

Effect of Social-platform Instructions regarding Menopause on Middle Age Women Awareness during Covid-19 Outbreak

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Abstract

Menopause marks the end of a woman's reproductive period and the beginning of her non-reproductive period. Biological, psychological, and physiological changes describe it. **The study aimed to** evaluate the effect of social-platform instructions regarding menopause on middle-aged women's awareness during the Covid-19 outbreak. **Research design:** A Quasi-experimental design (pre-post) test was adopted in this study. **Setting:** This study was conducted on non-menopausal women in Port Said governorate, Egypt, using an online self-administered questionnaire via Google Form. **The study sample:** A purposive sample of 300 healthy and non-menopausal women aged 35–45 years was obtained from social media such as Facebook and WhatsApp groups. **Tools:** (1) A Non-menopausal women's demographic data; (2) Women's knowledge regarding menopause, (3) Women's attitude regarding menopause (4) Women's reported practice regarding menopause, and (5) Women's satisfaction with social social-platform instructions. **Results:** The study findings revealed that women had a higher score of knowledge, attitude, and practical knowledge post-social- social-platform instructions intervention compared to pre-intervention regarding menopause. There was a positive correlation between mothers' total knowledge scores and total practical knowledge scores at the 0.01 level of significance regarding menopause post-intervention. **Conclusion:** The study concluded that the effect of social- social-platform instructions regarding menopause on middle-aged women's knowledge, attitude, and practices during the Covid-19 outbreak was positive. **Recommendations:** The study recommended that an in-service continuous, educational program should be imparted to women. Further research, and emphasis needed to be given through workshops and seminars about menopause.

Keywords: Awareness, Covid-19, Middle age women, Menopause, Social-platform Instructions.

Introduction

The coronavirus disease 2019 (COVID-19) pandemic has become the world's largest public health emergency of the 21st century. On 30 January 2020, the World Health Organization declared COVID-19 to be a public health emergency of international concern. 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 (**World Health Organization, 2020**).

Menopause is the stage whereby the body of a woman does not receive a menstruation period for 12 consecutive months, and women's ovaries have ceased functioning and menstruation has stopped. It may occur between the ages of 40-59 years. It has significant physical and emotional

consequences and in some cases, women may experience symptoms for many years (**Hamoda & Savvas, 2014**).

The mean age of the menopausal woman in Egypt is 46 years, which is low, but this age has been increased during the past few years in western countries, this may be due to various sociocultural attitudes towards the menopausal age in different communities (**Sallam et al., 2016**). The transitional phase that known as peri-menopause and is described as the time leading up to a woman's final menstruation, and the endocrinological, biological, and clinical features of the approaching menopause. The length of this transition is usually about four years, however, 10% of women do not experience this phase and menses may stop abruptly (**Ford, et al., 2018**)

Hormonal changes are more or less similar in all women with menopause because each women's experience is unique and is influenced by age, cultural background, health, and type of menopause. Other women feel that menopause brings a cessation of sexual pleasure and the duration, severity, and effect of these symptoms differ from woman to woman. Some women have severe symptoms that greatly affect their health, social functioning, and quality of life (**Bernis and Reher, 2017**).

During menopause more women, consequently, are spending longer periods and physiological changes take place which causes several health-related conditions such as hot flashes, sweats, diminished memory, insomnia, depression, bone, and joint complaints, and Vasomotor symptoms are the most common physical complaint experienced by the women through menopausal like sleep disturbances, mood alteration, urinary tract infection, vaginal atrophy and increased health risks for several chronic disorders including osteoporosis cardiovascular disease and loss of cognitive function (**Thurston and Joffe, 2019**). In menopause long-term estrogen deficiency, and changes to the cardiovascular or bone that leads to osteoporosis have been established (**Rahman et al., 2017**). Psychological symptoms associated with the menopausal period are fatigue and anxiety and other menopausal symptoms such as sleep turbulences, and weight increase can also occur in non-postmenopausal women (**Greenblum et al., 2018**).

The use of Hormone replacement therapy (HRT) to change ovarian hormone levels and hormonal therapy are excellent for preventing hot flushes, vaginal dryness, and related vaginal symptoms, and may help to improve sleeping patterns during menopause (**Anil, 2013**). Long-term use of HRT also has a benefit in helping to prevent brittle bones (osteoporosis) it will also have a positive effect on bone density, delaying the skeletal loss which occurs after menopause and preventing subsequent osteoporotic fractures, and reducing the incidence of colorectal cancer. (**NICE, 2015**).

The HRT can be provided in the form of tablets, skin patches, gels, or nasal spray. It keeps the vagina more lubricated and also may

prevent the vagina from becoming smaller. Cream pessary or vaginal ring which contains estrogen can also be used for easing symptoms such as hot flushes, vaginal dryness, and urinary discomfort, (**Hamoda et al 2016, Panay et al 2013**).

Menopause is not a disease so the woman can maintain a healthy way before menopause is important. The whole health promotion model includes what a person should do to remain healthy through a holistic approach. And on how much is this person able to channel all the individual characteristics to be able to reach the behavioral outcome as well as health-promoting behavior. Through health promotion, there is an elimination of poor health, burden on the economy, and creation of well-being of individuals thus the good quality of life (**Almeida, et al., 2014**).

As one of the key sources of information, social media platforms are considered the most comprehensively used and easiest accessible devices among users all over the world, because of physical separation practices. More importantly, these tools are very effective to disseminate knowledge and practices concerning diseases or natural disasters (**Gonzalez-Padilla & TortoleroBlanco, 2020**). The value of using social media to deliver care to women during the COVID-19 pandemic especially when people were recently described by, **Watson et al., 2020**, as it is low-cost, and has bidirectional features, which foster communication between people and health care providers in an environment devoid of contamination.

Nowadays, modern technological innovations and methods are employed to restrict disease transmission between people, such as staying at home, limiting access to nursing homes, and avoiding gatherings in public areas (**Masonbrink & Hurley, 2020**). In the aftermath of the COVID-19 lockdown, members of the community are using information technology tools such as social media to raise awareness, educate, and track health-related occurrences (**Kamel Boulos, 2019**). Websites and apps that allow users to generate and share content or participate in social networking are referred to as social media (**Dictionary O Social media Oxford Dictionary, 2019**).

Platforms and communities like Facebook, Whats App, and Facebook Messenger are examples of social media tools that allow several individuals to connect and participate at the same time (**Barrett & Mac Sweeney, 2019**). With over 3.2 billion active users worldwide, the number of individuals utilizing social media is steadily increasing. Users and non-users, age groupings, and demographic demographics all have different perspectives on social media. Because technical progress is related to language and cultural shifts, social media's position is continuously shifting (**Statsita, 2019**). To increase communication speed, disseminate correct information, and encourage understanding of support, therapies, and self-care alternatives, the use of social media in healthcare was becoming more frequent (**Cherak et al., 2020**)

Educating women about menopause may help them to avoid and reduce many adverse emotional and psychological symptoms of menopause and to better equip them when approaching this stage of the life cycle. Knowing more about menopause might empower women to cope better with menopausal changes because a lack of knowledge regarding menopause makes women more frightened when it is time to deal with menopause and this has negative effects on their emotional state and changes women's perceptions of menopause by increasing their knowledge on menopause may cause less emotional disturbance (**Mustafa and Sabir, 2017**).

As the nurse should help women in understanding menopause before, during, and after so that is an important factor in the assessment of their needs (**Pinto, 2017**). And the important role in the education of women about different aspects of menopausal symptoms and problems is that nurses should have the insight into their problems and their preventive measures, and equip the women of reproductive age with the important knowledge when entering menopause because peri- and postmenopausal women need to be well aware of their health status and physical and physiologic changes in advance to accordingly control their mind with positive thinking (**Yum, et al., 2016**).

According to **Okeke et al (2013)**, the information delivered will help in preparing the

woman's expectations realistically as well as understanding the importance of leading a healthier life because The menopausal transition is the most complex time where the woman is at a high risk of (**Hautamäki, 2014**). There is a particular emphasis on certain factors for menopausal women, such as smoking status, diet, and nutrition, exercise, alcohol consumption, weight control, psychological aspects of menopause, reinforcing breast awareness, encouraging attendance for breast and cervical screening, assessing cardiovascular risk, osteoporosis risk assessment, reducing the impact of symptoms (**NICE, 2015**) (**NICE, 2017**).

The role of the nurse specialist in menopause in managing and supporting women with menopause has been defined to take account of the need to facilitate a better understanding and the potential health implications of well-managed menopause among all nurses coming in contact with women, lead and develop specialist menopause services and support these services and ensure they are linked with all areas of care (**RCN, 2017**).

Significance of the study:

COVID-19 in Egypt was detected on February 30, 2020 (**World Health Organization, 2020**) with high transmission efficiency and infectivity. Using social media during COVID-19 is considered a powerful preventive measure to control the spread of this disease. As well, COVID-19 marked the first global pandemic in the age of social media to establish active communications with women and then applied it to improve women's health (**Tangcharoensathien et al., 2020**).

Because it is critical to maintain women's physical and mental health during menopause, health care for women during this time requires extra attention to assess their health needs and provide competent care. To reduce the severity of menopausal symptoms and complications, improving women's awareness and dealing with their health issues is critical. Hence the researcher saw it as important to evaluate the effect of social-platform instructions regarding menopause on middle-aged women's awareness during the Covid-19 outbreak.

Operational definitions:

Social media are web-based communication tools that enable people to interact with each other by sharing and consuming information. Available social media in this article are Mobile phones, Messenger, and WhatsApp (Zhao & Zhang, 2017)

Aim of the study:

To evaluate the effect of social -platform instructions regarding menopause on middle-aged women's awareness during the Covid-19 outbreak through:

1. Assessing the women`s knowledge about menopause pre and post instructions.
2. Assessing the women `s attitude toward menopause pre and post instructions.
3. Assessing the women `s practice regarding menopause pre and post instructions.

Research hypothesis:

Social-platform instruction regarding menopause has a positive effect on middle-aged women's knowledge, practices & attitude during the Covid-19 outbreak

Subjects and Methods**Research design:**

A Quasi-experimental design (pre-post) test was adopted in this study.

Research Setting:

The study was conducted on non-menopausal women in Port Said governorate, Egypt, using an online self-administered questionnaire via Google Form.

Subjects:

A purposive sample of 300 healthy and non-menopausal women obtained from social media such as Facebook and WhatsApp groups who met the inclusion criteria; were between the ages of 35–45, were educated mothers, already use social platforms, and agreed to participate in this study, and all of them took the pre-and post-test. These women completed an online self-administered questionnaire via Google Form that was opened from the beginning of April 2020 to the middle of April 2020 for about 15 days after the lockdown and after the link was closed.

Exclusion criteria:

Women with chronic diseases and not agreed to participate in this study.

Tool of the study:

Tool (1):- Non-menopausal women's demographic data including age, educational level, occupation, residence, and age at menarche.

Tool (2): Women's knowledge regarding menopause, was developed by the researchers after reviewing related literature; (Rahman et al., 2017; Hamoda & Savvas, 2014; Almeida, et al., 2019), including questions to measure knowledge was developed by the researchers and included 26 questions (multiple choice questions) designed in three areas of knowledge regarding definition, symptoms, physical, psychological problem of menopause, complications of estrogen deficiency in the long term, and source of information. The reliability of the tool was confirmed by Cronbach's Alpha test $r = 0.82$.

Scoring system: Scores were used to evaluate women's knowledge about menopause. Questions were scored as followed 1 mark for correct answer and 0 marks for wrong or no answer. The total score of each aspect was score above ($\geq 60\%$) is considered satisfactory and a score less than 60% was considered unsatisfactory.

Tool (3): Women's attitude regarding menopause, was developed by the researchers, it was developed by the researchers after reviewing related literature; (Ford, et al., 2018; Sallam et al., 2016; Nullifier, (2018); Bernis and Reher, 2017, Almeida, et al., 2019). It included 10 items for measuring the attitude toward menopause designed as four-choice (completely agree, agree, completely disagree, and disagree). The total score of each aspect was score above ($\geq 50\%$) is considered a positive attitude and a score less than 50% was considered a negative attitude. The reliability of the tool was confirmed by Cronbach's Alpha test $r = 0.85$.

Tool (4): Women' reported practice regarding menopause for practice measuring and included 3 questions were developed by the researchers, it was developed by the researchers after reviewing related literature; (Rahman et al., 2017; Hamoda & Savvas, 2014; Ford, et al., 2018; Sallam et al., 2016; Nullifier, (2018); Bernis and Reher, 2017, Almeida, et al., 2019), and designed in three areas of practice about some preventive ways of menopausal symptoms and complications. The reliability of the tool was confirmed by Cronbach's Alpha test $r = 0.85$.

Scoring system:

Scores were used to evaluate women's practice regarding menopause. Questions were scored as followed 1 mark for correct answer and 0 marks for wrong or no answer. The total score of each aspect was score above ($\geq 60\%$) was

considered adequate and a score less than 60% was considered inadequate.

Tool (5): Women's satisfaction with social-platform instructions: it included three statements regarding the contents of the social-platform instructions were enough, satisfaction with the social platform instructions, did social-platform instructions improve knowledge, attitude, and practices.

Procedure:

Preparatory phase:

It included reviewing related literature and theoretical knowledge of various aspects of the study using books, articles, the internet, periodical, and magazines to develop tools for data collection. This also helped with the creation of the testing tools and the creation of the video for the social platform instructions.

Tools validity and reliability:

The current study tools were submitted to three academic nursing experts in the obstetric and gynecology nursing field and community health nursing to test the face and content validity of the tools; necessary modifications were carried out according to the academic nursing experts' judgment on the clarity of sentences and the appropriateness of the content. Tools reliability was tested using internal consistency methods (Alpha Cronbach test). Its result was 0.88 which indicates the accepted reliability of the tools.

Pilot study:

It was carried out on 10 % of the women (30 women), for modification and clarification. The designed tool was tested on those women, to evaluate the content of the tools and to estimate the time required to fill in the sheets. Unclear items were clarified, unnecessary items were omitted and new variables were added to determine the length of time needed to collect the data from each woman accordingly modification was done. Women included in the pilot study were excluded from the study.

Ethical consideration:

Before conducting the study, a written permission letter was obtained from the Faculty of Nursing, Port Said City. 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 voluntary nature of participation, declarations of anonymity and confidentiality, and 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.

The Implementation of the study was carried out in three phases (assessment phase, implementation phase, and evaluation phase).

I- Assessment phase:

The researchers explained to the studied women the aim and expected outcomes of the study before collecting data, then asked them to complete the tools. The average time required for the completion of each tool was around 25-30 minutes. The tools used for collecting data were used as pretest tools (tool II, tool III, and tool IV).

II- Implementation Phase:

Data were collected from the beginning of April 2020 to the middle of April 2020 for about 15 days after the lockdown and after the link was closed. The researchers started by introducing themselves and describing the study's nature and goal to the women. 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 outbreak. Before the online films and presentation, each woman was tested using an internet-administered questionnaire as a (pretest) to obtain baseline data. Women were educated about the study's goal and expected outcomes, the tools' contents, and how to answer on the first page of the online questionnaire.

Sessions were performed in the Arabic language to ensure that all study subjects were understood, which included (four theoretical and two practical sessions). The duration of sessions for each theoretical and practical session ranged from 40-50 minutes for three days per week.

The booklet was delivered to women who participated in the pre-test via Google Form via Facebook and WhatsApp groups. The researchers created movies, PowerPoint slides, and posters about menopause to help women understand it better. Furthermore, to increase women's understanding, attitude, and practices during COVID 19 lockdown, the researchers created online videos and audio describing the contents of the booklet.

Evaluating the social platform instruction:

The social platform instructions were evaluated by five experts in the field of obstetric and gynecology nursing field and community

health nursing. The research experts in the fields ensured clarity and appropriateness by reviewing the social platform instructions and contents regarding menopause.

The general objectives of the social platform instruction were to improve middle-aged women's awareness' regarding menopause.

Specific objectives: At the end of the **social platform instruction** the studied women were able to:

- 1- Define menopause.
- 3- List symptoms of menopause.
- 4- Enumerate physical, and psychological problems of menopause.
- 5- List complications of estrogen deficiency in the long term.
- 6- Discuss complications of menopause.
- 7- Apply and discuss preventive ways for menopausal symptoms

III. Evaluation phase:

The questionnaire was re-posted to the participants on the Google Form for collecting after one month of sending the booklet, videos, PowerPoint presentation, and posters (post-test).

Statistical design:

Data collected and analyzed by computer program SPSS" ver. 21" Chicago. The USA. Data expressed as mean, Standard deviation and number, percentage. A person's correlation is used to determine the significance between variables in the same group. N.s $P > 0.05$ no significant, * $P < 0.05$ significant, ** $P < 0.001$ moderate significance and *** $p < 0.000$ highly significance.

Results:

Table (1) demonstrated the demographic characteristics of the study women. It was observed that (60.0%) of women they're aged between 35-and 40 years and their mean age was between 38.13 ± 5.22 . Regarding educational level, it was observed clearly that (64.0%) of the studied women were in secondary education. According to women's occupations, (54%) of them were housewives. Concerning residence, (77%) of the studied women were living in urban areas. It was found that (56%) of women had menarche started at age of $12 < 14$ years and their mean age was between 12.33 ± 2.71 .

Figure (1) showed that the main source of knowledge regarding menopause for 55.0 percent of women was their family members. Other sources of information were television (35.0%),

magazines (10.0%), books (6.0%), and physicians (2.0%).

Table (2): represents the percent distribution of studied women regarding their knowledge about menopause and showed that the majority of the sample knows that Menopause is a normal part of life and the vast majority (93%) of them define menopause as the abrupt cessation of menstruation. Moreover, 83% recognize that during menopause, the majority of women have hot flashes, and less than three-quarters (74%) report that the level of stress and depression feelings increases in menopause women.

Table (3) depicted the percentage distribution of women's knowledge of menopause symptoms, with hot flashes and abnormal menstrual bleeding being reported by a higher number of them (68.0 % & 58 % respectively). Other menopausal symptoms such as vaginal dryness and painful intercourse, night sweats, headaches, and urinary problems, on the other hand, were only known by a small percentage of women.

Table (4) and **Table (5):** Demonstrated frequency and percentage distribution of the studied women's knowledge regarding menopause. It was observed that the highest percentage of the women had satisfactory knowledge regarding menopause in all items post-social platform-instructions implementation than pre-implementation. There was an improvement with a highly statistically significant difference between women's total knowledge regarding menopause pre/post one month of social- platform instructions implementation ($P < 0.001$).

Table (6): revealed women's attitude toward menopause and showed that 89.0% of them was positive and 11.0% had a negative attitude toward menopause post-intervention. For example, more than 79% of the women agreed with the fact that menopause is a usual and natural phenomenon in women's lives, and more than 60% of them menopause is the period of eradicating the problems of menstruation and preventing pregnancy.

Figure (2) clarified the total attitude scores of the women regarding menopause pre and one-month post- social-platform instructions. It observed that 70% of the studied women had a negative attitude toward menopause pre-intervention and declined to become 11% one-month post-intervention. Additionally, 30% of the women had a positive attitude toward menopause

pre-intervention in comparison to 89 % one-month post-intervention.

Table (7): Showed the percentage distribution of the studied women regarding the preventive way of menopausal symptoms and complications that will faced them during menopause and the same table illustrated that an improvement with a highly statistically significant difference was detected between women's practical knowledge regarding menopause pre/post one month of social-platform instructions implementation ($P<0.001$).

Figure (3) clarified the total practices score of the studied women pre and one month post-intervention. It was noticed that majority of the studied women (78%) had inadequate practices toward menopause pre-social platform-instructions intervention and decreased to become 13% one-month post-social platform-instructions intervention. Reversely, 22% of the studied women had adequate practices regarding

menopause pre-intervention compared to 87 % one-month post-intervention.

Table (8): Represented correlation between the studied women's total knowledge level, practice, and attitude level pre and post social -platform instructions implementation; there is a highly negative correlation between women's knowledge and attitude level pre and post social -platform instructions ($r=0.553$ & $P=0.003$ & $r=0.613$ & $P=0.000$ respectively). Also, there is a correlation between women' practice and attitude level pre and post social -platform instructions with statistically significant difference ($r=0.343$ & $P=0.024$ & $r=0.464$ & $P=0.007$ respectively).

Table (9): Showed that all of the studied mothers (100%) reported that the content was enough and (98 %) of them were satisfied with social platform instructions. Concerning its effect on knowledge, attitude, and practices (94%) of them reported that it improved their knowledge, attitude, and practices.

Table (1): Percentage distribution of the studied women according to their demographic characteristics (N=300)

Demographic characteristics	No.	%
Women's age in years		
- 35 < 40	180	60.0
- 40 < 45	120	40.0
Mean \pmSD	38.13 \pm 5.22	
Women ' education		
-Primary education	57	19.0
-Secondary education	138	46.0
-University education	105	35.0
Women ' occupation		
-Employee	138	46.0
-Housewife	162	54.0
-Residence		
-Rural	69	23.0
-Urban	231	77.0
Age of menarche		
-Before 12 years	90	30.0
-12<14	168	56.0
-14<16	42	14.0
Mean \pmSD	12.33 \pm 2.71	

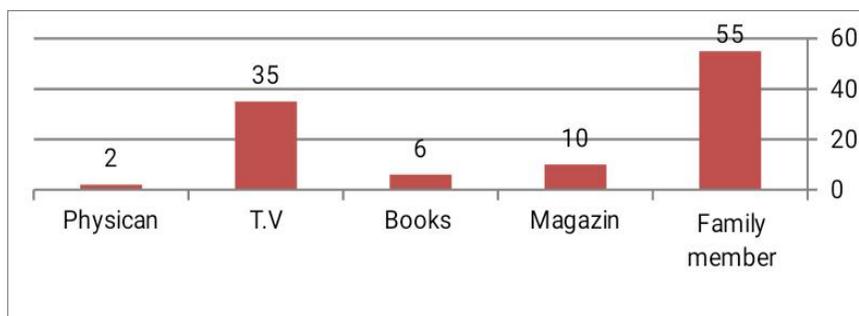


Figure (1): Percentage distribution of the studied women regarding sources of women's knowledge about menopause

Table (2): Percentage distribution of the studied women regarding their knowledge about menopause (n=300)-

Women ' knowledge	No	%
- Menopausal definition		
1-Menopause is a normal part of life.	273	91
2-Menopausal age occurs between the ages of 48 and 55.	126	42
3-Menopause is the abrupt cessation of menstruation.	279	93
4-Irregular menstruation is a symptom that the menopausal phase has begun.	96	32
5-Are there any elements that influence when a woman reaches menopause?	39	13
6-What factors can cause a woman to enter menopause earlier than expected?	9	3
7-Pregnancy prevention is required for the first year following the cessation of menstruation.	162	54
8-Menopause symptoms can be avoided and treated.	72	24
Menopausal physical and psychological symptoms:		
1-Back pain is the most common cause of vertebral fractures.	78	26
2-Women's skin thickens and wrinkles throughout menopause.	165	55
3-During menopause, the majority of women have hot flashes.	249	83
4-Menopause causes urine frequency and dysuria.	42	14
5-Menopause women's intercourse is painful.	69	23
6-Women gain weight during menopause.	114	38
The menopausal complication of estrogen deficiency in the long term:		
1-Women in menopause suffer sleep problems.	57	19
2-Diabetes is more prevalent in menopause.	66	22
3-Heart disease is more prevalent with menopause.	15	5
4-Sexualities in postmenopausal women change	18	6
5-When a woman reaches menopause, her stress and depression levels rise.	222	74
During menopause, the bones become weaker.	18	6
7-Osteomalacia in women is caused by menopause.	51	17
8-In women, menopause reduces genital infections.	99	33
9-Vaginal dryness and painful sexual intercourse are symptoms of menopause.	72	24
10-Women's focus and memory are affected by menopause.	162	54
11-Menopause causes women's skin to dry up and shrivel.	132	44
12-Menopause is linked to a variety of cancers in women.	72	24

Table (3): Distribution of the studied women regarding their knowledge about symptoms of menopause (N=300)

Menopause Symptoms Experiencing	Number	Percentage
-Hot flashes	204	68.0
-Vaginal dryness	30	10.0
-Painful intercourse	15	5.0
-Difficulty concentrating	27	9.0
-Depression	24	8.0
-Headache	27	9.0
-Memory loss	36	12.0
-Feel as if insects are crawling all over my skin	15	5.0
-Lower backache	21	7.0
-Sweating during the night (night sweats)	24	8.0
-Urinary problems	18	6.0
-Weight gain	63	21.0
-Mood swings	48	16.0
-Heart palpitations	30	10.0
-Irregular menstruation and bleeding	174	58.0
- Other :		
1- Recurrent fatigue	18	6.0
2- Exhaustion	12	4.0

Table (4): Frequency and percentage distribution of the studied women's knowledge regarding menopause pre & post-social-platform instructions (N= 300).

Women's knowledge about menopause	No =(300)				P-value
	Pre social platform instructions implementation		Post social platform instructions implementation		
	No	%	No	%	
Definition of menopause	99	33	270	90	<0.001*
Symptoms of menopause	126	42	267	89	<0.001*
The physical, psychological problem of menopause	69	23	249	83	<0.001*
Complications of estrogen deficiency	57	19	252	84	<0.001*

***highly significant at 0.001 levels**

Table (5): Frequency and percentage of the total knowledge of the studied women regarding menopause pre & post-social-platform instructions (N= 300).

Total knowledge	Pre social -platform instructions implementation		Post-social-platform instructions implementation		T	P-value
	No	%	No	%		
Satisfactory	66	23.0	288	96.0	35.045	<0.001*
Unsatisfactory	231	77.0	18	6.0		

(*) Statistically significant at $P \leq 0.05$

Table (6): Frequency and percentage distribution of the studied women regarding their attitude toward menopause post-social-platform instructions implementation

Women's attitude toward menopause	Complete agree		Agree		Complete disagree		Disagree	
	No	%	No	%	No	%	No	%
1-Menopause is the period of woman's loneliness	60	20	225	75	6	2	9	3
2-Menopause is the period of eradicating the problems of menstruation and preventing pregnancy	75	25	180	60	36	12	9	3
3-Woman's menopause decreases their husband's sexuality	54	18	150	50	87	29	9	3
4-Every woman can care for herself through training and the necessary tendency	84	28	117	39	75	25	24	8
5-In the menopause period, interest and attention of a woman to her husband decreases	18	6	177	59	69	23	36	12
6-Menopause is the beginning of the period of women's disablement	90	30	21	7	120	40	69	23
7-Menopause decreases the grace of a woman's appearance	72	24	168	56	57	19	27	9
8-Menopause is a usual and natural phenomenon in women's life	66	22	150	50	69	23	15	5
9-Woman's life during the menopause period is more delightful than before menopause	111	37	144	48	48	16	12	4
10-Menopause is the beginning of another life and the second maturity of women	36	12	174	58	60	20	30	10

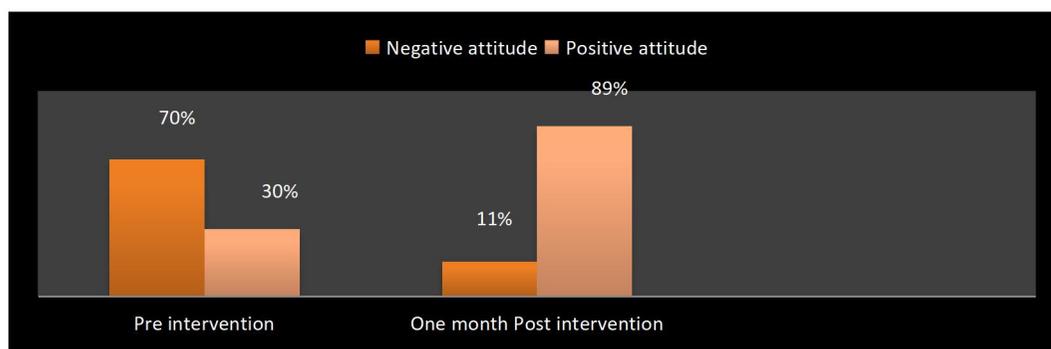
**Figure (2):** Frequency and percentage of the total attitude of the studied women toward menopause pre & post-social -platform instructions (N= 300).

Table (7): Frequency and percentage distribution of the studied women regarding their practical knowledge about preventive ways of menopausal symptoms and complications pre & post-social-platform instructions (N= 300).

Preventive ways of menopausal symptoms and complications	Pre social- platform instructions implementation			Post social platform instructions implementation		P-value
	Done	Not done	I don't know	Done	Not done	
	(%)	(%)	(%)	(%)	(%)	
a. For reducing hot flush						
1. Avoid hot and crowded places	44.0	26.4	29.5	84.0	16.0	<0.001*
2. Wearing several thin shirts in winter	15.0	75.0	10.0	78.0	12.0	<0.001*
3. Having deep breathes during hot flushes	33.0	47.0	20.0	63.0	37.0	<0.001*
b. Reducing the other complication						
2. Adequate sleep and daily activities	62.0	23.0	15.0	97.0	3.0	<0.001*
3. Study and meditation (improving the memory)	0.0	0.0	100.0	34.0	66.0	<0.001*
4. Applying lubricating creams during intercourse (to reduce dyspareunia)	10.0	40.0	50.0	65.0	35.0	<0.001*
5. Consuming milk, yogurt, and cheese (for bones health)	84.0	1.0	15.0	96.0	4.0	<0.001*
6. Regular exercising (for bones health)	9.0	80.0	11.0	70.0	30.0	<0.001*
7. Taking calcium tablet or syrup (for bones health)	36.0	32	32.0	67.0	33.0	<0.001*
8. keeping a suitable weight to decrease heart disease rate	56.0	30.0	14.0	76.0	24.0	<0.001*
c. Routine checkups						
1. Of breast cancer and the early recognizing	11.0	79.0	10.0	71.0	29.0	<0.001*
2. General medical examination (every 5 years)	2.0	82.0	15.0	82.0	18.0	<0.001*
3. Pap smear and pelvis examination	10	67.0	23.0	88.0	12.0	<0.001*
4. Visiting doctors in the case of having bleeding	88.0	7.0	5.0	92.0	8.0	<0.001*

(*) Statistically significant at $P \leq 0.05$

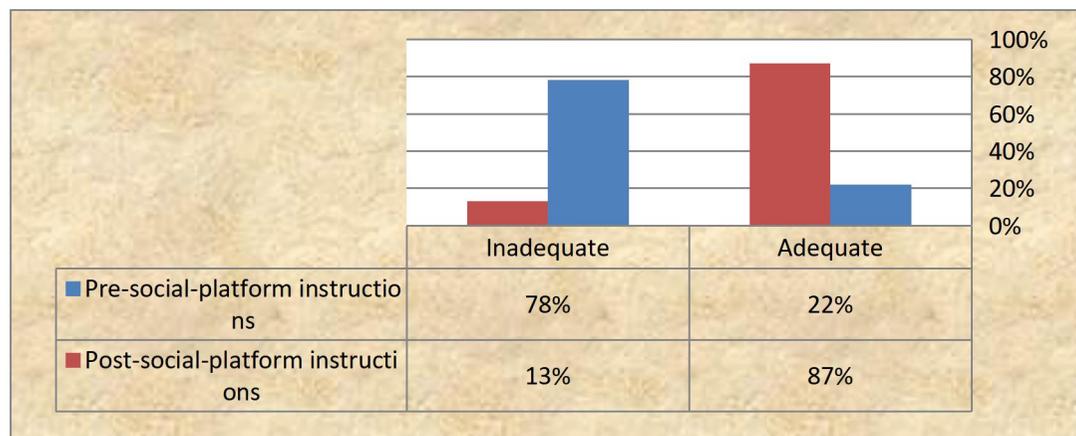
**Figure (3):** Frequency and percentage of the total practice of the studied women regarding menopause pre & post-social-platform instructions (N= 300).

Table (8): Correlation coefficient between total studied women's knowledge, practice scores, and their attitude pre and post-one-month of social-platform instructions implementation regarding menopause.

Items	Total women's attitude level			
	Pre social -platform instructions implementation		Post social -platform instructions implementation	
	R	P	r	P
- Total women' knowledge level	0.553**	0.003	0.613	0.000
- Total women' practice level	0.343*	0.024	0.464**	0.007

**correlation is significant at < 0.01 level (1-tailed)

*correlation is significant at the < 0.05 level (2-tailed).

Table (9): Frequency and percentage distribution of the studied women regarding women's satisfaction with social-platform instructions

Women's satisfaction with social-platform instructions	No	%
Content was enough		
- Yes	300	100%
- No	0	0.0
Satisfaction with the social-platform instructions		
- Yes	294	98%
- No	6	2%
Did social-platform instructions improve knowledge, attitude, and practices?		
- Yes	282	94%
- No	18	6%

Discussion:

It is expected throughout the world that most women will live through menopause. Therefore, they should know the health effects of menopause and its prevention **Bakouei et al., (2013)**. The main role of nurses is to provide comprehensive health care to women and they must bring newer strategies to help promote the women and support the development of health and well-being because when there is no menstrual period continuously for 12 months it can be declared menopause (**Kesson and Alicja, 2015**).

It must be noted that menopause is considered the end of the fertility period and occurs between the age of 40 to 60 and when women think about menopause, it causes anxiety, so the women needed a health awareness program to cope with a menopausal period (**Moilanen et al., 2012**). The coronavirus pandemic of 2020 is the first global health crisis in the age of social media.

The results indicated that social-platform instructions were effective in improving women's knowledge, attitude, and practices regarding menopause during the Covid-19 outbreak. So, the study aimed to evaluate the effect of social-platform instructions regarding

menopause on middle-aged women's awareness during the Covid-19 outbreak.

The results clarified that more than half of women reported that their family member was the main source of information about menopause. This result was in the same line with results conducted by **Entisar et al., (2015)** who found that knowledge about menopause was commonly learned from family members as they mostly obtained their information from their family members, not doctors that are why they are more familiar with these symptoms.

Similarly, this result disagrees with the study conducted by **Ensieh et al., (2014)** who reported that the majority of the women had gained information about menopause from friends, and agree also with a study conducted by **Shivraj et al., (2018)** who found that the main Source of awareness about menopause in his study was through TV. And also results by **Chung et al., (2012)** who examine " Changing Korean menopausal women's awareness on hormone therapy " and noted that women obtained their information about menopause through various sources, and mass media has been greater role, And was in disagreement with **Wong and NurLiyana (2017)** who reported in their a study about " A Survey of Knowledge and perception of menopause among young to middle-aged women in federal

territory, Kuala Lumpur, Malaysia " that the most common sources of information about menopause were reading materials (magazines, books) and families. And (Pinto, 2017) conducted a study entitled " A Study on Knowledge and Attitude Regarding Menopause among Rural and Urban Married Women in Mangalore " and found that little information was obtained from medical sources.

Concerning the level of knowledge regarding menopause, the present study showed that the highest percentage of the women had satisfactory knowledge regarding menopause in all items post-social platform instructions implementation than pre-implementation. From the researchers' point of view, this reflects the importance and effectiveness of social platform instructions implementation that is commonly associated with improving knowledge and a better understanding of menopause among the studied women.

This result was consistent with the results conducted in Iran and a study conducted in Tehran and showed that women's knowledge about menopause is weak and is similar to Patel et al., (2014) who evaluate " Effectiveness of structured teaching program on knowledge regarding menopausal symptoms and its management among women " and found that women had insufficient information about menopause and they need to be encouraged to participate in the health education program to increase their knowledge and practice.

And also the result is in agreement with results conducted by Shivraj et al., (2018) that studied "Knowledge, attitude and experiences of menopause in the postmenopausal women at a tertiary care center" and observed that majority of women did not have any knowledge about menopause. This means that women need to be educated properly by implementing social platform instructions implementation regarding menopause to improve their awareness of menopause and how to handle it properly when they have menopausal symptoms.

This finding is not in the same line as the study conducted by Ensieh et al., (2014) entitled "Knowledge and attitude toward menopause phenomenon among women aged

40–45 years" and reported that women's knowledge was moderate in the majority of them and about one third had good knowledge and only less than ten percent had weak knowledge. So, women need counseling about menopause to increase their satisfaction and provide healthy living and the awareness of menopause management and operation of nursing intervention are thought to be crucial. The structured teaching program was found to be an effective strategy to increase the knowledge of women regarding menopausal symptoms and their management Patel et al., (2014).

The current study revealed that women's knowledge about some symptoms of menopause, such as hot flashes or abnormal menstrual bleeding, was high. For example, more than two-thirds of them know about hot flashes and more than half of the women knew that irregular menstruation and menopausal bleeding disorder are one of the main symptoms of menopause. Also, knowledge about other menopausal symptoms such as vaginal dryness and painful intercourse, sweating during the night (night sweats), headache and urinary problems was low, These results were in accordance with the results conducted by Ensieh et al., (2014) who noted that women' knowledge about symptoms of menopause, such as hot flashes or abnormal menstrual bleeding, was high. For example, the majority of the women knew that menopausal bleeding disorder is one of the main symptoms of menopause and most of them introduced hot flashes as one of the obvious symptoms of menopause.

Moreover, this result is supported by the study conducted by Anjum et al., (2013) who did a study about "Awareness and perception of menopause in Pakistani women " and found that common symptoms were experienced by menopausal women were hot flashes and night sweats. Also, studies conducted by Rahman et al., (2017) who assess the menopausal symptoms using modified Menopause reported that the common symptoms of menopause are hot flashes and or night sweats, trouble sleeping, and vaginal dryness. So that women need to know solutions and management about the menopausal problem and reduce menopausal symptoms That will help those

who are in middle age to be oriented on how to manage properly menopausal symptoms once reached menopausal age.

Regarding the attitude of the studied subject towards menopause, it is evident that the majority of the studied women had a positive attitude toward menopause; these results are in agreement with **Ensieh et al., (2014)** who found that the majority of women had a positive and only less than one fifth had a negative attitude toward menopause. On the other hand, the results of the current study were in disagreement with that conducted by **Kim et al., (2014)** who examine " Association between physical activity and menopausal symptoms in perimenopausal women " and noted that women's attitudes towards menopause were negative because of the loss of sexuality and attractiveness. This result was in the same line as the study conducted by **Eun et al., (2014)** who studied "Menopause Knowledge, Attitude, Symptom, and Management among Midlife Employed Women" and found nearly the same results.

Results of the current study highlighted that less than one-third of the studied women had a positive attitude toward menopause pre-intervention in comparison to the majority of their one-month post-social platform instructions. This reflects the effectiveness of the message provided by the different media platforms in changing the faulty beliefs of women regarding menopause. This indicated that the social platform instructions method introduced by the researchers causes an improvement in women's attitudes about menopause than before the intervention.

The current study revealed that there was an improvement with a highly statistically significant difference detected between women's practical knowledge regarding menopause pre/post one month of social platform instructions implementation. From the researchers' point of view, it reflected the positive impact of social platform instructions in improving women's practices. These confirmed the effective modifications in the women's practices that reflected the success of the main goals of the implementation of the social platform instructions.

The current study revealed that most women have no prior information concerning the prevention way of menopausal symptoms and complications; this–result is in the same line with the results conducted by **Entisar et al., (2015)** who found that forty-four of the women had a poor level of knowledge about preventive health behavior and management of menopause and improved post-intervention.

The present study illustrated that there was a positive correlation ($P=0.000$) between women's knowledge scores and their practice post one month of social platform instructions implementation regarding menopause. This reflected the importance of improving women's knowledge and practices to help them learn and acquire good knowledge and apply it. This association is explained that when women had sufficient knowledge that can help them practice well which is reflected in their attitude.

The findings of the present study have supported the aim and hypothesis of the study and the knowledge, attitude, and practices among the studied women have improved. From the researchers' point of view, this is reflected in the success of social platform instructions implementation and its positive effects. Also, reflects the importance and effectiveness of introducing those instructions for the studied women regarding menopause that are associated with improving practice.

The findings of the present study showed that all of the studied mothers reported that the content was enough and was satisfied with social platform instructions. This is reflected in the simplicity of the content of social platform instructions.

Conclusion:

Based on the findings of the current study, aim, and hypotheses, it was concluded that the effect of social-platform instructions regarding menopause on middle-aged women's knowledge, attitude, and practices during the Covid-19 outbreak was positive.

Recommendations:

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

- The in-service continuous, educational program should be imparted to women.

Further research, and emphasis needed to be given through workshops and seminars about menopause.

- More research is needed to clarify the importance of social media-based nursing guidance to improve the level of knowledge, attitude, and practices during the Covid-19 outbreak.
- To prepare women for menopause a well-informed continuous, education program should be imparted to the women.
- Further, emphasis also needs to be given through workshops and seminars on menopause. And provide verbal and written instructions about menopause.
- Further research about coping strategies to overcome menopausal problems.
- Counseling activities of premenopausal women need to be generalized and facilities should be available to those who need them.
- It is important to encourage cooperation between educational institutions, medical care providers, and health personnel to educate women about menopause, its symptoms, long-term consequences, and treatment options that may be a combined effort by educational programs and health care providers that will help in increasing awareness.
- Replication of the current study on a larger probability sample is recommended for generalized results.
- A simplified illustrated booklet regarding menopause should be available to women as a reference.

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