Effect of Social Media Based Teaching Program on Emotional Status and Quality of Life for Women undergoing Hysterectomy during Covid-19 Lockdown

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Abstract:

Background: The care of the women undergoing hysterectomy should meet both their physical and psychological needs, and this must involve their families. However, psychological care such as the provision of sound information, emotional support, and advice, is often missed. **Aim:** To evaluate the effect of social media-based teaching program on emotional status and quality of life for women undergoing hysterectomy during Covid-19 lockdown. **Methods: Subjects and method**: **Design**: Quasi-experimental research design pre-post-test was used. **Settings**: The study was conducted at Mansoura City in Egypt. **Sample**: A purposive sample of 400 women having a hysterectomy was obtained from social media such as Facebook and WhatsApp groups, 2020 which the online Google form spreadsheet was opened from the third day of May 2020 to 23 May 2020 it was closed. **Three tools used in data collection**: (I): A self-administered questionnaire (pre and post-test format) to assess women's demographic characteristics, obstetric, and medical histories; women's knowledge about hysterectomy (pre and posttest format); (II): Depression, Anxiety, and Stress Scale (DASS); and (III): Quality of Life (QoL) scale. **Results:** The present study revealed that there were highly statistically significant differences between women's knowledge and their depression, anxiety, and stress levels regarding hysterectomy at the COVID-19 pandemic outbreaks pre and post-implementation of the social media-based teaching program. Also, Significant improvements in the QoL ($p<0.001$) were revealed after the implementation of the social media-based teaching program. **Conclusion:** the study concluded that social media-based teaching program implementation achieved significant improvements in the women's knowledge has a positive effect on improving the emotional disturbance as depression, anxiety and stress, and quality of life among undergoing hysterectomy women during the covid-19 lockdown. **Recommendations:** The social media-based teaching program should be applied and carefully planned for all women undergoing hysterectomy as a new teaching method for proving health issues.

Keywords: Covid-19 lockdown, Emotional status, Hysterectomy, Quality of Life, Social media-based teaching program.

Introduction:

Covid-19 had become a global health issue by the end of 2019. A worldwide lockdown was imposed in response to the pandemic, which had an impact on the people and changed many areas of their lives **(Sharma et al., 2018).** Egypt's lockdown began on March 25th and lasted around three months. A total of 25.3 million pupils have been affected by school closures, putting their safety and security in danger. Long-term home isolation as a result of lockdown measures to prevent the spread of the COVID-19 epidemic carries the danger of increased domestic accidents in children as a side effect of the pandemic (**World Health Organization, 2020**).

Hysterectomy is an operative treatment modality used in obstetrics/ gynecology for several diagnoses ranging from intractable post-partum hemorrhage and uterine prolapse to benign and malignant neoplasms. It can be partial or total **(D'Arpe et al., 2015)**. It is considered a severe type of maternal morbidity because of the risks of anesthesia and surgical intervention **(Geller et al., 2004)**. Added to this are the consequences of the removal of the uterus such as menopause and associated hot flushes, dry vagina with sexual problems, as well as psychological disorders such as stress and depression **(Occhino & Trabuco, 2016)**. This would have a negative impact on women's QoL, which is currently used as an outcome

variable reflecting a person's wellbeing in various domains of life, and because of cultural background. Yet, more research is needed to elucidate the effect of hysterectomy on various QoL domains **(Darwish et al., 2014)**.

Studies assessing the psychological impacts of hysterectomy on women have mostly addressed depression and during hospitalization **(Keskin & Gumus, 2019; Filha et al., 2016)**. However, there is a dearth of research addressing related Post-Traumatic Stress (PTS), a disorder that occurs after exposure to a severely traumatic event. Its symptoms are categorized into an intrusive reminiscence of the traumatic event, avoidance, negative thoughts and emotions, and hyper-arousal **(American Psychiatric Association, 2020)**.

The care of the women undergoing hysterectomy should meet both their physical and psychological needs, and this must involve their families. However, psychological care such as the provision of sound information, emotional support, and advice, is often missed. Thus, women having hysterectomy often express their interest in having counseling and in joining support groups since the exchange of information and experience would help improve their psychological distress **(Nausheen et al., 2016)**.

Individuals in the community use information technology mean like social media to raise awareness, educate, and track health-related events in the wake of the COVID-19 lockdown (**Kamel Boulos, 2019).** Social media is defined as websites and programs that enable users to generate and share information or participate in social networking **(Dictionary Social media Oxford Dictionary, 2019**). Social media tools are platforms and communities, such as Facebook, Whats app, and Facebook Messenger that allow several people to communicate and interact at the same time **(Barrett & Mac Sweeney, 2019).**

The number of people using social media is continually rising, with over 3.2 billion active users globally. The role of social media varies according to users and non-users, age groups, and demographic populations. Because technological change is linked to linguistic and cultural shift patterns, the role of social media is changing constantly **(Statsita, 2019**). The use of social media in healthcare become more common to improve communication speed, disseminate accurate information, and promote knowledge of support, treatments, and self-care options **(Cherak et al., 2020).**

Teaching is a process used in nursing care and in psychotherapy to help people in making their own decisions based on sound information provided by the nurses aimed at improving their understanding of the origins of their problems, underlying factors, and various alternatives to deal with them. The nurse does not propose or advise, but rather offers help if needed **(Blando, 2014)**. Teaching is one of the major roles of nurses, and it gains more importance in the nursing care for women after hysterectomy to help them deal with the stress, anxiety, and depression following this traumatic event **(Knight et al., 2016)**.

Significance of the study:

Hysterectomy is one of the most common obstetric/gynecological procedures performed around the world. It has a significant death rate. In Egypt, there were 165,107 reported occurrences of hysterectomy **(Rathbone & Rathbone, 2019**). According to hospital statistics from the same year, 410 instances were reported in Mansura governorate. Given its great prevalence and detrimental effects on women's lives, so, the study was aimed to evaluate the effect of social media-based teaching program for undergoing hysterectomy women on their emotional status and quality of life during Covid-19 Lockdown

Aim of the study

The study was aimed to evaluate the effect of social media-based teaching program on emotional status and quality of life for women undergoing hysterectomy during Covid-19 lockdown.

Research hypothesis:

- Women's knowledge regarding hysterectomy will improve after receiving a social media-based teaching program during COVID-19 lockdown.

- Women undergoing hysterectomy will have reducing in the level of emotional disturbance as stress, anxiety, and depression regarding hysterectomy during the COVID -19 post-social media-based teaching program implementation.

Subjects and Methods:

Research design:

A Quasi-experimental research design pre-post-test was used.

Settings:

The study was conducted at Mansoura City in Egypt**.**

Sample:

A purposive sample was used to achieve the aim of this study. It included 400 women having a hysterectomy was obtained from social media such as Facebook and WhatsApp groups. Google form spreadsheet which is presented in Facebook and Whats App groups. All the studied women meet the following inclusion criteria such as having smart phone and internet access educated women, free from physical, mental, chronic disease, free from cognitive disease, no history of mental illness, and agree to participate in this study. The only exclusion criterion was women having any associated complications.

Data collection tool:

Three tools were used to collect the data of the study as the following:

Tool I: A self-administered questionnaire (pre and post-test format) was developed by the researchers after reviewing the related literature and research studies. It included the following three parts:

Part (1): Woman's demographic characteristics: This covered data such as age, education, working status, and residence.

Part (2): Woman's obstetric history involved her gravidity, parity, abortions, etc. The assessment of the current illness included the diagnosis, duration, symptoms, woman's past and present medical history, and sources of information.

Part (3): Woman's knowledge about hysterectomy (pre and post-test format): It was developed by the researchers. It included 20 items about knowledge related to hysterectomy such as meaning, clinical pictures, causes, types, high-risk persons, complications, treatment, what to expect after hysterectomy through the social media-based teaching program by the Whats App and Facebook groups.

Scoring system for women's knowledge about hysterectomy:

Each item was scored as two marks for a correct answer, one mark for an incomplete answer, and zero for the wrong answer with a total score of 40 points. Then, these scores were converted to a percentage score. Women's s knowledge was considered satisfactory if the percentage score was 60% or more and unsatisfactory if was less than 60%. The reliability of the tool was confirmed by Cronbach's Alpha test r = 0.84.

Tool II: Depression, Anxiety and Stress Scale (DASS-21):

The researchers used the Depression, Anxiety, and Stress Scale which was adopted from **Lovibond & Lovibond (1995).** The scale involved 21 items and consisted of a set of three self-report scales designed to measure the symptoms of the emotional state of depression, anxiety, and stress. Each of the three DASS-21 subscales contains seven items. The depression scale assesses hopelessness, dysphoria, devaluation of life, lack of interest/involvement, self-deprecation, anhedonia, and inertia. The anxiety scale measures autonomic arousal, skeletal muscle symptoms, subjective experience of anxious affect, and situational anxiety. The stress scale is sensitive to levels of chronic non-specific arousal. It assesses nervous arousal, difficulty relaxing, and being easily upset/agitated, irritable/over-reactive, and impatient. The rating scale responses ranged from (3) applied to me very much or most of the time; (2) applied to me to a considerable degree or a good part of the time; (1) applied to me some of the time or to some degree; and (zero) did not apply to me at all.

Scoring system for Depression, Anxiety, and Stress Scale (DASS):

The responses were categorized with the cutoff point adopted by Lovibond & Lovibond, **(1995)** to categorize stress, anxiety, and depression. Thus, the level of symptoms (extremely severe, severe, moderate, mild, and no symptoms) was as follows:

Levels of DASS symptoms	**Depression**	**Anxiety**	**Stress**
Normal (no symptoms)	0-7	0-14	0-9
Mild	8-9	15-18	10-13
Moderate	10-14	19-25	14-20
Severe	15-19	26-33	21-27
Extremely Severe	20+	34+	28+

Tool III: Quality of Life (QoL) scale:

This scale was developed by the **Brucker, (2014)**, it consisted of 33 items assessing four QoL domains, namely sleep/activity, work relations, family/social relations, and marital relationship including coitus, preparation for sex, and trials to escape sex. The responses are on 3-point Likert agree/uncertain/disagree. For scoring, these were scored 2, 1, and 0 respectively. The scoring was reversed for negative items so that a higher score indicates better QoL. The scores of the items of each domain and the total scale were summed up, divided by the number of items, and converted into percent scores. The QoL was considered high if the score was 60% or higher and low if less than 60%.

Social media-based teaching program characteristics:

This part used to assess effect of the social media. It included five statements, was the social media-based teaching program content enough, satisfaction with the social media-based teaching program did the social media-based teaching program improve knowledge, advantages, and disadvantages of the social media-based teaching program.

Procedure:

The actual fieldwork was carried out starting from the third day of May 2020 to 23 May 2020.

Tool validity and reliability:

The assessment sheet was developed in the English language then, translated to the Arabic language after an extensive review of the literature. The data collection tool was tested for validity by five experts in Maternity, Gynecology, Obstetrics and Mental Health Nursing and Medicine for its clarity, comprehensiveness, appropriateness, and relevance. The reliability of the two scales was assessed in the current study using the internal consistency approach. Both demonstrated high reliability with Cronbach alpha coefficients 0.95 for the DAS scale and 0.96 for the QoL scale.

Pilot study:

This was conducted on 10% of the total sample size (40 women undergoing hysterectomy) to ensure the applicability of the tool and the time needed to complete it. Since no modifications were done, the women who participated in the pilot study were included in the main study sample.

Ethical considerations:

Official permission was obtained through an issued letter from the Dean of Faculty of Nursing, Mansoura University to conduct this study. On the first page of the online questionnaire, an informed consent form was included. The cover page of the questionnaire included a brief introduction to the study's objectives. The purpose of the study was explained to the women in the first part before starting the administered questionnaire the researcher informed the participants that, the study was voluntary, they were allowed to refuse to participate and they had the right to withdraw from the study at any time, without giving any reason. Instructions for completing the questionnaire, as well as the link and quick response (QR) code for the online questionnaire. After reading the consent form, women completed the questionnaire. Moreover, they were assured that their information would

be confidential and used for research purposes only.

The study was conducted through initial assessment, planning, implementation, and evaluation phases.

In the initial assessment phase:

To develop the tools for data collection and prepare the teaching program, the researchers reviewed the current and past available literature the available textbooks, articles, magazines, and internet searches.

The planning phase:

The researcher gave a complete description of the social media-based teaching program. Through this phase, the researcher determined the following points.

1-structure of the sessions:

The researcher designed the social media-based teaching program based on initial assessment information and pertinent literature. The social media-based teaching program addressed meaning, causes, indications, signs, and symptoms of hysterectomy.

2-relaxation technique:

Stress management and relaxation techniques, health education regarding compliance to medication after surgery, and personal hygiene were used to facilitate carrying out the session of the program and consist of pictures and videos for deep breathing, progressive muscle relaxation, and meditation and poster for an explanation of the steps of relaxation techniques.

The implementation phase:

This study hypothesized that the women who will participate in social media-based teaching program will have lower mean scores of anxiety, depressive symptoms, and a high level of quality of life after implementation of the social media-based teaching program Intervention than before.

Participants were asked to fill out and submit a Google Form that had been prepared online. The Google form link was shared with women via Facebook and WhatsApp groups during the COVID-19 pandemic (**https://docs.google.com/forms/dle/1FALPSLsd**). Before the online videos and presentation, each woman was tested using an internet-administered questionnaire as a (pretest) to assess their demographic features, knowledge about hysterectomy, DASS, and QoL. Women were informed about the study's goal and expected outcomes, the tools' contents, and how to answer on the first page of the online questionnaire. An introduction, clinical pictures, causes and risk factors, kinds, and management of hysterectomy were all included in the guide booklet developed by the researchers.

The average time spent for women's completion of the online administered questionnaire, the DASS, and QOL scale was approximately 30 minutes. Each woman involved in the study was informed about the purpose of the study, the components of the tools, and how to answer the online questionnaire and the scale.

The booklet was distributed via Google Form to those who participated in the pre-test via Facebook and WhatsApp groups. The researchers used appropriate videos, PowerPoint presentations, and posters to help women understand hysterectomy. In addition, to boost women's understanding of hysterectomy during COVID 19 lockdown, the researchers created online videos and audio describing the contents of the booklet.

Social media-based teaching program:

It was designed by the researcher focused on the following sessions:

Session1: Introduction about the aim of social media-based teaching program.

Session 2: Give knowledge about introduction, clinical pictures, causes and risk factors, kinds, and management of hysterectomy.

Session 3: Effect of hysterectomy on women's emotional status and QOL.

Session 4: Practice relaxation training as a deep breathing exercise.

Session 5: Practice relaxation training as a progressive muscle relaxation technique

Session 6: Practice relaxation training as meditation.

Session 7: Effect of hysterectomy on women's QOL.

Session 8: Evaluation of the social media-based teaching program by using post-test

The evaluation phase:

The effect of the social media-based teaching program was assessed through a posttest using the same tools. Post one month of sending the booklet, videos, PowerPoint presentation, and posters, the questionnaire was re-posted to the participants on the Google Form for collection (post-test).

The sessions for the social media-based teaching program were:

Session 1: Introduction and orientation:

1. The researcher introduces herself and explains the nature and purpose of the study and the possibility to convince the women that the program is very important.

2. Taking oral informed consent of the patients who agreed to participate in the program and setting an agreement on the number of sessions, time, and duration of every session, then specifying the subject of the next session.

3. Orienting the patients about the program (8 sessions, one session every week, for 60-90 minutes). Patients must follow the Whats app group with confirming the privacy and confidentiality of research information, commitment to session's dates and times, avoiding sarcasm about others' opinions, and applying essential activities during every session.

4. The pretest DASS Scale and quality of life scale were given to them (pre-intervention assessment).

Session 2: Overview on hysterectomy:-

At the beginning of the session, the researcher welcomes all women and Thanks to them for their participation. Participants were asked to fill out and submit a Google Form that had been prepared online. The Google form link was shared with women via Facebook and WhatsApp groups during the COVID-19 pandemic about meaning, causes, indications, the signs and symptoms of hysterectomy.

Session (3): Overview on the effect of hysterectomy on women's emotional status:-

This session concerned with what is the effect of hysterectomy on women's emotional status? and the researcher provides a detailed explanation of the effect of hysterectomy on women's emotional status.

Session (4): Relaxation training: -

The researcher asked women to see deep breathing exercises which introduced Whats app and Facebook group. The researcher shows videos and photos that illustrate how to practice deep breathing exercises. The researcher asks women, to apply deep breathing exercises.

Session (5): Relaxation training: -

The researcher asked women to see progressive muscle relaxation. The researcher shows videos and photos that illustrated how to practice progressive muscle relaxation which was represented to women as videos and photos that illustrate how to practice progressive muscle relaxation through Whats app and Facebook group.

Session (6): Relaxation training –

The researcher asked women to see meditation. The researcher shows videos and photos that illustrated how to practice meditation.

Session (7): Effect of hysterectomy on women' QOL:

The researcher discusses with the participants how to improve their QOL through:

- Strength your relationship with God and ask him for help
- Develop good behavior through:
- -Replace your negative thoughts with a positive one
- -Stay away from negative people

Session (8): final session regarding the evaluation of the social media-based teaching program by using post-test

The researcher explained to women that this is the last session for evaluating the effectiveness of the social media-based teaching program by using post-test research' tools that were used as pre-test research' tools.

Statistical analysis:

Data entry and analyses were done using the Statistical Package for the Social Sciences (SPSS Version 20.0). Categorical variables were analyzed using the Chi-squared test. To identify the predictors of improvement of the QoL and DASS scores, multiple linear

regression analyses were done with the analysis of variance of the models obtained. The level of statistical significance was considered at p< 0.05.

Results:

Table 1 illustrates that women's age ranged between 26 and 64 years, with a median of 45.6 years, (68%) were basic/intermediate education. More than two-thirds of them were housewives (66.0%), and (76%) of them lived in urban areas.

As shown in **Table 2**, less than two-thirds of the studied women were grand multigravida (60%), (63%) of the studied women were multipara, and (73%) had previous abortions. The most frequent diagnosis among the studied women was neoplasms (43%). The duration of illness was less than one year in (55%) of them. The most frequently reported symptoms were pelvic pain (75%) general fatigue and bleeding (69%). The majority of them (82%) reported that their symptoms had a negative impact on their sexual life.

Concerning women's medical history, **Table 3** indicates that (26.0%) of them were having chronic diseases and were on regular medications, (54.0%) of them were managed by total hysterectomy, and (60%) of them had additional treatment, mostly hormonal. Regarding the length of hospital stay (84.0%) of the studied women stayed less than seven days.

As regards their sources of information **figure (1),** demonstrates the main source of knowledge regarding hysterectomy among the studied women as nurses and physicians (70% and 40%) respectively.

Table (4) illustrates the effect of social media-based teaching program implementation on women's knowledge about hysterectomy. It was obvious that the majority of them have more knowledge about hysterectomy in all items post-social media-based teaching program implementation than pre-implementation and there was a highly statistically significant difference between women's knowledge regarding hysterectomy pre and post social media-based teaching program implementation (P<0.001).

Figure (2**)** shows that the most of women (96.0%) had an unsatisfactory level of knowledge regarding hysterectomy in the pretest but post-social media-based teaching program implementation, (94.0%) of them had a satisfactory level of knowledge.

Concerning women's total scores of depression, anxiety, and stress regarding hysterectomy, It was noticed from **the table (5)** that, the total women's depression, anxiety, and stress scores were severe pre-social media-based teaching program and there were highly statistically significant improvements were observed in women's total scores of depression, anxiety, and stress scores regarding hysterectomy at (P<0.001).

Figure (3) presents that, less than three quarter (70%) of the studied women pre-social media-based teaching program implementation had a severe level of stress, more than half (60 %) of them had severe anxiety and half of them (50%) had severe depression while these percentages decreased to be moderate in more than half of them post-social media-based teaching program implementation.

It was clear from **table (6)** that, there was a significant relationship between the studied women's emotional status (depression, anxiety, and stress levels) and their total level of knowledge pre and post the social media-based teaching program implementation (P< 0.05). While less than half of them who had an unsatisfactory level of knowledge had a psychological disturbance in the form of depression and anxiety pre-social media-based teaching program implementation.

As displayed in **Table 7,** statistically significant post-intervention improvements were revealed in all domains and the total quality of life scale (p<0.001). The only exception was in the domain of marital relations concerning trials to escape sex, which improved from 54% to 67%, but the difference reach statistical significance at (p=0.18).

Table (8): Showed that most of the studied women (98%) reported that the contents were enough and (97%) of them were satisfied with the social media-based teaching

program. Concerning its effect on knowledge, nearly all of them (98%) reported that it improved their knowledge. Regarding the disadvantage of a social media-based teaching program; nearly all of them (97%) reported that it was internet interruption.

Table (1): Percentage distribution of the studied women regarding their demographic characteristics (n=400)

Demographic characteristics	Frequency	Percent
Age:		
<40	152	38.0
> 40	248	62.0
Range	26.0-64.0	
Mean± SD	45.8±8.7	
Median	45.6	
Education:		
Read/write	64	16.0
Basic/intermediate	272	68.0
University	64	16.0
Working status:		
Housewife	264	66.0
Working	136	34.0
Residence:		
Urban	304	76.0
Rural	96	24.0

Table (2): Percentage distribution of the studied women regarding their obstetric and gynecological history (n=400)

Obstetric and gynecological history	Frequency	Percent
Gravidity:		
Multigravida	160	40.0
Grand multigravida	240	60.0
Parity:		
Multipara	252	63.0
Grand multipara	148	37.0
History of abortions:		
• Yes	292	73.0
• No	108	27.0
Current gynecological illness		
Bleeding/prolapse	140	35.0
Neoplasm	172	43.0
Benign tumor	88	22.0
Duration of illness in years:		
<1	220	55.0
1+	180	45.0
Symptoms:		
Pelvic pain	300	75.0
General fatigue	276	69.0
Bleeding	276	69.0
Recurrent vaginitis	196	49.0
Dyspareunia (pre)	192	48.0
Dyspareunia (post)	92	23.0
Symptoms had a negative impact on sexual life		
• Yes	328	82.0
• No	72	18.0

Table (3): Percentage distribution of the studied women regarding their past and present medical history (n=400)

Past and present Medical History	Frequency	Percent
Medical history:		
Have chronic disease	104	26.0
On regular medication	104	26.0
Had previous surgery	192	48.0
Intervention:		
Partial hysterectomy	184	46.0
Total hysterectomy	216	54.0
Treatments:		
Chemotherapy	108	27.5
Radiotherapy	48	12.5
Hormonal	240	60.0
Hospital stay (days):		
<7	336	84.0
7+	64	16.0

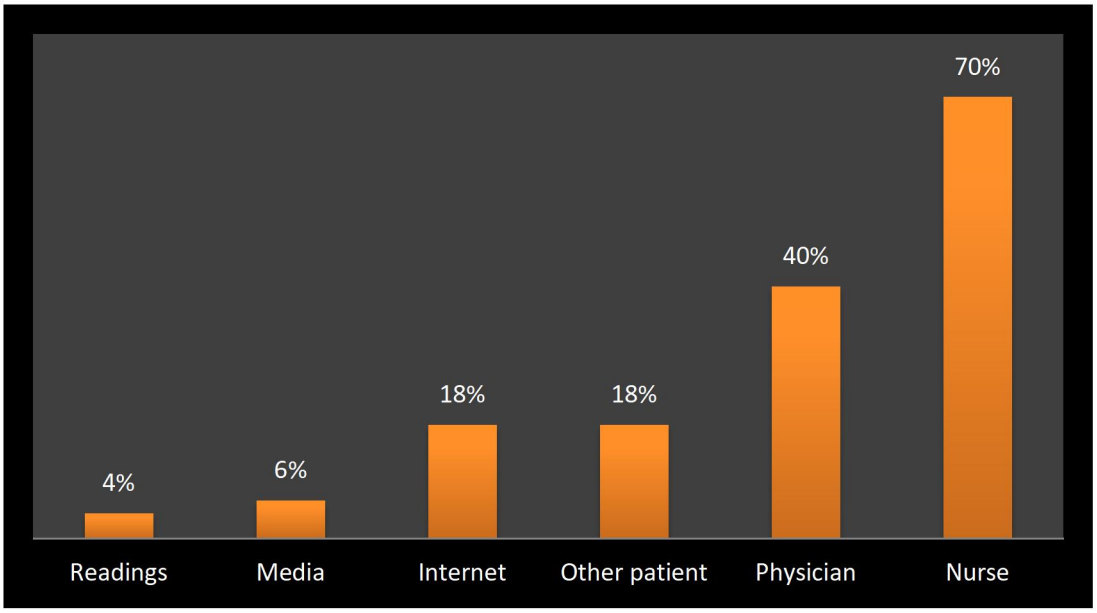

Figure (1): Percentage distribution of the studied women regarding their source of knowledge regarding hysterectomy (n=400)

Table (4): Percentage distribution of the studied woman's knowledge about hysterectomy pre and post social media-based teaching program implementation

Woman's knowledge	No =(400) Pre social media-based teaching program implementation	Post social media-based teaching program implementation	P-value
Meaning of hysterectomy	96(24.0)	376(94.0)	<0.001*
The clinical picture of hysterectomy	136(34.0)	360(90.0)	<0.001*
Causes of hysterectomy	148(37.0)	384(96.0)	<0.001*
Types of hysterectomy	136 (34.0)	384 (96.0)	<0.001*
High-risk persons of hysterectomy	68 (17.0)	380(95.0)	<0.001*
Complications of hysterectomy	96 (24.0)	368(92.0)	<0.001*
Treatment of hysterectomy	136 (34.0)	340(85.0)	<0.001*
What to expect after a hysterectomy	152(38.0)	356(89.0)	<0.001*

**highly Significance at 0.001 levels

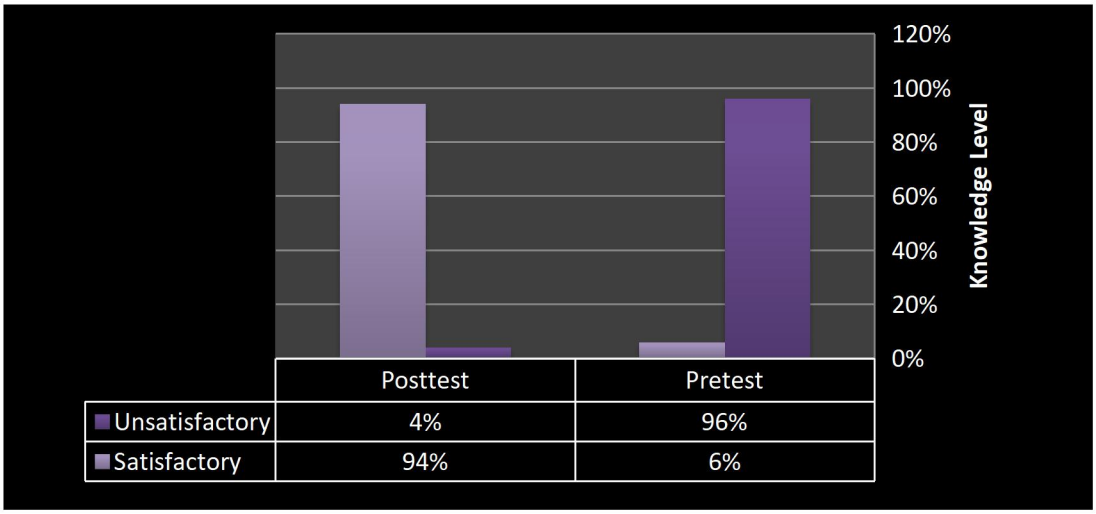

Figure (2): Percentage distribution of the total women's knowledge level about hysterectomy

Table (5): Total mean scores of women's emotional status (depression, anxiety, and stress) regarding hysterectomy pre and post social media-based teaching program implementation

DASS	No =(400)		t- test	p-value
	pre	Post		
Depression	25.60 ± 3.50	13.60 ± 1.40	356.9	<0.001*
Anxiety	18.70 ± 1.13	11.76 ± 1.14	489.3	<0.001*
Stress	33.60 ± 3.72	22.33 ± 3.69	657.2	<0.001*

**highly Significance at 0.001 levels

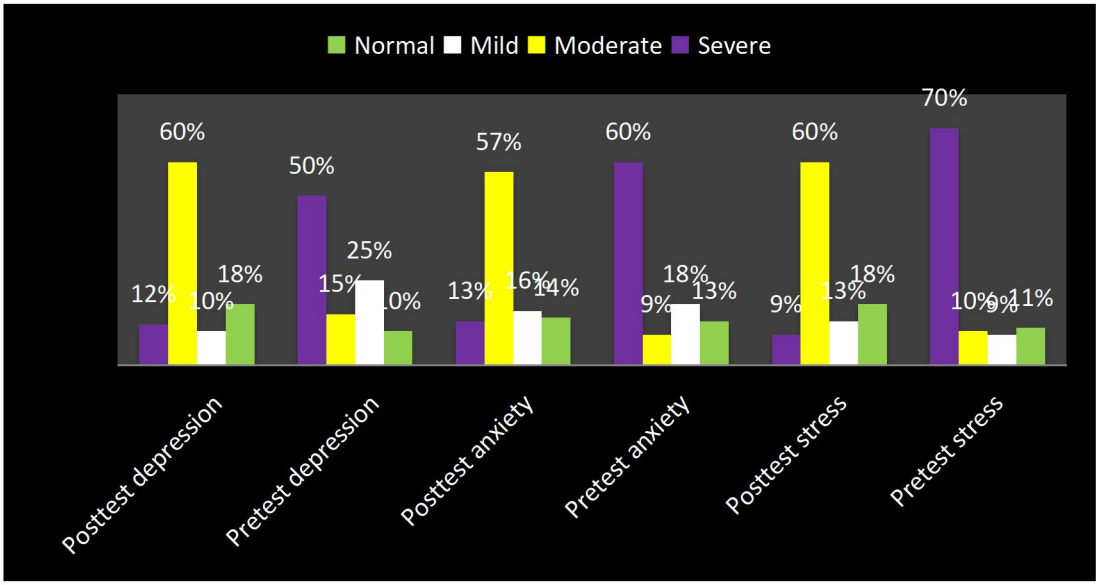

Figure (3): Percentage distribution of the studied women's emotional status (depression, anxiety, and stress level) regarding hysterectomy pre and post-social media-based teaching program implementation.

Table (6) Association between women's level of depression, anxiety, and stress and their total level of knowledge about hysterectomy pre and post social media-based teaching program implementation

DASS	Pre social media-based teaching program implementation				Post social media-based teaching program implementation				X2	P-value
	Satisfactory		Unsatisfactory		Satisfactory		Unsatisfactory			
	No=24	%	No=384	%	No=376	%	No=16	%		
Depression	8	33.4	154	40.0	90	24.0	4	25.0		
Anxiety	8	33.3	169	44.0	158	42.0	4	25.0	36.76	<0.0001*
Stress	8	33.3	61	16.0	128	34.0	8	50.0		

**highly Significance at 0.001 levels

Table 7: Pre-Post-Intervention Improvement in Domains and Total Score of Quality Of Life (QoL) among the Studied Women Sample (n=400)

QoL domains	Time				X^2 test	P-value
	Pre (n=400)		Post (n=400)			
	No.	%	No.	%		
Sleep and activity	132	33.0	336	84.0	24.73	<0.001*
Work relations	64	16.0	132	33.0	4.65	0.032*
Family/social relations	92	23.0	216	54.0	8.42	0.004*
Marital relation:						
Coitus	108	27.0	272	68.0	13.68	<0.001*
Preparation for sex	76	19.0	184	46.0	6.72	0.010*
Trials to escape sex	216	54.0	268	67.0	1.68	0.18

(*) Statistically significant at p<0.05
**highly Significance at 0.001 levels

Table (8): Percentage distribution of the studied women regarding their feedback regarding social media-based teaching program (N=400).

Social media-based teaching program	N0	%
Is the content enough?		
-Yes	392	98.0
-No	8	2.0
Satisfaction with the social media-based teaching program		
-Yes	388	97.0
-No	12	3.0
Did social media-based teaching program improves knowledge		
-Yes	392	98.0
-No	8	2.0
Advantages of social media-based teaching program:		
- Active participation	380	95.0
-Participants can get a chance for live chat.	368	92.0
-Participants can reach it at any place.	376	94.0
-They offer calendar scheduling and invites	388	97.0
-Ease of users to stay in touch with teaching program providers	400	100.0
Disadvantages of social media-based nursing teaching program:		
-Internet interruption	388	97.0
-Inability of participants to join a social media teaching program with a large sample	12	3.0

Discussion:

Hysterectomy is most commonly performed on women between 40 years and 45 years of age, and by age 65 approximately 37–39% of women have undergone this procedure. The positive attitude of women toward hysterectomy prevents many physical, psychological, and social complications, which is possible only with adequate knowledge regarding the causes and consequences of hysterectomy. The rate of hysterectomy has increased nowadays due to various indications. The complications are based on the type of surgery and anesthesia. During the clinical experience, it observed that many patients lacked knowledge regarding hysterectomy. In a study 66% of women expressed that they need more information regarding the consequences of hysterectomy **(Graw & Beyond, 2018).**

Concerning women's age, the results of the current study revealed that, majority of them their age was ranged between 26 and 64 years with a median of 45.6 years. From the researchers" point of view, these factors are

expected in the sample as they are often associated with disorders that may indicate the need for hysterectomy. This result is in congruence with this, the mean age of women having hysterectomy was 44.5 years in the study carried out by **Kjølhede et al. (2019)** to assess the impact of stress on their recovery from abdominal hysterectomy. From the researchers" point of view, thus, at this age, menopause and associated hormonal changes usually start.

Result of the current study showed that less than two-thirds of the studied women were grand multigravida and were multipara. From the researchers" point of view, this reflected that the high gravidity and parity and they are considered an important risk factor for uterine prolapse, which is one of the most common indications for hysterectomy. These results are In line with this, **Joseph et al. (2016)** who studied "Clinical Profile of Uterine Prolapse Cases in South India" and found that grand parity was a main risk factor for uterine prolapse in Indian women.

Result of the current study highlighted that the most frequent diagnosis among the studied women was neoplasms. These results are matched with this, **Manicheril et al. (2020)** who studied "Knowledge of Women on Hysterectomy" and the entire subjects reported the preoperative diagnosis was uterine fibroid.

As regard impact of hysterectomy on their sexual life, the majority of the studied women reported that their symptoms had a negative impact on their sexual life. From the researchers" point of view, it reflected the critical need about social media-based teaching program implementation to support women.

As regards women's sources of information**,** results of the current study revealed the main source of knowledge regarding hysterectomy among the studied women as nurses and physicians which reflected that women were important to seek information from health personnel.

The present study findings indicated that women' knowledge regarding hysterectomy and there was a highly statistically significant difference and improvement between women's knowledge regarding hysterectomy pre and post social media-based teaching program implementation (P<0.001). This illustrated the importance of introducing the social media-based teaching program about hysterectomy to the women

This may be related to deficiency of knowledge about hysterectomy which affected the people's compliance to treatment. This result agreed with the study by **Fan et al**., (**2020)** about the "KAP theory" and reported that, a health behavior change when gaining the right knowledge and adopting practice**.** Also**,** recent study by **Rana et al., (2020)** illustrated that, sufficient individual knowledge is associated with effective prevention, control of disease and promotion of person's health**.** A study by **Ricardo et al., (2018)** supported that; knowledge deficit is associated with poor health and maladaptive disease**.**

The current study revealed that the most of women had a satisfactory level of knowledge post-social media-based teaching program implementation. From the researchers" point of view, it reflected the positive effect of social media-based teaching program.

This result is similar to a study was conducted by **Mathew, (2020)** in Bengaluru to assess the knowledge regarding postoperative care before and after a structured teaching program among 30 women undergoing abdominal hysterectomy. The posttest findings of the study showed that women their knowledge has been improved regarding selected aspects of postoperative hysterectomy care.

The present findings revealed that, the total level of women depression, anxiety and stress' scores were severe at the pretest, but after social media-based teaching program implementation, a highly statistical significant improvements were observed in women total scores of emotional disturbance as depression, anxiety and stress scores regarding hysterectomy (P<0.001). These results explained knowledge deficit that, causes increasing emotional disturbances level and fear of unknown. These results were consistent with the study done by **Huang and Zhao (2020)** regarding generalized anxiety disorder,

sleep quality, depressive symptoms and noticed that anxiety disorder affected depressive symptoms.

The current study has also revealed that slightly more than two-thirds of the women had a severe level of stress, with the intrusive re-experiencing symptoms being the highest in severity. This is related to the drastic changes in woman's body image, with both physical and psychological sequels, particularly in this operation where a precious organ symbolizing femininity is lost. These results are in agreement with a study conducted in Turkey by **Kurek Eken et al, (2016)** entitled " The impact of abdominal and laparoscopic hysterectomies on women's sexuality and psychological condition "and revealed a decrease in women's self-esteem following hysterectomy. Similar high levels of stress and anxiety were reported in cases following hysterectomy **(de la Cruz, et al, 2016)** as well as in other major surgeries or diseases**. Thus, Lee et al. (2017)** emphasized the importance of psychological support for women undergoing hysterectomy.

Meanwhile, the present study findings provide evidence of significant improvements in all severity aspects of stress, anxiety, and depression particularly in the intrusive re-experiencing symptoms following the program. Thus, the positive effect of the program was primarily on the severity of the symptoms, which is quite important in alleviating the level of stress among them. The improvement was confirmed the direct effect, as well as an indirect effect on stress through improving women's QoL. This success of the social media-based teaching program could be attributed to the coping element of this program, which focused on helping women to select the most suitable coping strategy to be followed to relieve their stress. In congruence with this, **Kjølhede et al. (2018)** stressed the importance of coping in decreasing the level of stress among women exposed to such surgery. The improvement in stress in the current study is in agreement with the results reported by **de la Cruz et al. (2019)** where women having hysterectomy had lower stress after receiving adequate education, in addition to physical and psychological support. The findings add to the evidence of the positive effects of social media-based teaching program on various events facing patients **(Navidian et al, 2017; Rizkalla et al, 2017).**

The present study reveals that, there was a significant relationship between the studied women's emotional status (depression, anxiety, and stress levels) and their total level of knowledge pre and post the social media-based teaching program implementation ($P< 0.05$). Also, there is an improvement in women' knowledge level which associated with decreasing levels of depression, anxiety and stress This result reflects the benefit of administering the social media-based teaching program, which met the women' needs and provide them with sufficient knowledge to cope with this disease.

The findings of the present study point to statistically significant post-intervention improvements were revealed in all domains and the total quality of life scale ($p<0.001$). From the researchers' point of view, the findings reflected acceptance of the set research hypothesis, indicating the effectiveness of the social media teaching program in alleviating these women's stress, and consequently improving their QoL. According to the present study findings, most women had low QoL revealed after hysterectomy and before the social media teaching program. This was evident in all QoL domains including sleep and activity, work, family, and social relations, in addition to the marital relations among the married ones. Thus, **Lonnee-Hoffmann and Pinas (2019)** found a significant decrease in libido among women after hysterectomy. This could be attributed to their fear of sexual intercourse due to the possible anatomical, hormonal and psychological changes after surgery. On the other hand, other studies demonstrated improvements in QoL and in sexuality after hysterectomy due to relief of the symptoms of underlying disease or condition **(Fram et al., 2018).**

The implementation of the current study social media teaching program led to significant improvements in their QoL and in

all its aspects. This indicates that this psychotherapy approach is effective in such cases, which is attributed to its innate nature of giving the participant the opportunity of taking her own decision based on authentic and complete information, which would increase her empowerment. In fact, women may lack information about the procedure and its consequences, which may raise concerns and phobias among them, leading to poor QoL. In agreement with this, a study carried out in the United States revealed that women lacked knowledge about hysterectomy even after having it **(Mattingly et al., 2017).** The positive effect of social media teaching program on the QoL of women after hysterectomy, shown in the present study, is in agreement with the results reported by **Radosa et al. (2016)** in Germany, where counseling of women undergoing this procedure led to significant improvements in their QoL and sexual functioning.

All aspects of QoL domain of marital relations showed significant improvement after the present study social media teaching program, but only the aspect of concerning trials to escape sex improved without statistical significance. This might be explained by the relatively high pre-counseling level of this aspect; in fact, it was the highest QoL aspect, with slightly more than a half of the women scoring high in it. This could be related to the prevailing religious and societal obligation of the women in our community to avoid refusal of the husbands' desire for having a sexual relation. It could also be attributed to that the hysterectomized woman tends to prove to herself and to her husband that she is still able to fulfill her marital functions. Moreover, the surgical technique used in hysterectomy has a significant impact on women's QoL, particularly regarding their sexual functions **(Brucker et al, 2014).** In this respect, a study in Iran recommended training program of women exposed to hysterectomy in order to improve their sexual functioning **(Danesh et al, 2015).**

Concerning satisfaction of the studied women about social media teaching program, they reported that the contents were enough and improved their knowledge. From the researchers' point of view, it indicated the good impact of animated stories intervention.

Conclusion:

Based on the results of the present study, the study findings concluded that the results support the research hypothesis in which social media based teaching program implementation achieved significant improvements in the women's knowledge and has a positive effect on improving the emotional disturbance as depression, anxiety and stress and quality of life among undergoing hysterectomy women during covid-19 lockdown.

Recommendations:

Based on the current study results, the following recommendations are proposed:

- The social media based teaching program should be applied and carefully planned for all women undergoing hysterectomy as a new teaching method for proving health issues.
- Psychological support and intervention activities should be carried out to help them to cope and become more resilient regarding hysterectomy**.**
- Replication of the current study with a larger sample of women in different settings is required for generalizing the results.

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