ages of 32 and 45. 50% of research participants only completed secondary school.

Table 2: Frequency distribution demographic and health data of COPD women husbands 'showed that husbands' mean age was 44.2 ± 8.79 years old with a minimum of 35 years old and a maximum of 65 years old, 13.8% were Chronic diseases, 82.5% of COPD women studied husband's Initiation of sexual act, and 13.8% took drugs to initiate the sexual act.

Table 3: Health status of studied COPD women showed that dyspnea duration was above 10 years, Majority of the sample had mild and moderate asthma (42.5% & 40% respectively). Asthma before marriage was among 77.5% and 22.5% had late onset of asthma after marriage.

The table 4: Paired t test showed significant differences between pre and post program. Total of natural of sexual relation mean score was 5.8 ± 2.12 pre-program and increased to 13.52 ± 3.31 post program, women self-perception as a female mean score preprogram was 2.13 ± 0.75 and increased to 3.35 ± 0.89 and total impact of dyspnea on sex mean score was 4.42 ± 1.46 preprogram and 8.67 ± 1.92 post program. Moreover, the study population showed overall significant improvement regarding all parameters from pre to post program.

Figure 1: Comparison between pre and post program (PSHE-COPDW) regarding the nature of the sexual intimate relationship shows highly statistically significant differences ($p=0.00$) between all questions between pre and post the program implementation. Intimacy is a source of happiness was 44% preprogram and increased to 90% post program. Problems found in the intimate relationship preprogram were among 76% and 15% post program. Enjoying their married life was among (21%) of COPD women preprogram, and increased to 83% post the program, 73% cases found the marital relationship frustrated them psychologically preprogram and 16% post program.

Figure 2: A comparison of the female COPD participant's self-perception before and after the PSHE-COPDW program showed highly statistically significant differences ($p=0.00$) in all questionnaire questions between the pre- and post-program periods. 91% of cases after the training were satisfied with their sexual performance, compared to 36% of cases before. 79% of participants recognized their body map after the session, compared to 24% who knew it before. Before the training, 30% of cases felt confidence in their ability to have sex, and 70% did so after. Pre-program, 24% of cases prayed to enjoy the husband in an intimate relationship; post-program, 80% of cases did the same.

Figure 3: Comparison between pre and post (PSHE-COPDW) program regarding the effect of shortness of breath on sexual intimacy showed that there was a statistically significant differences at ($p=0.00$) between pre and post program regarding all elements of the questionnaire. 67% of cases were afraid of shortness of breath during intimacy preprogram and 10% were post program. 24% cases suffered from shortness of breath in certain positions during sexual act preprogram and 89% post-program. 21% of cases practiced positions that are less laborious on breathing and helped enjoyment preprogram and 85% post-program. In the event that she feels uncomfortable breathing, 23% cases reached orgasm with foreplay only preprogram and 83% post program. 23% cases practiced a certain routine before the relationship to overcome the feeling of uncomfortable breathing preprogram and 77% post program. 30% cases practiced deep breathing exercises before having sex to reduce the feeling of uncomfortable breathing during sex preprogram and 84% post program. 31% cases took deep breaths during a relationship helps you overcome the uncomfortable feeling of breathing preprogram and 86% post program. 21% cases felt a psychological and physical comfort is a prerequisite for their sexual act preprogram and 83% post program. 21% cases knew the main reasons that reduced or prevented them from feeling the desire to have an intimate relationship preprogram and 93% post program. 16% cases reported that they knew the main reasons that reduced or prevented them from feeling the desire to have an intimate relationship preprogram and 79% post program.

Figure 4: Overall total score of sexual relation score showed that 11.56 ± 4.82 preprogram and 25.45 ± 5.52 post program that showing the effect of Psycho-Sexual Educational Health program (PSEH-COPDW).

Table 1: Frequency distribution of COPD women demographic data (N=80)

Age	N	%
- 18-31	16	20
- 32-45	56	70
- 46-60	8	10
	Mean± SD	45.00 ± 6.25
	Median (Range)	48.5 (35-60)
BMI	Mean± SD	24.62±2.71
	Median (Range)	24.0 (20-27)
Duration of marriage	Mean± SD	27.10±6.70
	Median (Range)	25 (15-35)
Oldest off spring	Mean± SD	22.76±7.7
	Median (Range)	25 (8-33)

Women demographic data		N	%
Education	Primary	15	18.75
	Secondary	40	50.0
	High	25	31.25
Occupational status	Not working	54	67.5
	Working	26	32.5
living condition	Shared	26	32.5
	Independent	54	67.5
Another wife	No	76	95.0
	Yes	4	5.0
Offspring	No	24	30.0
	Yes	56	70.0

Table 2: Frequency distribution demographic and health data of COPD women husbands' (N=80).

Husband age	N	%	
- 18-31	16	20	
- 32-45	32	40	
- 46 and above	32	40	
	Mean± SD	55±7.5	
	Median (Range)	50 (35-65)	
Husbands' demographic and health data		N	%
Husband education	Primary	4	5.0
	Secondary	17	21.3
	High	59	73.8
Husband Occupation	Farmer	10	12.5
	Worker	6	7.5
	Employee	34	42.5
	Professional	30	37.5
Income	Not enough	6	7.5
	Enough	69	86.3
	Enough and more	5	6.3
Chronic diseases	No	69	86.3
	Yes	11	13.8
Initiating sex act	No	14	17.5
	Yes	66	82.5
Using sexual drugs stimuli	No	69	86.3
	Yes	11	13.8

Table 3: Health status of studied COPD women (n=80)

Duration of Dyspnea (years)	N	%	
- below 5	10	12	
- 5-10	30	37	
- above 10	40	50	
	Mean± SD	14.12±4.9	
	Median (Range)	15.0 (5-28)	
	N	%	

Dyspnea Severity	Mild	34	42.5
	Moderate	32	40.0
	Sever	14	17.5
Asthma onset	Before marriage	62	77.5
	late marriage onset	18	22.5

Figure (1) Comparison between pre and post program (PSHE-COPDW) regarding the nature of the sexual intimate relationship (n=80)

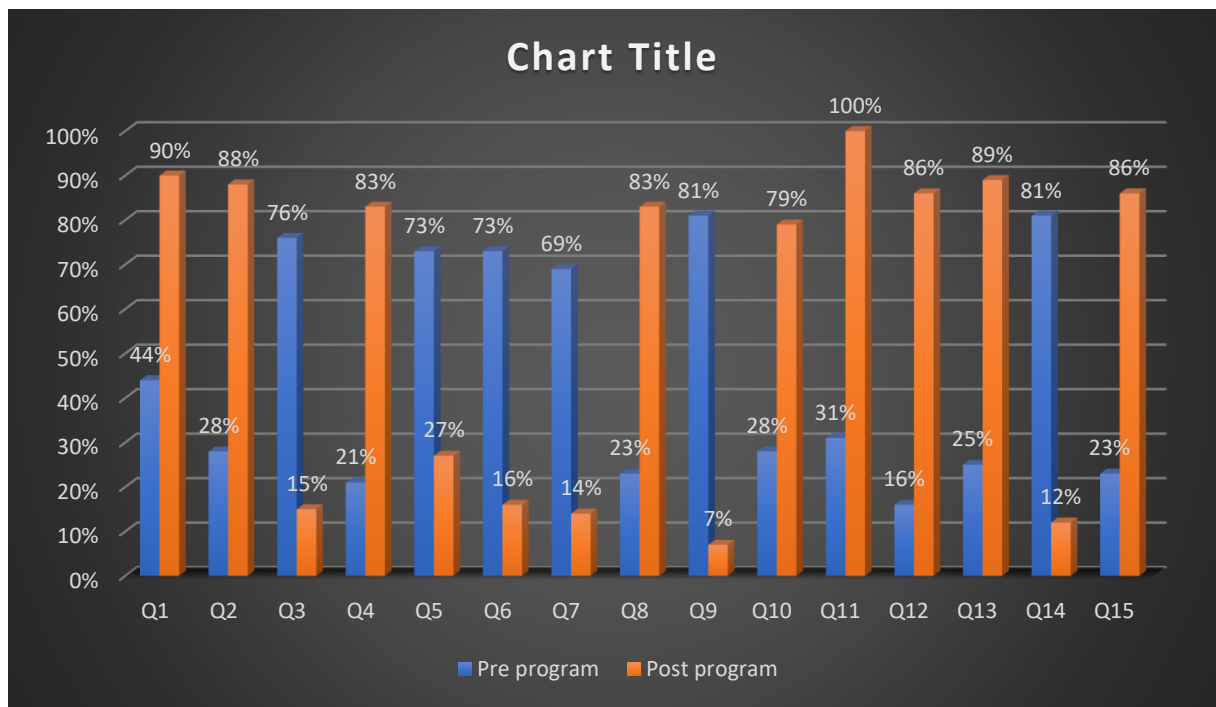


Figure (2): Comparison between pre and post (PSHE-COPDW) program regarding COPD women self-perception as a female

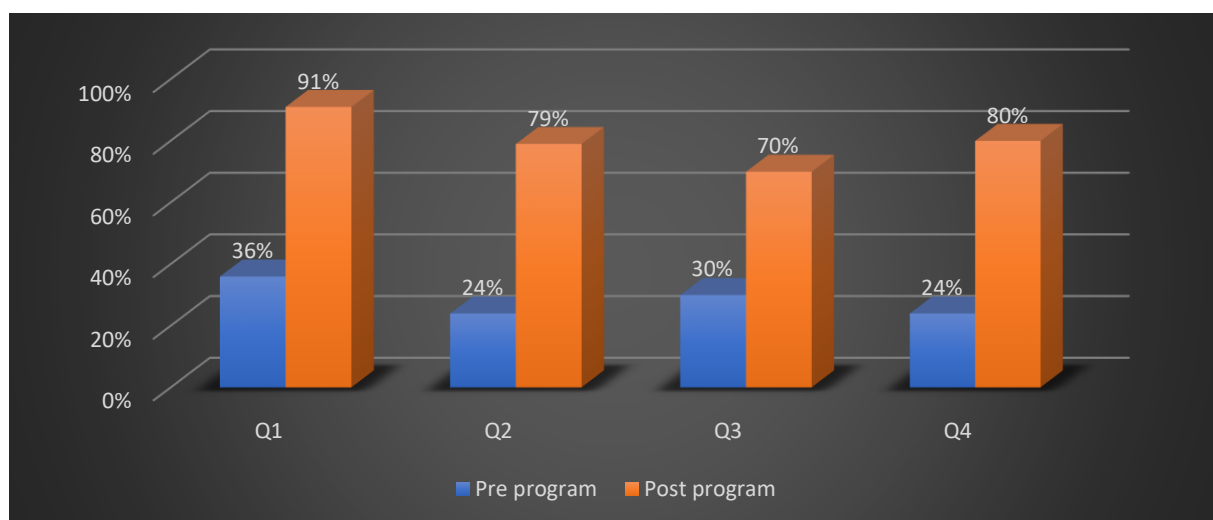


Figure (3): Comparison between pre and post (PSHE-COPDW) program regarding the effect of shortness of breath on intimacy.

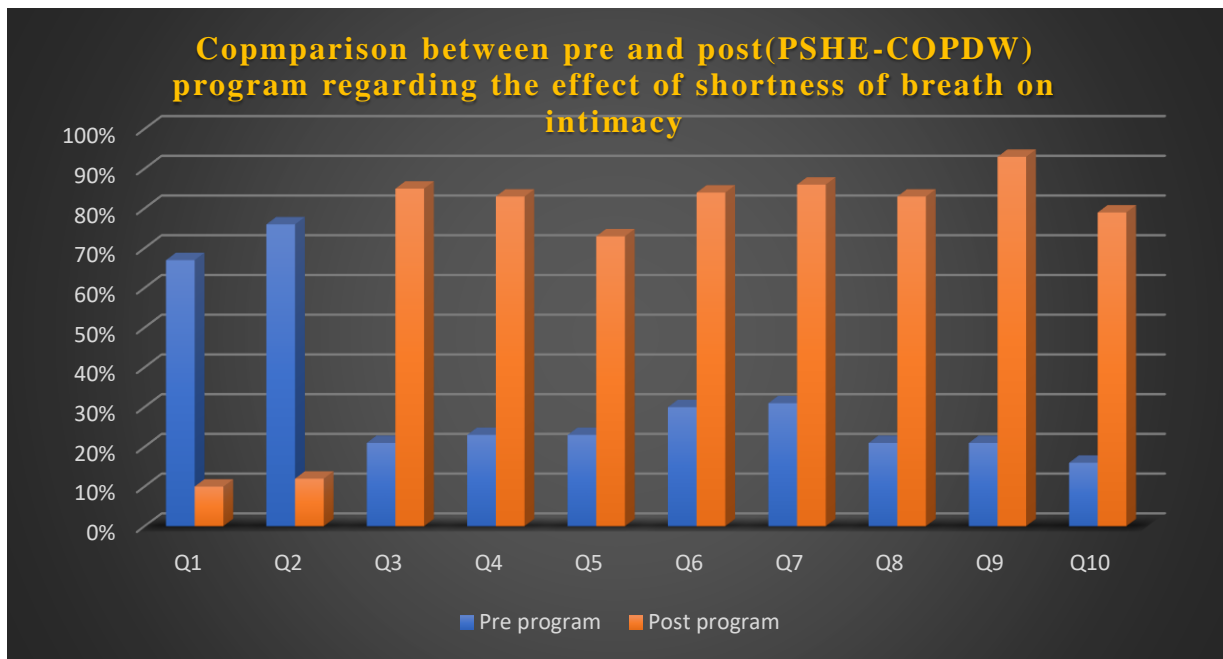
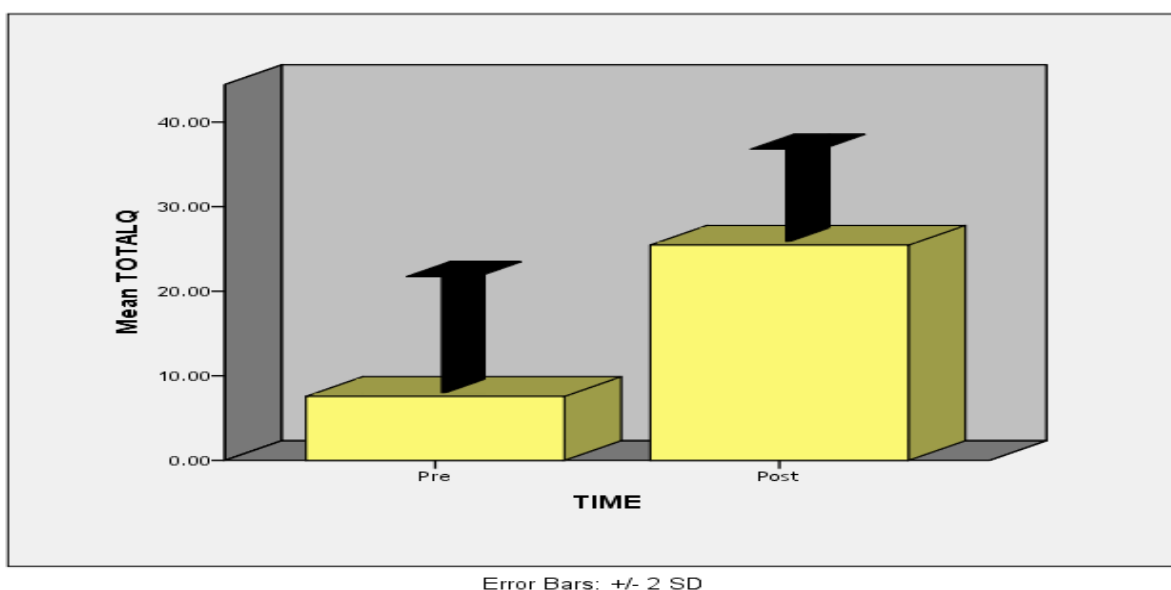


Table 4: Comparison between pre and post program regarding total mean scores of (PSEH-COPDW) domains (N=80).

	Pre	Post	Paired t	P Value
Total Mean score of natural of the intimate sexual relation	5.8±2.12	13.52±3.31	16.635	0.00**
Total Mean score of women self-perception as a female	2.13±0.75	3.35±0.89	10.921	0.00**
Total Mean score of impact of shortness of breath on sexual intimacy	4.42±1.46	8.67±1.92	17.132	0.00**
Overall total	11.56±4.82	25.45±5.52	18.043	0.00**

Figure (4): The overall total score of sexual relation pre and post (PSHE-COPDW) program



4. DISCUSSION

Intimacy and sexuality are basic human needs that never go away, even after a chronic lung illness diagnosis. The expression of intimacy and sexuality is influenced by physiological changes in addition to psycho-emotional elements. Without a doubt, sexuality is seen as a crucial aspect of quality of life, particularly for people with chronic respiratory illnesses. (Magdy et al., 2019). Health care professionals can help patients with chronic lung illness meet their needs for intimacy and sexuality by evaluating and changing their sexual behavior to support the best possible sexual health for those with chronic lung disease. (Zysman et al., 2020). This study therefore hopes to improve the quality of COPD women sexual life by providing them with health education and knowledge about different comfortable sexual positioning to achieve safe satisfactory sexual relation practice without fear of shortness of breathing.

Regarding demographic data of study participants, the current study results showed that the age of study participants ranged from 32-45 years, more than half of study participants has duration of marriage ranged from 15-35 years, more than of them 67% were housewives and 76% of them had secondary education. This current study results is not agreeable with Kaplan, Alp & Gümüşsoy (2022) found that the mean duration of marriage was 31.74 ± 11.50 that was longer than the duration of our study population that a result of lower levels of sexual satisfaction, and is not agreeable with Mohammed, Mezien, Ali, Sobh & El Mowsfy (2020) and Hamed, Abdelmoniem & Saleh (2022) who aimed to evaluate the effect of supportive nursing care on symptoms severity and QoL for patients with COPD. They found that the majority of the study sample were worker because they conducted their study on greater percentage of males.

According to a recent study, the mean duration score for dyspnea in women with COPD was 14.12 ± 4.9 , which is indicative of their condition's symptoms and their correlation with sexual dysfunction. 40% of the sample had moderate asthma, and nearly half (42.5%) had mild asthma. The majority, or 77.5%, had asthma prior to marriage, whereas 22.5% developed late-onset asthma after marriage. Dyspnea, or shortness of breath, is one of the most prevalent signs of COPD and can significantly lower a patient's quality of life. Women with more acute and protracted dyspnea had a greater frequency of sexual dysfunction, according to the current study, which linked COPD symptoms to sexual dysfunction in women. This finding is consistent with a study by Kahraman, Sen, Koksak, Kiliç, and Resim. (2013) that found chronic illnesses require a very long period before a patient begins to complain. In a study published in Hemmed et al. (2022), discovered that over half of their sample had both a positive family history of COPD and bronchial asthma as children.

The majority of study participants exhibited decreased desire, decreased arousal, decreased lubrication, sexual dissatisfaction, and dyspareunia before to intervention, according to the current study's findings about sexual dysfunction pre and post intervention. This result was consistent with Yazdani & Dabiran, (2018) al., (2017), who studied "Sexual dysfunction in COPD females an unresolved Issue" and reported that up to 50% of women with COPD symptoms have sexual dysfunction.

Similar results were reported by Karakas and Aslan (2019), who investigated "Sexual counseling in women with sexual dysfunction: use of the BETTER model" and found that using the BETTER model in sexual counseling improved both sexual satisfaction and function. The developed program PSEH-COPDW helped COPD women to enjoy their sexual life by increasing their self-esteem and decreasing their worries of perceiving themselves as bad partners. The High educational level of both sampled COPD women and their partners along with the PSHE-

Through the COPDW psycho-sexual-educational health program, these patients were able to ask their husband for psychological support in order to overcome intimacy-related issues and to be open and honest with him about the issues that prevent them from enjoying an intimate connection.

The PSEH-COPDW program was designed to give COPD women who participated a wide range of knowledge about how to set up situations that lessen suffering and boost enjoyment in intimate relationships. It has been demonstrated that implementing a sexual satisfaction-focused nursing program enhances sexual function in females with COPD. According to a Chen and Chen (2018) study, women with COPD experienced increased sexual function after completing a nursing program that includes psychiatric counseling, physical therapy, and instruction on sexual function.

Furthermore, the PSHE-COPDW program enhanced the overall quality of sexual life for COPD participants in the current study. According to a study by Alibek (2019), women with COPD experienced increased sexual function after completing a nursing program that included psychological counseling and education on sexual function. A second study by Jones, Smith, and Brown (2019) discovered a correlation between improved sexual function in women with COPD and a nurse education program that addressed COPD management.

The current study found that, chi square test showed highly significant improvement at ($p=0.00$) post (**PSEH-COPDW**) program in all elements of the (**COPD Women Sexual Nature Questionnaire**) (**COPD-WSN**). Nearly one third 36% only of the cases were satisfied with their performance (sexually) pre (**PSEH-COPDW**) program, which increased to include most of the sampled COPD women 91% post program. Pre (**PSEH-COPDW**) program only one quarter 24% knew their body map for reaching orgasm during sexual relationship, while post program three quarters of the sampled women 79% become knowing their body map. Pre (**PSEH-COPDW**) program, one-third (30%) of cases reported feeling confident of themselves during an intimate sexual relationship, whereas nearly three-quarters (70%) of cases after the program reported feeling the same way.

The current study found an improvement in marital satisfaction following application (**PSEH-COPDW**) under the direction of the BETTER model. The information and psychological support received during counseling could be the reason for the improvement. Similar results were reported by Karakas and Aslan (2019), who investigated "Sexual counseling in women with sexual dysfunction: use of the BETTER model" and found that using the BETTER model in sexual counseling improved both sexual satisfaction and function. After six weeks of counseling intervention, there was an improvement in sexual satisfaction, according to a different study by Young et al. (2011) titled "The effect of a sexual life reframing program on marital intimacy, body image, and sexual function among breast cancer survivors (BCS)". This agreement indicates the positive effect of nursing counseling using better model on sexual functioning on chronic diseases.

The current study found that all variables of the COPD Women Sexual Nature Questionnaire (**COPD-WSN**) exhibited highly significant improvement at ($p=0.00$) post-**PSEH-COPDW** training. Prior to the **PSEH-COPDW** program, around 36% of the cases were satisfied with their sexual performance; this number rose to 91% after the treatment, including the majority of the sampled COPD women. Three quarters of the sampled women (79%) learned their body map for achieving an orgasm during a sexual relationship after the (**PSEH-COPDW**) training, compared to just one quarter (24%), who knew it beforehand. In intimate sexual relationships prior to the (**PSEH-COPDW**) treatment, one-third (30%) of cases reported feeling confident about themselves, but nearly three-quarters (70%) claimed to feel confident during

A percentage of 24% cases pre (**PSEH-COPDW**) program interested to please their husbands in the intimate sexual relationship while 80% post program. Given the significant impact that sexual dysfunction can have on women with COPD.

Similarly, Garcia et al., (2016) with his study evaluated a developed nursing program that aimed at improving self-perception in women with COPD. The program consisted of individual counselling sessions, group support, and physical activity. Results of the study showed that the nursing program was effective in improving self-perception and reducing sexual dysfunction in women with COPD.

The current study's findings demonstrated a significant improvement in all areas of the COPD Sexual Nature Questionnaire following the **PSEH-COPDW** program. Following the **PSEH-COPDW** program's instructions for sexual positioning to reduce shortness of breath, COPD women who did so reported a significant decrease in their fear of experiencing dyspnea during sexual activity, which improved the quality of their relationships. According to the program's implemented results, there was a decrease in dyspnea during sexual relations in specific positions. This finding inspired women with COPD to experiment with alternative positions that promote enjoyment and are easier on the breathing, as suggested by the **PSEH-COPDW** program. They were able to get past the uncomfortable breathing sensation and experience an orgasm during foreplay alone.

Ultimately, the current study's findings demonstrated that women who participated in the **PSEH-COPDW** program, which is directed by the BETTER model, saw improvements in their psychological well-being, marital satisfaction, and sexuality following the intervention. This increase in psychological state, marital satisfaction, and sexual function could be attributed to knowledge, assistance, and direction received from the **PSEH-COPDW** nursing intervention, which is based on the BETTER counseling paradigm.

5. CONCLUSION

The study concluded that, a psychosexual educational nursing program known as the "Psychosexual Educational Health Program for COPD Women (**PSEH-COPDW**) program" has helped women with COPD who were previously unaware of the disease and its treatments, had fewer sexual health issues, and had better overall physical health. The Psycho-Sexual Educational Health program (**PSEH-COPDW**) significantly improved the psychological well-being, marital satisfaction, and sexuality of women with COPD.

Our research indicates that the PSEH-COPDW program significantly improves the sexual health of women with COPD by enhancing their self-esteem, motivation to discuss their sexual concerns in a comfortable way, and awareness of their health state and self-perception. In addition to treating the illness, the PSEH-COPDW program offers these women emotional and educational assistance to lessen dyspnea and dyspnea-related symptoms, ultimately improving their quality of life.

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