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Effect of social-platform nursing guidelines on emotional status among caregivers caring for elderly women undergoing hysterectomy

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Abstract--Background: Providing comprehensive care to elderly women undergoing hysterectomy requires a holistic approach, addressing both physical and psychological needs. Involving family

members can be beneficial. Caregivers who take care of older women undergoing hysterectomy have a heavy burden that can detrimentally affect their physical health and emotional well-being. As social media becomes substantially pervasive in daily life, it can be used for enhancing information and emotional support of caregivers, which consequently impacts elderly patients' outcomes.

Aim: To determine the effect of social-platform nursing guidelines on emotional status among caregivers caring for elderly women undergoing hysterectomy. **Design:** To accomplish this study a quasi-experimental research design (pre and post) test was used.

Settings: The study was conducted at Sohag City-Egypt. **Sample:** A purposive sample of 200 caregivers caring for elderly women undergoing hysterectomy was obtained from social media such as Facebook and WhatsApp groups, 2021 which the online Google form spreadsheet was opened from the first day of June 2021 to the end of June 2021, it was closed. **Three tools used in data collection:**

(I): A self-administered questionnaire (pre and post-test format) to assess caregivers' demographic characteristics, demographic characteristics of elderly women undergoing hysterectomy, caregivers' knowledge about hysterectomy (pre and posttest format); (II): caregivers' reported practices about hysterectomy (pre and posttest format), and (III): Depression, Anxiety, and Stress Scale (DASS) scale. **Results:** The present study revealed that there were highly statistically significant differences between knowledge, practices and depression, anxiety, and stress levels of caregivers who caring for elderly women undergoing hysterectomy before and after implementation of the social-platform nursing guidelines.

Conclusion: the study concluded that social-platform nursing guidelines implementation achieved positive effect on improving the knowledge and practices of caregivers who take care of elderly women undergoing hysterectomy as well as, reducing their emotional disturbance (depression, anxiety, and stress levels).

Recommendations: The social-platform nursing guidelines should be applied and carefully planned for all elderly women undergoing hysterectomy as a new teaching method for proving health issues.

Keywords---Caregivers, Elderly women undergoing hysterectomy, Emotional status, Social platform nursing guidelines.

Introduction

Hysterectomy is one of the most popular medical operations for women, with millions of women having one each year. The removal of extra structures determines the kind of hysterectomy—total, subtotal, and radical—and influences the healing process and level of care required for each patient (**De la Cruzet al., 2019**). The consequences of the procedure go beyond the surgical intervention itself, including potential short- and long-term side effects such as hormonal changes, complications like infections or blood clots, and socio-emotional effects such as anxiety and alterations in body image. In this intricate landscape,

nursing professionals play a crucial role, responsible for guiding patients through the process, addressing their individual needs, and creating a supportive environment that promotes healing (**Callegari et al., 2019**).

A hysterectomy is a surgical procedure used in obstetrics and gynecology to address a number of ailments, such as benign and malignant tumors, uterine prolapse, and uncontrollable postpartum bleeding. Both partial and complete procedures are possible (**D'Arpe et al., 2015**). Because anesthesia and surgery carry inherent risks, this operation is considered a major form of maternal morbidity. According to **Occhino and Trabuco (2016)**, the removal of the uterus can also result in psychological problems including stress and sadness as well as menopause symptoms like hot flashes, dry vagina, and trouble having sex.

A hysterectomy can treat a number of medical issues, such as endometriosis, uterine fibroids, irregular bleeding, and some types of cancer. A woman's physical health as well as her emotional, psychological, and social well-being are all impacted by this surgery, which is a significant life change. Thus, it is vitally important that women undergoing this surgical procedure receive nursing care. Prior to, during, and following the procedure, nurses play a critical role in providing complete care (**Cohen et al., 2020**).

The care provided to women undergoing hysterectomy should cater to both their physical and psychological requirements, and it is essential to involve their families in this process. However, psychological support, which includes providing accurate information, emotional assistance, and guidance, is frequently overlooked. Consequently, women who undergo hysterectomy often express a desire for counseling and participation in support groups, as sharing information and experiences can significantly alleviate their psychological distress (**Nausheen et al., 2016**).

Caregivers are individuals who provide unpaid assistance to friends, family members, or partners who are ill, whether they are patients or disabled. According to **Adib-Hajbaghery & Ahmadi (2019)**, the concept of core burden refers to the negative effects that caring for individuals with disabilities has on a family caregiver's activities (objective burden) or emotions (subjective burden) related to their emotional, physical, social, and financial well-being. The act of caregiving significantly influences public health, affecting the quality of life for millions of individuals. Family caregivers offer social or medical support to other family members. This support may include assistance with one or more daily activities, such as dressing and bathing, managing bills, shopping, and providing transportation. Emotional support and help in managing a chronic illness or disability may also be included. As the needs of the recipient increase, the range of caregiving responsibilities may also change, which can place additional stress on the caregiver (**Weis et al., 2021**).

Community members utilize information technology tools such as social media to disseminate knowledge, educate, and monitor health-related events (**Kamel Boulos, 2019**). (Dictionary Social media Oxford Dictionary, 2019) Based on this definition, social media encompasses websites and applications that allow users to create and share content or participate in social networking. Social media tools

include websites and networks like Facebook, WhatsApp, and Facebook Messenger, which enable multiple users to connect and communicate simultaneously (**Barrett & Mac Sweeney, 2019**).

Globally, over 3.2 billion individuals are active users of social media, and this number continues to rise. The role of social media varies among users and non-users, across different age groups, and among various demographic segments. The function of social media is continually evolving, as technological advancements are linked to shifts in language and culture. Social media is increasingly being utilized in the healthcare sector to enhance communication, spread correct information, and spread awareness about support, therapies, and self-care alternatives (**Cherak et al., 2020**).

Nurses play a crucial role in assisting caregivers to participate in support groups. These groups can provide problem-solving strategies for difficult situations, along with encouragement and validation, as members understand the challenges one may face and create an excellent environment for building strong connections. It is important to seek social support and strive to maintain relationships with loved ones who can offer nonjudgmental emotional assistance. Consider scheduling a weekly activity to connect, even if it is simply taking a walk with a friend (**Wong et al., 2021**).

After a hysterectomy, the nursing care given to the patient is essential to their physical and mental recovery. Pre-operative education is essential; nurses should provide comprehensive information on the procedure, any risks involved, and what to anticipate during the healing process. Taking care of personal worries and fears is crucial to creating a supportive environment. For the purpose of preparing for anesthesia and the surgical operation, nurses are also in charge of carrying out thorough assessments, which include keeping an eye on vital signs, running laboratory tests, and going over history. Attaining the best possible recovery requires creating a customized care plan that details mobility goals, wound care, and pain management strategies (**De la Cruz et al., 2019**).

Nursing care following surgery is focused on keeping an eye out for problems like thromboembolic events, hemorrhages, and infections. Educating patients on the warning signals of possible problems and encouraging early ambulation and deep breathing exercises are two ways that nurses can help patients recover. Equally important is emotional care, since women may experience emotional difficulties and hormonal changes following surgery. Women can be empowered to manage their recovery with confidence and support if they have access to counseling options or support groups, which can assist address the psychological repercussions of the surgery (**Onyeneho et al., 2021**).

Significance of the study:

Throughout the world, hysterectomy is one of the most common obstetric and gynecological surgeries. Its mortality rate is noteworthy. There were 165,107 hysterectomy instances reported in Egypt (**Rathbone & Rathbone, 2019**). It is essential for families to participate in the care of women undergoing hysterectomy to address their physical and psychological needs. Nevertheless, psychological support is often neglected, which includes providing sound advice, emotional

backing, and information. Consequently, women who have experienced mastectomy often show a desire to seek counseling and engage in support groups, as they believe that sharing experiences and knowledge can alleviate their psychological distress (**American Psychiatric Association, 2020**).

In Egypt, 58% of informal caregivers for cancer patients are women, with 88% caring for a relative, 39% cohabiting with the patient, 50% experiencing high emotional stress from caregiving, and 73% involved in discussions regarding hospital care; however, 43% indicated a need for help in managing both emotional and physical stress. At the end of life, 40% of those surveyed sought assistance (**Onyeneho & Hesanmi, 2021**). Caregivers, particularly spousal caregivers, endure a considerable emotional, caregiving, and financial burden throughout the treatment process (**Chen et al., 2022**).

As primary caregivers, spouses are tasked with fulfilling the daily living, illness care, and emotional support requirements of the patient, while also managing additional family and social obligations. However, the overwhelming caregiving responsibilities can lead to the neglect of their own physical and psychological health, making them more vulnerable to issues such as fatigue, anxiety, and depression compared to the patients themselves. This creates a caregiver burden that results in physical, psychological, emotional, and financial challenges associated with providing care (**Saji et al., 2021**). Therefore, the study was conducted to determine the effect of social-platform nursing guidelines on emotional status among caregivers caring for elderly women undergoing hysterectomy.

Aim of the study:

General objective

The study was aimed to determine the effect of social-platform nursing guidelines on emotional status among caregivers caring for elderly women undergoing hysterectomy.

Specific objectives:

- Assessing knowledge and reported practices of caregivers who caring for elderly women undergoing hysterectomy at pre and post-social-platform nursing guidelines.
- Assessing stress, anxiety, and depression levels among caregivers caring for elderly women undergoing hysterectomy at pre and post- social-platform nursing guidelines .
- Designing and implementing social-platform nursing guidelines based on caregivers' needs.
- Evaluating the effect of social-platform nursing guidelines on emotional status among caregivers caring for elderly women undergoing hysterectomy.

Research hypothesis:

- Knowledge level and reported practices of Caregivers caring for elderly women undergoing hysterectomy is expected to be improved after receiving social-platform nursing guidelines than before.
- There will be a decrease in the intensity of emotional disturbances include stress, anxiety, and depression levels among caregivers caring for elderly women undergoing hysterectomy after applying the social-platform nursing guidelines than before.

Subjects and Methods:**Research design:**

To accomplish this study a quasi-experimental research design pre-post- test was used.

Settings:

The study was conducted in Sohag City, Egypt.

Sample:

A purposive sample of 200 caregivers caring for elderly women undergoing hysterectomy was obtained from social media such as Facebook and WhatsApp groups, 2021 which the online Google form spreadsheet was opened from the first day of December 2021 to the end of December 2021, it was closed.

Inclusion Criteria:

Caregivers of both sexes who are caring for elderly women undergoing hysterectomy were included in the study, educated, and without a history of mental illness.

Exclusion Criteria:

Caregivers with communication problems, mental illnesses, or psychiatric conditions were prohibited.

Data collection tool:

After evaluating the pertinent literature and research data (**De la Cruz et al., 2019; Cohen et al., 2020; Onyeneho et al., 2021; Wong et al., 2021**), the researchers created:

Tool I: A self-administered questionnaire in pre and post test formats. The following four components were present:

Part 1: Demographic characteristics of caregivers: This section encompassed details regarding age, educational background, occupation, and residential location.

Part 2: The demographic characteristics of elderly women undergoing hysterectomy comprised data including age, educational attainment, employment status, and place of residence.

Part 3: The obstetric history of elderly women concerning the current illness included the diagnosis, duration, symptoms, as well as the woman's past and present medical history, along with sources of information.

Part 4: Caregiver knowledge regarding hysterectomy (pre and posttest format); this was developed by the researchers. It consisted of 20 items pertaining to knowledge about hysterectomy, including its definition, clinical presentations, causes, types, high-risk individuals, complications, treatment options, and expectations following hysterectomy, as guided by social-platform nursing guidelines via WhatsApp and Facebook groups.

Scoring system for women's knowledge about hysterectomy: A total score of 40 points was determined by allocating two points for a correct response, one point for an incomplete response, and zero points for an incorrect response for each item. A percentage was then calculated from these scores. If the percentage score was 60% or higher, the caregivers' knowledge was considered satisfactory; if it was less than 60%, it was considered unsatisfactory. The Cronbach's Alpha test was used to confirm the instrument's reliability, and the results showed that $r = 0.84$.

Tool (II): Reported practices of caregivers regarding hysterectomy (pre and posttest format): This was also developed by the researchers (Cohen et al., 2020; Onyeneho et al., 2021; Wong et al., 2021). It included 30 items concerning reported practices related to hysterectomy, such as pre-operative education about the procedure, potential risks, and recovery expectations, mobility plans, wound care, and pain management techniques are all crucial for the best possible recovery. The focus of post-operative nursing care is on early ambulation and deep breathing exercises to aid in rehabilitation, as well as monitoring for problems like infection, bleeding, and thromboembolic events. After the operation, women may experience hormonal shifts and emotional anguish, therefore emotional support is also important. Women can manage the psychological effects of surgery by using social-platform nursing guidelines provided by Facebook groups and WhatsApp groups, which can help address the psychological impact of surgery.

Scoring system of caregivers' reported practices:

There are two response levels for each step: completed and unfinished. For each of these, the scores were 1, 0. When the score was greater than or equal to 60 %, the total reported procedures were deemed adequate; when it was less than 60 %, they were deemed inadequate.

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

The Depression, Anxiety, and Stress Scale was used by the researchers to measure which was adopted from Lovibond & Lovibond (1995). Comprising three self-report ratings, the 21-item scale was designed to assess the symptoms of stress, anxiety, and depression. The three subscales of the DASS-21 each consist of seven items. The depression scale assesses lethargy, anhedonia, dysphoria, lack of involvement or interest, devaluation of life, and self-deprecation. The anxiety scale evaluates subjective experiences of anxious affect, autonomic arousal, skeletal muscle symptoms, and situational anxiety. The chronic non-specific arousal levels are sensitive to the stress scale. It evaluates anxious

arousal, trouble unwinding, readily becoming irritated or angry, irritable/over-reacting, and impatient. The replies on the rating scale varied from (3) applied to me very much or most of the time to (2) applied to me to a significant extent 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):

In order to classify the responses into stress, anxiety, and depression, **Lovibond & Lovibond (1995)** used a cutoff point.

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

Social platform nursing guidelines characteristics:

In this section, the impact of social platform nursing guidelines is evaluated. It contained five questions: were the social platform nursing guidelines sufficiently informative; were the social platform nursing guidelines satisfactorily received; did the social platform nursing guidelines increase caregivers knowledge; practices, emotional status, and what were the social platform nursing guidelines' benefits and disadvantages.

Procedure:

Beginning **from the first day of December 2021 to the end of December 2021**, fieldwork was done.

Tool validity and reliability:

Five experts in the fields of Obstetrics and Gynecological Nursing, Community Health Nursing, Oncology, Mental Health Nursing, and medicine evaluated the data collection tool's validity for its clarity, thoroughness, appropriateness, and relevance. The internal consistency approach was used in the current study to evaluate the reliability of the three tools. With Cronbach alpha ratings of 0.95 for the DAS scale, 0.96 for the first tool, and 0.987 for the second tool, all showed very excellent reliability.

Pilot study:

For testing the usefulness of the tools and the time required to complete it, 10% of the total sample size (20 caregivers caring for elderly women undergoing hysterectomy) were used. The women who took part in the pilot study were incorporated into the main study sample because no alterations were made.

Ethical considerations:

To conduct this study, official approval was secured through a letter from the dean of the nursing faculty. An informed consent form was attached to the online questionnaire's initial page. An overview of the study's goals was provided on the questionnaire's cover page. The researcher explained to the participants that they might decline to participate in the study at any moment and that they could withdraw from it at any time, without having to give a reason, before starting the questionnaire that would be delivered to them. The first segment gave the caregivers an explanation of the goal of the study, the online survey's link, quick response (QR) code, and instructions for completing it. Caregivers answered the questionnaire after reading the consent form. Additionally, participants received guarantees that the information they provided would be kept private and used only for study.

The research was carried out through the phases of initial assessment, planning, implementation, and evaluation.

In the initial assessment phase:

In order to design the social-platform nursing guidelines and develop the tools required for data collecting, the researchers looked at both historical and contemporary literature, including textbooks, papers, periodicals, and internet sources.

The planning phase:

The social-platform nursing guidelines were thoroughly reviewed by the researcher. At this stage, the researcher discovered the following features.

1- Structure of the sessions:

Based on the data acquired from the initial assessment and pertinent literature, the social-platform nursing guidelines were created. These guidelines addressed the definition, etiology, signs, symptoms, and indicators of hysterectomy.

2- Relaxation technique:

To support the implementation of the guidelines sessions, stress management and relaxation techniques were used, as well as health education for caregivers about medication adherence after surgery and how to care for elderly women having a hysterectomy. This includes posters explaining the steps required in the relaxation techniques, as well as visual aids like images and films showing increasing muscular relaxation, deep breathing, and meditation.

The implementation phase:

This study posited that women participating in the social-platform nursing guidelines would exhibit lower average scores of anxiety and depressive symptoms, along with improved knowledge and reported practices following the implementation of the social-platform nursing guidelines compared to their scores prior to the intervention.

Participants were requested to complete and submit a Google Form that had been created online. The link to the Google Form was disseminated to caregivers

through Facebook and WhatsApp groups (<https://docs.google.com/forms/dle/1FALPS> Lsd). Prior to the online videos and presentation, each caregiver underwent an internet-administered questionnaire as a pretest to evaluate their demographic characteristics, knowledge, and practices regarding hysterectomy, as well as the DASS. Caregivers were briefed on the study's objectives and anticipated outcomes, the contents of the tools, and instructions on how to respond on the initial page of the online questionnaire. The guide booklet, developed by the researchers, encompassed an introduction, clinical images, causes and risk factors, types, and management of hysterectomy.

The DASS scale and the online questionnaire took caregivers an average of almost half an hour to complete. Every caregiver who took part in the study was informed about the goal of the study, the components of the instruments, and how to complete the scale and online questionnaire. The booklet was sent to participants in the pre-test via Facebook and WhatsApp groups using a Google Form. The researchers used posters, PowerPoint presentations, and appropriate movies to help caretakers comprehend hysterectomy. Additionally, the researchers created audio and video content for the internet that described the booklet's contents in order to improve caregivers' understanding of hysterectomy.

Social media platform nursing guidelines:

It was developed by the researcher with a focus on the following sessions:

Session 1: An introduction to the objectives of the social platform nursing guidelines.

Session 2: Providing information on the introduction, clinical presentations, causes and risk factors, types, and management of hysterectomy.

Session 3: The impact of hysterectomy on the emotional well-being of caregivers caring for elderly women.

Session 4: Engaging in relaxation training through deep breathing exercises.

Session 5: Engaging in relaxation training using progressive muscle relaxation techniques.

Session 6: Engaging in relaxation training through meditation practices.

Session 7: Assessing the social platform nursing guidelines through a post-test.

The evaluation phase:

The effectiveness of the social platform nursing guidelines was evaluated via a post-test utilizing the same evaluation instruments. For the purpose of gathering data, the questionnaire was given to participants again via Google Form one month after the booklet, videos, PowerPoint presentation, and posters were distributed (post-test).

The sessions for the social platform nursing guidelines included:

Session 1: Introduction and orientation:

1. The researcher introduces herself and clarifies the nature and objectives of the study, aiming to persuade caregivers of the significance of the social platform nursing guidelines.
2. Obtaining oral informed consent from caregivers who agreed to participate in the social platform nursing guidelines, establishing an agreement on the

- number of sessions, timing, and duration of each session, and outlining the topic for the subsequent session.
3. Informing caregivers about the social platform nursing guidelines (8 sessions, one session each week, lasting 60-90 minutes). Caregivers are required to join the WhatsApp group while ensuring the privacy and confidentiality of research data, adhering to session schedules, refraining from sarcasm regarding others' views, and engaging in essential activities during each session.
 4. The pretest DASS Scale was administered to them (pre-intervention assessment).

Session 2: Overview of Hysterectomy:-

At the start of the session, the researcher extends a warm welcome to all women and expresses gratitude for their participation. Participants were requested to complete and submit an online Google Form that had been prepared in advance. The link to the Google Form was disseminated to caregivers through Facebook and WhatsApp groups, covering topics such as the meaning, causes, indications, signs, and symptoms of hysterectomy.

Session (3): Overview of the Emotional Status of Caregivers for Elderly Women Undergoing Hysterectomy:-

This session focused on the emotional status of caregivers who are responsible for elderly women undergoing hysterectomy. The researcher provided a comprehensive explanation regarding the impact of hysterectomy on the emotional well-being of caregivers.

Session (4): Relaxation Training: -

The researcher instructed caregivers to engage in deep breathing exercises, which were introduced via WhatsApp and Facebook groups. The researcher presented videos and images that demonstrated how to perform deep breathing exercises. Caregivers were encouraged to practice these deep breathing techniques.

Session (5): Relaxation Training: -

The investigator asked caregivers to experiment with progressive muscle relaxation methods. Caregivers were given access to videos and pictures that demonstrated progressive muscle relaxation techniques via Facebook groups and WhatsApp.

Session (6): Relaxation Training –

The researcher invited caregivers to participate in meditation practices. Videos and images were provided to demonstrate how to effectively practice meditation.

Session (7): Final Session on Evaluating Social-Platform Nursing Guidelines Using Post-Test

The researcher informed caregivers that this session would serve as the final evaluation of the effectiveness of the social-platform nursing guidelines, utilizing post-test research tools that had previously been employed as pre-test research tools.

Statistical analysis:

SPSS Version 20.0, the Statistical Package for the Social Sciences, was used for data entry and analysis. To evaluate categorical variables, the Chi-squared test

was employed. Using the analysis of variance of the models obtained, multiple linear regression analyses were performed to determine the determinants of improvement of the DASS scores. A significance level of $p < 0.05$ was taken into consideration.

Results:

Table (1): indicates that 65% of the caregivers involved in the study were aged 30 or less, 60% were female, 35% had attained a Secondary education, and 55 % were employed.

Table 2 illustrates that 65% of elderly women's age were ≥ 60 years, (50%) were illiterate. More than two-thirds of them were not working (70.0%), and (76%) of them lived in urban areas.

Table 3 indicates that among the older women in the study, neoplasms were the most common diagnosis (43%). For 55% of them, the sickness lasted less than a year. Bleeding (75%), general fatigue, and pelvic pain (80%) were the most commonly reported symptoms.

Regarding the medical history of older women, **Table 4** shows that 30.0% of them had chronic conditions and were taking regular drugs, 55.0% had a total hysterectomy, and 55% had extra treatment, primarily hormonal. Eighty-five percent of the women in the study spent less than seven days in the hospital.

Regarding their knowledge sources, **figure (1)** shows that doctors accounted for 70% of the caregivers in the study's understanding about hysterectomy.

According to **Figure 2**, the majority of caregivers (96.0%) had unsatisfactory knowledge about hysterectomy before the pretest, while 94.0 % of them had satisfactory knowledge after reading the social platform nursing guidelines .

Table (5) illustrates the effect of social-platform nursing guidelines on **caregivers'** knowledge about hysterectomy. It was obvious that there was improvement in knowledge about hysterectomy post-social-platform nursing guidelines than pre-implementation and there was a highly statistically significant difference between **caregivers'** knowledge regarding hysterectomy pre and post social-platform nursing guidelines ($P < 0.001$).

Table (6) illustrates that there was improvement in practices about hysterectomy post-social-platform nursing guidelines than pre- implementation and there was a highly statistically significant difference between **caregivers'** knowledge regarding hysterectomy pre and post social-platform nursing guidelines ($P < 0.001$).

According to **figure (3)**, the most of caregivers (90.0%) had inadequate practices regarding hysterectomy during the pretest, but 88.0 percent of them had a adequate practices after social platform nursing guidelines.

Regarding caregivers' total hysterectomy-related stress, anxiety, and depression scores, it was observed from **the table (7)** that, the total **caregivers'** depression, anxiety, and stress scores were severe pre-social-platform nursing guidelines and there were highly statistically significant improvements were observed in **caregivers'** total scores of depression, anxiety, and stress scores regarding hysterectomy at ($P < 0.001$).

Figure (4) presents that, (70%) of the studied caregivers pre-social-platform nursing guidelines had severe stress, with over 60% experiencing severe anxiety and 50% experiencing severe depression. Following the social-platform nursing guidelines, these percentages dropped to moderate in over half of them.

Table (8): Showed that all of the studied caregivers (100%) reported that the contents were enough, were satisfied with the social-platform nursing guidelines. Concerning its effect on knowledge, all of them (100%) stated that it improved their knowledge. Regarding the disadvantage of a social-platform nursing guidelines; all of them (100%) reported that it was internet interruption.

Table (9) illustrates a statistically significant correlation between the total knowledge and practices caring for elderly women undergoing hysterectomy pre and post- social-platform nursing guidelines.

Table (1): Demographic characteristics of caregivers (n=200)

Demographic characteristics of caregivers	No	%
Sex		
Male	80	40
Female	120	60
Age		
18 to 30	130	65
>30	70	35
Residence		
Rural	140	70
Urban	60	30
Educational level		
Illiterate	60	30
Basic education	50	25
Secondary education	70	35
University education	20	10
Working status		
Not work	90	45
Working	110	55

Table (2): Demographic characteristics of elderly women undergoing hysterectomy (n=200)

Demographic characteristics of elderly women	No	%
Age		
60 to70	130	65
>70	70	35
Residence		
Rural	140	75
Urban	60	25
Educational level		
Illiterate	100	50
Basic education	40	20
Secondary education	60	30
Working status		
Not work	140	70
Working	8	4
Retirement	52	26

Table (3): Distribution of Elderly women regarding their obstetric and gynecological history (n=200)

Obstetric and gynecological history of elderly women	Frequency	Percent
Current gynecological illness		
Bleeding/prolapse	72	36.0
Neoplasm	88	44.0
Benign tumor	40	20.0
Duration of illness in years:		
<1	120	60.0
1+	80	40.0
Symptoms:		
Pelvic pain	160	80.0
General fatigue	140	70.0
Bleeding	150	75.0
Recurrent vaginitis	120	60.0

Table (4): Elderly women distribution regarding their past and present medical history (n=200)

Past and present Medical History	Frequency	Percent
Medical history:		
Have chronic disease	60	30.0
On regular medication	50	25.0
Had previous surgery	90	45.0
Intervention:		
Partial hysterectomy	90	45.0
Total hysterectomy	110	55.0
Treatments:		
Chemotherapy	60	30.0
Radiotherapy	30	15.0.
Hormonal	110	55.0
Hospital stay (days):		
<7	170	85.0
7+	30	15.0

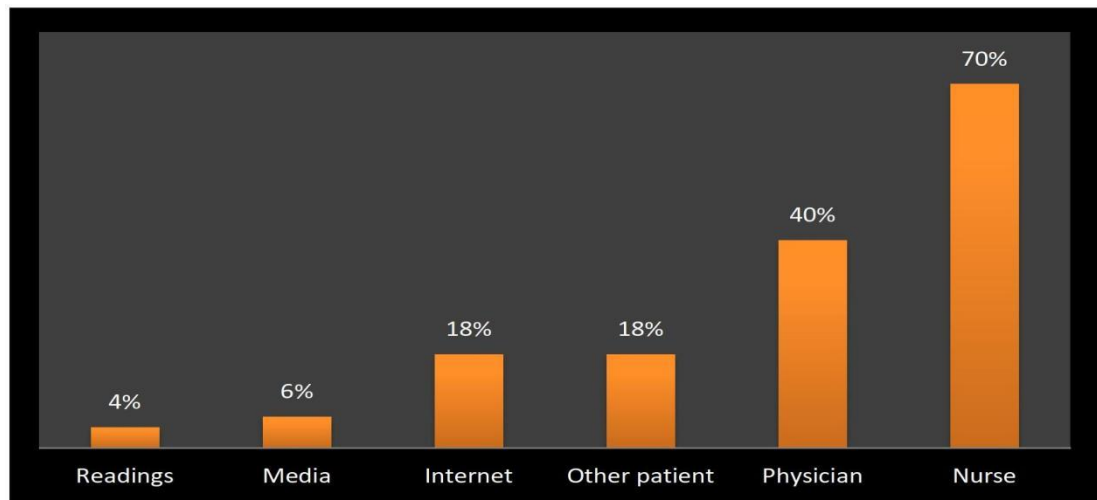


Figure (1): Source of knowledge among caregivers caring for elderly women undergoing hysterectomy

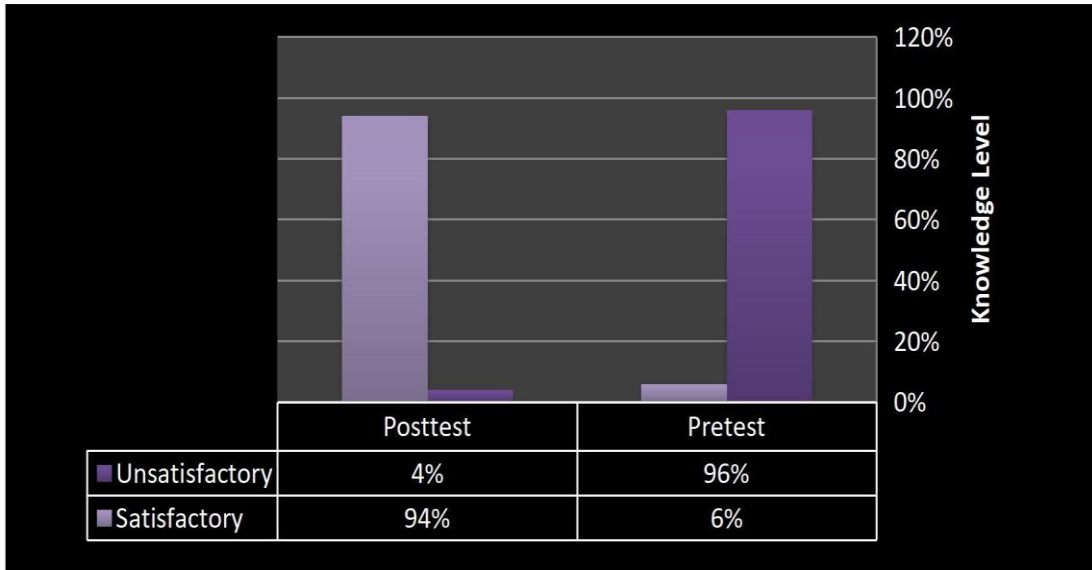


Figure (2): Caregivers total knowledge levels regarding hysterectomy pre and post-social-platform nursing guidelines (n=200)

Table (5): Total caregivers' knowledge mean score regarding hysterectomy pre and post- social-platform nursing guidelines (n=200)

Caregivers' knowledge	Pre	Post	P-value	t-test
Knowledge Mean Score	15.67±1.77	38.22±1.22	<0.001**	78.21

- independent t-test ** Significant difference at p. value<0.01

Table (6): Total caregivers' practices mean scores regarding hysterectomy pre and post- social-platform nursing guidelines (n=200)

Caregivers' practices	Pre	Post	P-value	t-test
Practices Mean Score	13.21±1.42	28.03±1.11	<0.001**	56.32

- independent t-test ** Significant difference at p. value<0.01

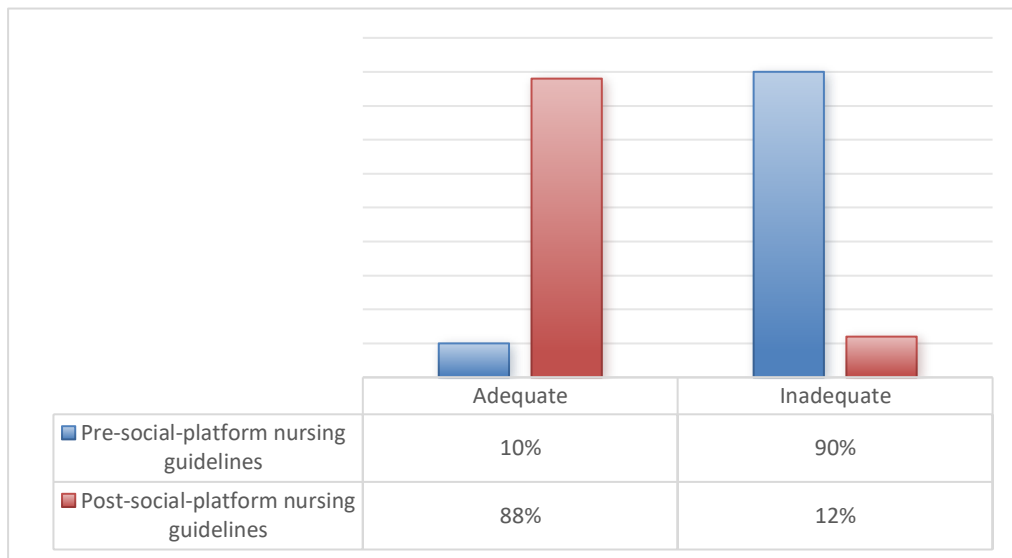


Figure (3): Caregivers' total practice level regarding hysterectomy at pre and post-social-platform nursing guidelines (n=200)

Table (7): Total caregivers' mean scores of emotional status (depression, anxiety, and stress) regarding hysterectomy pre and post social-platform nursing guidelines (n=200)

DASS	No =(200)	t- test	p-value	
	pre	Post		
Depression	25.55± 3.34	13.59± 1.32	56.9	<0.001*
Anxiety	18.66± 1.22	11.68± 1.52	48.3	<0.001*
Stress	33.73± 3.64	22.22± 3.78	57.2	<0.001*

**highly Significance at 0.001 levels

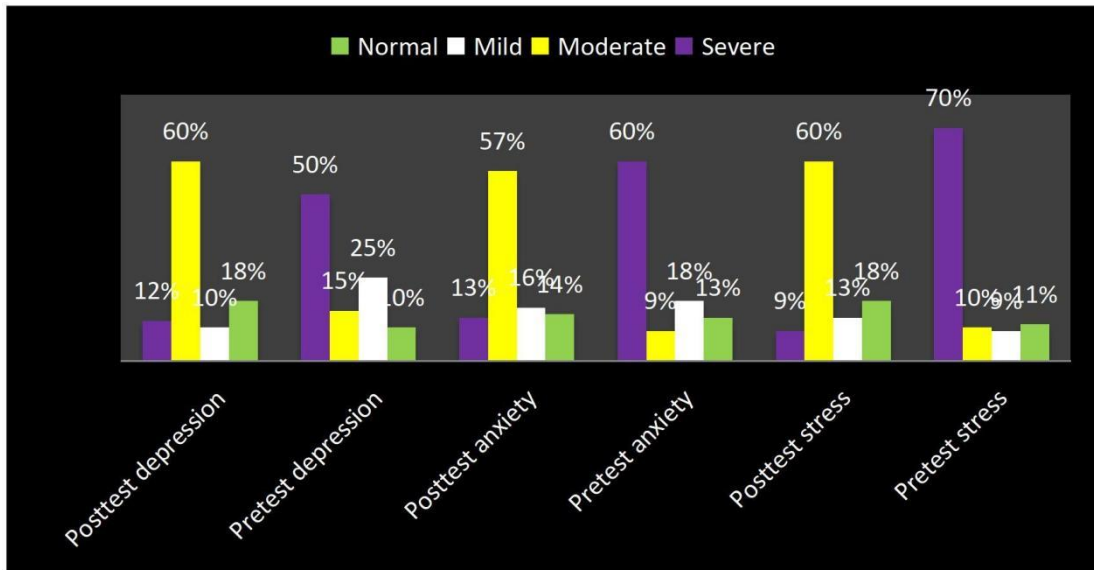


Figure (4): Total emotional status of caregivers (stress, anxiety, and depression) before and after a hysterectomy in relation to social platform nursing guidelines (n=200)

Table (8): The studied caregivers distribution regarding their feedback regarding social-platform nursing guidelines (N=200).

Social media-based teaching program	NO	%
Is the content enough?		
-Yes	200	100
-No	0	0
Satisfaction with the social-platform nursing guidelines		
-Yes	200	100
-No	0	0
Did social-platform nursing guidelines improves knowledge		
-Yes	200	100
-No	0	0
Advantages of social-platform nursing guidelines:		
- Active involvement	100	100
-A opportunity for live conversation is available to participants.	100	100.0
-Anywhere is where participants can get there.		
--Simplicity for users to communicate with providers of teaching programs	100	100
- Social-platform nursing guidelines' disadvantages include:		
-Inability of participants to join a big sample social media teaching program	100	100
-Internet outages		

Table (9): Correlation between total knowledge and practices among caregivers caring for elderly women undergoing hysterectomy pre and post- social-platform nursing guidelines (n=200)

Items	Total Knowledge score			
	Pre		Post	
	r	p-value	r	p-value
Total Practice score	0.83	0.001**	0.48	0.003**

(**) Pearson's correlation, (**) Statistically significant at $p \leq 0.001$

Discussion:

Cancer is identified as the third leading cause of death worldwide, with an increasing number of patients. Although the use of the latest technology has led to better prognoses, further efforts are necessary. This situation causes distress not only for the patients but also for their caregivers and family members. It is essential for cancer patients and their caregivers to receive education on managing symptoms and coping with the disease (**WHO, 2021**).

The emotional, social, and financial well-being of a family member of a cancer patient is adversely affected. In many cultures, strong family bonds and traditions are upheld. Consequently, family members experience both joy and sorrow (**Graw & Beyo, 2018**). This social aspect is maintained during inpatient care throughout the therapeutic process. Typically, caregivers at this stage are immediate relatives. They often provide emotional support in addition to assisting with the patient's treatment. As noted by **Gok Metin et al. (2019)**, a subpar hospital environment can lead to various issues, yet it can also offer emotional satisfaction for the caregiver. Caregiver burden can be defined as the negative responses to how caregiving affects the caregiver's social, professional, and personal responsibilities (**Ogunyemi et al., 2021**). **So**, the study aimed to determine the effect of social-platform nursing guidelines on emotional status among caregivers caring for elderly women undergoing hysterectomy.

The present study revealed that over three-fifths of the caregivers were female and aged 30 or younger, while more than two-fifths were unemployed, and over one-third had attained basic education. In their respective research, **Ogunyemi et al. (2021)**, **Akpan-Idiok & Anarado (2019)**, **Boostaneh et al. (2021)**, **Gabriel et al. (2019)**, **Jite et al. (2021)**, and **Sung et al. (2021)** established that women predominantly assume the caregiving role for cancer patients. The average age of participants in our study was 40.4 years, which exceeds the 35.9 and 39.71 years reported by **Akpan-Idiok (2021)**. This suggests that a significant portion of healthcare professionals involved in the treatment of cancer patients are in their forties or fifties. Additionally, the findings of **Gabriel et al. (2019)** that most caregivers fall within the 41 to 50 age range corroborate our study's results.

According to the current study's findings, neoplasms were the most common diagnosis among the elderly women analyzed. **Manicheril et al. (2020)** discovered that every participant reported a preoperative diagnosis of uterine fibroids. These results are in line with their findings.

Regarding the medical history of elderly women, it was noted that over half underwent total hysterectomy and received additional treatment, primarily hormonal therapy. In terms of cancer stage, it was observed that slightly less than three-quarters were classified as stage III, and fewer than half had undergone surgery, chemotherapy, and targeted therapy as part of their cancer treatment. These results are consistent with those of **Zou et al. (2020)**, who identified chemotherapy and surgery as the most common types of interventions. Similarly, **Rasul & Amen (2022)** reported the use of radiation, chemotherapy, and surgery as treatment modalities. These findings align with those of **Yesilbalkan et al. (2019)**, who discovered that three-quarters of their patients had cancer that had persisted for three years, with the majority having received chemotherapy. Conversely, nearly one-third of the patients received radiation treatment; according to **Rezaei et al. (2020)**. This could be because chemotherapy is the first line of treatment for cancer after surgery and has been shown to be effective. **Wenhao et al. (2021)**, who found that more than half of informal caregivers were unemployed, supported these findings.

Concerning the sources of knowledge, the findings of the current study indicated that the primary source of information regarding hysterectomy among the caregivers studied was physicians. It confirmed that caregivers acquire knowledge from appropriate sources.

The findings of the current study indicated that most caregivers exhibited an inadequate level of knowledge regarding hysterectomy during the pretest; however, following the implementation of social-platform nursing guidelines, the majority achieved a satisfactory level of knowledge. From the researchers' perspective, this underscores the critical necessity for the implementation of social media-platform nursing guidelines to support women.

The findings of the current study demonstrated the impact of social-platform nursing guidelines on caregivers' knowledge concerning hysterectomy. It was evident that there was an enhancement in knowledge about hysterectomy following the social-platform nursing guidelines compared to before their implementation, and a highly statistically significant difference was observed in caregivers' knowledge regarding hysterectomy pre and post the social-platform nursing guidelines. This, in the opinion of the researchers, illustrates the significant and positive influence of social-platform nursing guidelines. These findings align with those of **De Lamaza et al. (2020)**, who found that structured instruction improved carers' clinical outcomes and elevated their knowledge levels. Additionally, these findings are consistent with those of **Belongacem et al. (2019)**, who identified a significant statistical relationship between caregivers' overall knowledge before and after the program. This may be attributed to the effect of social-platform nursing guidelines that enhance caregivers' comprehension.

The current study reported that after social-platform nursing guidelines about hysterectomy, the overall level of knowledge among the caregivers under investigation had improved. The results align with previous research on cancer patients and cancer patients after surgery by **Beaver et al. (2019)**, which demonstrates that phone follow-up and information support successfully raise

disease awareness. According to **El-Amin et al. (2021)**, the family caregivers in the study had a good understanding of cancer before the social-platform nursing guidelines, and after the intervention, their knowledge increased. According to the study, these differences might be the consequence of regulations and reinforcement that improve caregivers' comprehension as well as their strong desire to learn enough.

One possible explanation for this could be a lack of knowledge about hysterectomy, which decreased treatment adherence. This result validated the "KAP theory" study by **Fanet et al. (2020)**, which asserted that with the right knowledge and practice, healthy behavior can be changed. Additionally, a recent study by **Rana et al. (2020)** showed that effective disease prevention, control, and promotion are linked to having sufficient personal knowledge. According to a study by **Ricardo et al. (2018)**, maladaptive disease and poor health are associated with knowledge loss.

The current study demonstrated that there was an enhancement in practices related to hysterectomy following the implementation of social-platform nursing guidelines compared to the period before their implementation. Furthermore, a highly statistically significant difference was observed in caregivers' knowledge regarding hysterectomy before and after the introduction of these guidelines. From the perspective of the researcher, this finding confirmed the effectiveness of the social-platform nursing guidelines, which led to an improvement in knowledge and was associated with enhanced practices concerning hysterectomy.

The current study indicated that the majority of caregivers exhibited an insufficient level of knowledge regarding hysterectomy during the pretest; however, after the implementation of social-platform nursing guidelines, they demonstrated an adequate level of knowledge. According to **Eliana's (2019)** research, approximately half of the caregivers in the study achieved satisfactory practice scores for the treatment of their cancer patients prior to the intervention, with that percentage rising to over three-quarters following the intervention. The researchers suggest that these variations may result from the effectiveness of the social-platform nursing guidelines in enhancing caregivers' practices and fulfilling the objectives of the current study.

Regarding the total scores of depression, anxiety, and stress among caregivers related to hysterectomy, it was observed that the overall scores for depression, anxiety, and stress were significantly severe prior to the implementation of social-platform nursing guidelines. Furthermore, highly statistically significant improvements were noted in caregivers' total scores of depression, anxiety, and stress following the hysterectomy. These findings highlight a knowledge deficit that contributes to an increase in emotional disturbances and fear of the unknown. These results align with the research conducted by Huang and **Zhao (2020)**, which examined generalized anxiety disorder, sleep quality, and depressive symptoms, revealing that anxiety disorders adversely impacted depressive symptoms.

The present study also indicated that less than three-quarters of the caregivers studied prior to the social-platform nursing guidelines experienced a severe level of stress, while more than half reported severe anxiety and half exhibited severe depression. However, these percentages decreased to moderate levels in more than half of the caregivers after the implementation of the social-platform nursing guidelines. This phenomenon is associated with the fear of the unknown, This has both psychological and physical repercussions, especially in this surgical surgery where a critical organ that symbolizes femininity is destroyed. These results are in line with a study by **Kurek Eken et al. (2016)**, "The impact of abdominal and laparoscopic hysterectomies on women's sexuality and psychological condition," which was carried out in Turkey and found that women's self-esteem decreased after a hysterectomy. According to **de la Cruz et al. (2016)**, people who have had a hysterectomy or another major surgery or sickness have also been shown to experience higher levels of stress and anxiety. Therefore, **Lee et al. (2017)** emphasized the importance of offering psychological support to women who are having a hysterectomy.

Meanwhile, the results of this study show notable improvements in all severity characteristics of stress, anxiety, and depression, especially related to intrusive re-experiencing symptoms after the social-platform nursing guidelines were put into practice. Consequently, the primary positive impact of these guidelines was observed on the severity of symptoms, which plays a crucial role in reducing stress levels among the participants. The improvement was validated through both direct and indirect effects on stress, as evidenced by its reduction. The success of the social-platform nursing guidelines can be attributed to their coping component, which aimed to assist caregivers in selecting the most appropriate coping strategies to alleviate their stress. In alignment with this, **Kjølhede et al. (2018)** emphasized the significance of coping mechanisms in lowering stress levels among women undergoing such surgical procedures. These findings contribute to the body of evidence supporting the beneficial consequences of educational initiatives based on social media on the different difficulties that patients face (**Navidian et al., 2017; Rizkalla et al., 2017**).

The results of this study show that the emotional states of the women under investigation—such as their levels of stress, anxiety, and depression—and their general knowledge levels both before and after the social-platform nursing standards were implemented were significantly correlated. Furthermore, there has been an enhancement in the knowledge levels of women, which is associated with a reduction in depression, anxiety, and stress. This outcome underscores the advantages of implementing the social-platform nursing guidelines, which addressed the needs of the women and equipped them with adequate knowledge to manage this condition. From the researchers' perspective, the findings affirm the acceptance of the proposed research hypothesis, highlighting the effectiveness of the social-platform nursing guidelines in mitigating the stress experienced by these caregivers.

These results elucidated the information gap that contributes to increasing emotional instability and fear of the unknown. The research conducted by Huang and **Zhao (2020)** regarding generalized anxiety disorder, depressive symptoms,

and the observation that anxiety disorder influenced depressive symptoms aligned with these results.

Regarding the satisfaction of the caregivers studied concerning social-platform nursing guidelines, all participants indicated that the content was sufficient and enhanced their knowledge. From the researchers' perspective, this reflects the effectiveness of the social-platform nursing guidelines.

The current study identified a statistically significant relationship between the overall knowledge and practices of caregivers for elderly women undergoing hysterectomy before and after the implementation of social-platform nursing guidelines. These findings were supported by **El-Amin et al. (2021)**, who examined the knowledge, attitudes, and practices of caregivers for cancer patients in Sudan. They found a strong statistically significant correlation between the total knowledge and total practices of the caregivers for older adult cancer patients they assessed. This may be attributed to the varying levels of strain experienced by caregivers of cancer patients, which can depend on the disease stage and other patient-related factors.

Conclusion

The authors of the current study came to the conclusion that the findings are consistent with their research hypothesis, in which social-platform nursing guidelines implementation achieved positive effect on improving the knowledge and practices of caregivers who take care of elderly women undergoing hysterectomy as well as, reducing their emotional disturbance (depression, anxiety, and stress levels).

Recommendations:

The results of the present study lead to the following recommendations:

- As a novel teaching strategy for demonstrating health issues, the social-platform nursing guidelines should be implemented and meticulously developed for all caregivers of elderly women having hysterectomy.
- The booklet and colorful pamphlets is recommended to be available in health care settings to empower the awareness of elderly women undergoing hysterectomy and their caregivers focusing on improving their emotional and knowledge condition.
- Educational nursing program is recommended for elderly women undergoing hysterectomy aimed to help them to become more resilient in the face of a hysterectomy.
- Replicating the current study with a large sample of caregivers of elderly women undergoing hysterectomy in a variety of settings is necessary for the results to be generalized.

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