



Post Abortion Women's Life Style Items: Impact of Counseling Based on PLISSIT Model

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Abstract

Background: Pregnancy loss adversely affects women's psychological health, resulting in challenges like hospitalization and lifestyle adjustments. Issues such as poor nutrition, smoking, sleep disturbances, and emotional difficulties are prevalent among women post-abortion, highlighting the need for lifestyle counselling. Additionally, high alcohol and sugar consumption is linked to negative reproductive health outcomes, impairing oocyte quality and implantation rates.

Aim: The current study was conducted to evaluate the effect of post abortion women's life style items after implementation of counselling based on PLISSIT model. conducted to evaluate the impact of counselling based on PLISSIT model on post abortion women's life style.

Subjects & Methods:

Design: A quasi-experimental (pre- and post-test) research design was used.

Sample & Settings: A convenient sample of 92 women who had abortions affiliated obstetrics & gynecology unit at Beni-Suef University Hospital.

Tools: (1) A Structured Interview Questionnaire. (2) Women's lifestyle after abortion. (3) Supportive material (Arabic booklet). (4) Post-Abortion Counselling Based on the PLISSIT Model.

Results: presented that; 72.8% of the studied women were always exposed to passive smoking after abortion during pretest which improved to 79.3% of them weren't exposed to passive smoking after abortion during post-test. Pre-counselling; 67.4% & 65.2% & 58.7% of studied women were always; eating foods contains too much salt, engaged in vigorous work, and take medications without consulting doctor which improved to 21.7% & 21.7% & 17.4% post-counselling, respectively. Moreover, 62% & 47.8% & 59.8% of the studied women were always sleep in the wrong positions, feel anxious or lonely after abortion, and feel pain during intercourse after abortion pre-counselling which improved post-test to 16.3% & 16.3% & 15.2% post-counselling, respectively.

Conclusion: There was a statistically significant improvement among the studied women regarding smoking and alcohol, nutritional, weight and exercise, personal habits, sleeping, spiritual habits and relationships, and sexual intercourse.

Recommendations: Developing strategies to facilitate women's understanding and support life style adjustments after abortion by applying this study to a large sample in inpatient and outpatient departments.

Keywords: Abortion; Life Style; Counselling; PLISSIT Model

Introduction

Pregnancy loss is a traumatic event that can lead to psychological health disorders. It encompasses the experience of loss and medical issues, resulting in pain, hospitalization, social role limitations, decreased security, and lifestyle changes for women [1].

Lifestyle refers to the way of living for individuals and societies, shaped by various geographical, economic, political, cultural, and religious factors [2-7]. Understanding lifestyle and identifying its detrimental influences can help develop strategies to enhance service delivery and community quality of life [8-11]. Specifically, women post-abortion faces significant challenges, making lifestyle counselling crucial. Concerns include the impact of food habits, blood loss, smoking, sleep

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issues, inadequate family planning, and emotional health on these women [12-15]. Lifestyle factors and nutritional habits, such as the consumption of alcohol, refined sugar, and artificial sweeteners, have been positively associated with the incidence of several oocyte dimorphisms and negatively associated with ovarian stimulation response and embryonic development [16-19]. Negative relationships were also observed between these habits and clinical outcomes, except for the miscarriage rate, where positive relationships were observed. Significant negative dose-dependent relationships exist between these habits and implantation rates [20].

Counselling is an essential rule maternity nursing that affect women's life span. It has several models [21-25]. Counselling on post-abortion care is essential in reproductive health, utilizing structured models like the PLISSIT model (Permission, Limited Information, Specific Suggestions, Intensive Therapy) to support informed decision-making [26]. This model effectively addresses women's psychological, emotional, and social concerns post-abortion, helping to reduce complications and improve knowledge and emotional adaptation [26-27]. This model can be applied whenever appropriate and in various situations. Previous studies have demonstrated that the PLISSIT model had positive effects on individuals at different life stages and under different circumstances, improving their post-abortion functions. This suggests that the structure and features of the model can be highly effective in addressing post-abortion issues [28].

A nurse should assist women in making decisions, solve problems, and take the necessary action during in-person counselling. Addressing and resolving problems that are creating emotional distress or discomfort for women is the goal of counselling [29-31]. It can give people a regular, safe place to talk about and work through challenging emotions [32-36]. The purpose of the counsellor is to respect and encourage women's views [37-39]. Typically, women will assist in gaining their own grasp of the issues rather than offering advice [40]. The nursing process for women after an abortion involves assessing, planning, implementing, and evaluating care to ensure the woman's physical and emotional well-being [41].

1. Assessment: The initial assessment of a woman's health involves data collection to identify risks, including evaluation of physical health for complications like bleeding and infection, emotional health, and medical history. In cases of significant bleeding, the woman should be positioned on her side and monitored for contractions and fetal heart rate, alongside vital signs and renal function checks. Assessing blood loss and saving used pads for analysis are important, as is evaluating the woman's support system and discussing family planning to prevent unintended pregnancies [42-43].

2. Planning: The nurse collaborates with the woman to create a care plan that enhances recovery and addresses both emotional and physical health needs. This includes preventing infection and complications, managing pain through various methods, facilitating emotional healing via counselling, and educating on post-abortion care, complications warning signs, and contraception [44].

3. Implementation: Interventions in the care plan include administering prescribed medications (antibiotics, pain relievers), monitoring vital signs, and checking for complications like infection or excessive bleeding. Emotional support involves creating a safe space for the woman to express feelings and referring her for counselling. Education on post-abortion care covers signs of infection and bleeding and advises on seeking medical help. It also

discusses contraception options and ensures follow-up appointments are scheduled to monitor recovery and address concerns [45].

4. Evaluation: The evaluation focuses on restoring maternal blood volume and stopping bleeding. The nurse monitors physical recovery, identifies complications such as infection, and assesses emotional coping. Furthermore, the nurse provides information on post-abortion care, contraception, and follow-up requirements to ensure comprehensive support for women [46].

Aim of the Study

The current study was conducted to evaluate the effect of post-abortion women's life style items after implementation of counselling based on PLISSIT model

Subject and Method

Research design: A quasi-experimental (pre- and post-test) research design was used in this study.

Setting: The current study was conducted at the post-natal unit, which is affiliated with the department of obstetrics and gynecology at Beni-Suef University Hospital.

Subjects:

Sample type and size: A convenient sample of 92 women who had abortions in the previously mentioned setting.

Tools of data collection: Data were collected using the following tools:

Tool I: A Structured Interview Questionnaire

This questionnaire was designed by the researcher based on reviewing related literature, and it was written in simple Arabic. It consists of socio-demographic data and general characteristics.

Tool II: Women's lifestyle after abortion

This tool was adapted from *Ramadan et al. (2021)* and was used to assess women's lifestyles post-abortion after being translated into Arabic by the researcher. It consists of (48) items and reflects (7) parts [32]:

Part 1: Smoking and alcohol, such as smoking during the pregnancy, being exposed to passive smoking during pregnancy, smoking after abortion, and being exposed to passive smoking after abortion.

Part 2: Nutritional lifestyle: drinking carbonated (soda) drinks like cola that contain preservatives and drinking too much caffeine and tea.

Part 3: Weight and exercise lifestyle: I keep my ideal body weight after abortion by walking at least 30 minutes per day and doing hard work such as moving furniture.

Part 4: Personal habits such as wearing high heels and not comfortable shoes, wearing cotton and wide clothes, and using too-hot water baths.

Part 5: Sleeping: Take medications for sleep after abortion, take a day nap, wake up a lot at night, and find it difficult to go back to sleep.

Part 6: Spiritual habits and relationships as regular in praying, keep a good relationship with my friends after the abortion, and receive psychological and social support from my family after the

miscarriage.

Part 7: Sexual intercourse as practice: practice sexual intercourse normally after abortion, practice vigorous sexual intercourse after abortion, and use safe topical medical preparations (cream) or medicinal herbs during sexual intercourse after abortion.

Tool III: Supportive material (Arabic booklet)

A booklet was developed by the researcher to provide comprehensive knowledge and information to women about abortion to raise awareness about the post-abortion period. It includes all the counseling offered to women to improve women's lifestyles, overcome unhealthy habits, and understand all the tips for a faster physical, psychological, and emotional recovery, aiming to enhance women's lifestyles after abortion.

Tool IV: Post-Abortion Counseling Based on the PLISSIT Model

This program, developed in Arabic, focuses on counseling women post-abortion using the PLISSIT model [47-49]. It covers the definition, signs and symptoms, causes, risk factors, types and complications of abortion, as well as management and lifestyle considerations after an abortion.

Tool validity: Face and content validity of the tools were confirmed by five maternal and newborn health nursing experts from Beni-Suef University's faculty of nursing and faculty of medicine. These experts evaluated the tools for clarity, relevance, comprehensiveness, simplicity, and applicability, leading to minor modifications and the finalization of the forms.

Reliability: In the present study, reliability was tested using Cronbach's alpha coefficients for women's lifestyle after abortion, which was 0.773.

A pilot study: 10% of the sample size (9 women after an abortion) participated in a pilot study to evaluate the tools' usefulness, comprehensibility, and effectiveness. No changes or improvements were made based on the pilot study's findings, and the ladies were added to the study's actual sample.

Ethical considerations: The study received ethical approval (approved number: FMBSUREC/03102023) from the Beni-Suef Scientific Ethical Committee. Participants were informed about the study's objectives, guaranteed anonymity and confidentiality, and were made aware of their voluntary participation and right to withdraw at any time.

Administrative design: The dean of Beni-Suef University's nursing faculty dispatched official letters to the hospital manager to secure clearance. These letters detailed the study's title and purpose, along with its primary data items and anticipated outcomes.

Statistical design

Statistical analysis was conducted using SPSS version 26, presenting qualitative data as percentages and quantitative data with means and standard deviations. Significance was assessed using the chi-square test for qualitative features and the student's t-test for quantitative data, with P-values below 0.05 deemed significant and below 0.001 highly significant. Pearson correlation was employed for correlation analysis.

Field work

A) Preparatory phase:

The study involved a literature review and the development of data collection and post-abortion counseling tools based on the PLISSIT model. Following approval from the Dean of the Faculty of Nursing and the Manager of Beni-Suef University Hospital, the researcher interviewed women in the post-natal unit, explaining the study's aim and obtaining oral consent. Data collection took place over six months, from mid-February 2024 to mid-August 2024, with the researcher present in the post-natal unit three days a week.

B) Planning phase:

The researcher planned and determined the suitable time for providing and explaining post-abortion counselling based on the PLISSIT model for each woman. Once the initial assessment was finished, the researcher planned the sessions and implemented the study

C) Implementation (Intervention) Phase:

The intervention involved interactive sessions for each woman individually, and the sessions were conducted for 45 minutes to one hour in the waiting area of the post-natal unit.

D) Evaluation phase:

The researcher evaluated the effect of post-abortion counseling based on the PLISSIT model on women's lifestyles in a post-test (four months from the application of the PLISSIT model) using the same two tools through video call, Zoom, or home visits.

The preprogrammed format was repeated again to measure the effect of post-abortion counseling on women's lifestyles. (This phase took a month).

Results

Table (1) presents that; around three quarters (72.8%) of the studied women were always exposed to passive smoking after abortion during pretest which improved to 79.3% of them weren't exposed to passive smoking after abortion during post-test. There was a statistically significant improvement among the studied women regarding smoking and alcohol life style after abortion post-test at p value ≤ 0.01 .

Table (2) presents that, more than two-thirds (67.4%) of the studied women were always eat foods contains too much salt which improved to 21.7% post-test. There was a statistically significant improvement among the studied women regarding nutritional life style after abortion post-test at (p value ≤ 0.05).

Table (3) presents that, around two-thirds (65.2%) of the studied women were always engaged in vigorous work which improved post-test to 21.7%. There was a statistically significant improvement among the studied women regarding weight and exercise after abortion post-test (p value ≤ 0.05).

Table (4) presents that, more than half (58.7%) of the studied women were always take medications without consulting doctor which improved post-test to 17.4%. There was a statistically significant improvement among the studied women regarding personal habits after abortion post-test (p value ≤ 0.05).

Table (5) presents that, less than two-thirds (62%) of the studied women were always sleep in the wrong positions which improved post-test to 16.3%. There was a statistically significant improvement among the studied women regarding sleeping post-test (p value

Table 1: Percentage distribution of the studied women regarding to their smoking and alcohol life style after abortion.

Smoking and alcohol	Pretest						Posttest						X ²	p value
	Always		Sometimes		Never		Always		Sometimes		Never			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
I smoked during pregnancy	4	4.3	10	10.9	78	84.8	0	0.0	2	2.2	90	97.8	12.434	0.000**
I exposed to passive smoking during pregnancy	64	69.6	16	17.4	12	13.0	9	9.8	12	13.0	71	77.2	11.808	0.002**
I smoke after abortion	7	7.6	10	10.9	75	10.9	4	4.3	9	9.8	79	85.9	8.961	0.004**
I exposed to passive smoking after abortion	67	72.8	16	17.4	9	9.8	8	8.7	11	12.0	73	79.3	10.507	0.003**
I drank alcohol during previous pregnancy	0	0.0	0	0.0	92	100.0	0	0.0	0	0.0	92	100.0	-	-
I drink alcohol now after abortion	0	0.0	0	0.0	92	100.0	0	0.0	0	0.0	92	100.0	-	-

* Statistically significant at p≤0.05

** High statistical significant at p≤0.01

Table 2: Percentage distribution of the studied women regarding to their nutritional life style after abortion.

Nutritional lifestyle	Pretest						Posttest						X ²	p value
	Always		Sometimes		Never		Always		Sometimes		Never			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
I drink cola & drinks that contain preservatives	65	70.7	12	13.0	15	16.3	21	22.8	17	18.5	54	58.7	11.948	0.018*
I drink too much caffeine & tea	61	66.3	14	15.2	17	18.5	23	25.0	22	23.9	47	51.1	14.208	0.007**
I drink enough water, warm fluids or fresh juice	21	22.8	17	18.5	54	58.7	49	53.3	24	26.1	19	20.7	15.058	0.005**
I eat meat & poultry with intent or half-cooked	49	53.3	15	16.3	28	30.4	17	18.5	14	15.2	61	66.3	10.721	0.030*
I eat seafood	20	21.7	13	14.1	59	64.1	45	48.9	26	28.3	21	22.8	13.584	0.009**
I eat fast food	59	64.1	21	22.8	12	13.0	25	27.2	20	21.7	47	51.1	18.166	0.001**
I eat foods contains much salt	62	67.4	10	10.9	20	21.7	20	21.7	18	19.6	54	58.7	14.317	0.006**
I eat foods high in protein, minerals & carbohydrates	27	29.3	20	21.7	45	48.9	57	62.0	16	17.4	19	20.7	15.696	0.003**
I eat foods high in fats	49	53.3	18	19.6	25	27.2	19	20.7	17	18.5	56	60.9	13.838	0.006**
I am keen to eat vegetables and fruits	28	30.4	24	26.1	40	43.5	49	53.3	22	23.9	21	22.8	15.926	0.003**

* Statistically significant at p≤0.05

** High statistical significant at p≤0.01

Table 3: Percentage distribution of the studied women regarding to their weight and exercise life style after abortion.

Weight and exercise	Pretest						Posttest						X ²	p value
	Always		Sometimes		Never		Always		Sometimes		Never			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
I am keen to keep ideal body weight after abortion	7	7.6	16	17.4	69	75.0	56	60.9	17	18.5	19	20.7	14.577	0.008**
I am waking at least 30 min per day	12	13.0	13	14.1	67	72.8	48	52.2	23	25.0	21	22.8	9.835	0.043*
I do hard work (moving furniture, carrying weights)	56	60.9	15	16.3	21	22.8	18	19.6	20	21.7	54	58.7	15.624	0.004**
I am engaged in vigorous work	60	65.2	18	19.6	14	15.2	20	21.7	15	16.3	57	62.0	18.068	0.001**

* Statistically significant at p≤0.05

** High statistical significant at p≤0.01

≤0.05).

Table (6) presents that, less than half (47.8%) of the studied women were always feel anxious or lonely after abortion which improved post-test to 16.3%. There was a statistically significant improvement among the studied women regarding spiritual habits and relationships post-test (p value ≤0.05).

Table (7) presents that, more than half (59.8%) of the studied women were always feel pain during intercourse after abortion which improved post-test become 15.2%. There was a statistically significant improvement among the studied women regarding sexual intercourse post-test (p value ≤0.01).

Discussion

In order to increase the quality of prenatal and postnatal care,

which offers support and information to expectant and postpartum women, maternity nurses are essential. In addition, the nurse can offer psychosocial services such as counselling, health education, assessment, and appropriate referral in addition to health promotion [50–67].

Life Style-Associated Factors to abortion that are many factors related lifestyle that's leads to abortion. Choosing a lifestyle after an abortion can be difficult for many women. While unintended pregnancies may bring some relief, more commonly, women experience emotional loss, despair, shame, and anger. Nurses must be mindful of these feelings, even when women do not express them or seem indifferent [58-63].

Concerning women's lifestyle after abortion, the discussion is presented as follows. Firstly, regarding smoking and alcohol-related

Table 4: Percentage distribution of the studied women regarding to their personal habits after abortion.

Personal habits	Pretest						Posttest						X ²	p value
	Always		Sometimes		Never		Always		Sometimes		Never			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
I wear high heels and not comfortable shoes	47	51.1	24	26.1	21	22.8	14	15.2	16	17.4	62	67.4	12.412	0.015*
I wearing cotton and wide clothes	28	30.4	27	29.3	37	40.2	57	62.0	18	19.6	17	18.5	14.577	0.0006**
I am use too hot water baths	51	55.4	17	18.5	24	26.1	13	14.1	20	21.7	59	64.1	13.745	0.005**
I sit in warm water & use vaginal cleansers, a vaginal douche	55	59.8	15	16.3	22	23.9	19	20.7	17	18.5	56	60.9	16.721	0.002**
I am exposed to radiation during pregnancy or after abortion	16	17.4	23	25.0	53	57.6	69	75.0	12	13.0	11	12.0	11.039	0.026*
I am urinating a lot than usual	52	56.5	19	20.7	21	22.8	15	16.3	11	12.0	66	71.7	15.518	0.004**
I use creams that contain natural substances	29	31.5	23	25.0	40	43.5	54	58.7	22	23.9	16	17.4	13.860	0.010*
I use dyes & oxygen for my hair during last pregnancy and after apportion	58	63.0	14	15.2	20	21.7	17	18.5	23	25.0	52	56.5	13.475	0.006**
I use lotions and antiseptics that contain chemical substances or hydrocortisone to clean the vaginal area without doctor order	50	54.3	16	17.4	26	28.3	12	13.0	19	20.7	61	66.3	11.482	0.024*
I climb stairs excessively	43	46.7	26	28.3	23	25.0	11	12.0	21	22.8	60	65.2	12.133	0.007*
I use caustic cleaning tools such as chlorine or potash	53	57.6	20	21.7	19	20.7	22	23.9	20	21.7	50	54.3	16.293	0.003**
I am still in follow up with my physician	24	26.1	22	23.9	46	50.0	55	59.8	23	25.0	14	15.2	14.938	0.005**
I take medications without consulting my doctor	54	58.7	17	18.5	21	22.8	16	17.4	15	16.3	61	66.3	11.546	0.021*
I travel for long periods	31	33.7	28	30.4	33	35.9	15	16.3	21	22.8	56	60.9	13.115	0.011*

* Statistically significant at p≤0.05

** High statistical significant at p≤0.01

Table 5: Percentage distribution of the studied women regarding to their sleeping after abortion.

Sleeping	Pretest						Posttest						X ²	p value
	Always		Sometimes		Never		Always		Sometimes		Never			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
I take medications for sleep after abortion	35	38.0	34	37.0	23	25.0	16	17.4	19	20.7	57	62.0	14.711	0.005**
I take a day naps	26	28.3	23	25.0	43	46.7	15	16.3	16	17.4	61	66.3	9.728	0.045*
I wake up a lot at night and find it difficult to go back to sleep	51	55.4	21	22.8	20	21.7	13	14.1	20	21.7	59	64.1	11.170	0.025*
I sleep in the wrong positions.	57	62.0	19	20.7	14	15.2	15	16.3	22	23.9	55	59.8	9.954	0.037*

* Statistically significant at p≤0.05

** High statistical significant at p≤0.01

Table 6: Percentage distribution of the studied women regarding to their spiritual habits and relationships after abortion.

Spiritual habits and relationships	Pretest						Posttest						X ²	p value
	Always		Sometimes		Never		Always		Sometimes		Never			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
I regular in praying	27	29.3	32	34.8	33	35.9	56	60.9	21	22.8	15	16.3	9.669	0.046*
I keep a good relationship with friends	23	25.0	26	28.3	43	46.7	52	56.5	19	20.7	21	22.8	10.854	0.028*
I receive psychological & social support from family	22	23.9	30	32.6	40	43.5	59	64.1	22	23.9	11	12.0	9.481	0.050*
I feel anxious or lonely	44	47.8	28	30.4	20	21.7	15	16.3	20	21.7	57	62.0	11.717	0.020*

* Statistically significant at p≤0.05

** High statistical significant at p≤0.01

lifestyle behaviours after abortion, the present study revealed that around three-quarters of the studied women were always exposed to passive smoking after abortion during the pre-counselling phase. This improved post-counselling, as less than three-quarters reported no longer being exposed to passive smoking. There was a statistically significant improvement among the studied women in relation to smoking and alcohol-related lifestyle behaviours following the implementation of the counselling sessions.

Similarly, this finding aligns with Ramadan et al. (2021), who reported that more than two-thirds of the studied women were

exposed to smoking. This may be attributed to that these women were encouraged to improve their lifestyle once they became aware that both passive and active smoking could negatively affect their health after abortion. Ramadan et al. (2021) reported that smoking during pregnancy poses significant risks, contributing to abortion and other complications. Research indicates that both active and passive smoking can lead to preterm births, stillbirths, placenta previa, placental abruption, and reduced gestation time [32].

Setti et al., (2022) added that alcohol, refined sugar, and artificial sweeteners were among the dietary and life style choices that were

Table 7: Percentage distribution of the studied women regarding to their sexual intercourse after abortion.

Sexual intercourse after abortion	Pretest						Posttest						X ²	p value
	Always		Sometimes		Never		Always		Sometimes		Never			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
I practice sexual intercourse normally	21	22.8	24	26.1	47	51.1	53	57.6	22	23.9	17	18.5	14.911	0.005**
I practice vigorous sexual intercourse	46	50.0	21	22.8	25	27.2	15	16.3	19	20.7	58	63.0	15.711	0.004**
I use safe topical medical preparations (cream) or medicinal herbs during sexual intercourse	27	29.3	29	31.5	36	39.1	58	63.0	18	19.6	16	17.4	13.505	0.009**
My husband uses unsafe herbs or topical creams during intercourse	50	54.3	23	25.0	19	20.7	17	18.5	20	21.7	55	59.8	17.239	0.001**
I feel pain during intercourse	55	59.8	19	20.7	18	19.6	14	15.2	24	26.1	54	58.7	16.668	0.003**
I reduced the number of times I had sex	49	53.3	22	23.9	21	22.8	19	20.7	21	22.8	52	56.5	15.900	0.004**

* Statistically significant at $p \leq 0.05$

** High statistically significant at $p \leq 0.01$

negatively correlated with embryo growth and response to ovarian stimulation and positively correlated with the incidence of multiple oocyte dimorphisms. In addition to the miscarriage rate, which showed significant associations with these behaviours, negative associations were also found with clinical outcomes. Significantly negative dose-dependent correlations between implantation rates and these behaviours [20]

In relation to nutritional lifestyle after abortion, the current study found that more than two-thirds of the studied women reported always consuming foods high in salt during the pre-counselling phase. This percentage improved significantly to around one-fifth following the implementation of the counselling sessions. There was a statistically significant improvement in the women's nutritional lifestyle after abortion post-counselling.

This finding is consistent with Shi et al. (2024), who reported a statistically significant improvement in women's nutritional habits following educational intervention. This agreement may be due to that; the frequent consumption of salty foods may be attributed to a common habit among rural populations, where strong Flavors—particularly salty tastes are culturally preferred and considered part of traditional dietary practices [64].

Concerning weight and exercise lifestyle after abortion, the present study reported that around two-thirds of the studied women were always engaged in vigorous physical activity during pre-counselling, which improved significantly post-counselling to include more than one-fifth of them. There was a statistically significant improvement among the studied women regarding weight management and exercise after abortion following the counselling sessions.

This finding is consistent with Han et al. (2024), who conducted a recent study entitled “Effects of a Web-Based Weight Management Education Program on Various Factors for Overweight and Obese Women,” and found a statistically significant improvement in the participants' weight, exercise habits, and physical activity levels after the educational program [65].

Contrarily, this study is consistent with Ghimire et al. (2020), who conducted a study entitled “Association Between Obesity and Miscarriage Among Women of Reproductive Age in Nepal,” and reported that more than half of the studied women were not engaged in heavy or vigorous physical activities [66].

Regarding personal habits after abortion, the current study

revealed that more than half of the studied women used to take medications without consulting a doctor during pre-counselling, which improved post-counselling to less than one-fifth. This finding aligns with Reardon et al. (2023), who conducted a study entitled “The Effects of Abortion Decision Rightness and Decision Type on Women's Satisfaction and Mental Health,” and reported a statistically significant improvement in the personal habits of women following program implementation [67].

From the researcher's perspective, taking medications without medical consultation may be attributed to a lack of health awareness and understanding of the risks associated with improper medication use. Economic factors may also play a role, as visiting a doctor can be costly or inaccessible, especially in rural areas.

In relation to sleeping habits after abortion, the present study found that more than half of the studied women consistently slept in improper positions during the pretest, which improved post-test to less than one-fifth. There was a statistically significant improvement in sleeping habits among the studied women post counselling.

This result is supported by Hassani et al. (2023), who conducted a study entitled “Effect of a Psycho-Awareness Training Program on Women's Attitude and Psychosomatic Status Post-Abortion in Jazan, Saudi Arabia,” and revealed that the psycho-awareness training program positively affected women's sleep after abortion [68]. This improvement may be attributed to the educational program, which included clear explanations about proper sleeping patterns, positively reflecting on women's lifestyles.

Concerning spiritual habits and relationship items after abortion, the current study found that around half of the studied women always felt anxious or lonely after abortion, which improved post counselling to a minority of them. There was a statistically significant improvement among the studied women regarding spiritual habits and relationships post counselling. This result was in agreement with Raphi et al. (2021), who reported a statistically significant improvement among studied women regarding their psychological state, social relationships, and spiritual habits post counselling [69].

About one-fifth of women reported healthy sexual intercourse prior to counselling after abortion, improving to three-quarters post-counselling. This improvement is linked to the positive impact of counselling based on the PLISSIT model.

This finding supports the research of Heera et al. (2021),

which reported significant enhancements in sexual lifestyle among marginalized women in Nepal following an empowerment program [70]. It is also consistent with Charlton et al. (2020), who found that approximately 60% of women studied maintained a healthy sexual lifestyle [71].

The study indicates significant improvements in women's lifestyles, particularly in healthy habits regarding smoking, alcohol, nutrition, exercise, personal habits, sleeping, spiritual practices, relationships, and sexual behaviour, following counselling sessions. These changes were statistically significant, attributed to the counselling's educational methods, including lectures and distribution [72-85]. Additionally, the concise Arabic booklets that facilitated knowledge retention. This aligns with Edgar Dale's Pyramid of Learning, suggesting that individuals retain varying percentages of information through different educational methods [86-97].

Conclusion

Based on the results of the current study, it was observed that there was a statistically significant improvement among the studied women regarding smoking and alcohol, nutritional, weight and exercise, personal habits, sleeping, spiritual habits and relationships, and sexual intercourse.

Recommendations

Developing strategies to facilitate women's understanding and support life style adjustments after abortion by applying this study to a large sample in inpatient and outpatient departments.

References

- Cuenca D. Pregnancy loss: Consequences for mental health. *Frontiers in global women's health*, 2023, 3, (53) 1032212.
- Wesselink A. K, Wise L. A, Hatch E. E, Mikkelsen E. M, Savitz, D. A Kirwa K & Rothman K. J. A prospective cohort study of seasonal variation in spontaneous abortion. *Epidemiology*, 2022, 33(3), 441-448.
- Hassan H, Abd-ELhakam F, Ali E. Effect of Life Style Modification Implemented Program Among Infertile Women with Poly Cystic Ovary Syndrome on Obesity and Menstrual Regulation. *Journal of Clinical and Laboratory Research*, 2025, 8(2): 1-7. DOI:10.31579/2768-0487/166.
- Mostafa H, Yousef F, Hassan H. Health Related Quality of Life Educational Interventions: Effect on Chronic Hepatitis C Patients'. *Saudi Journal of Nursing and Health Care*, 2018, 1(2): 56-67.
- Hassan H. Quality of Life with Gestational Diabetes. *American Research Journal of Public Health*, 2020, 3(1): 1-4. DOI: 10.21694/2639-3042.20004
- Nady F, El-Sherbiny M, Youness E, Hassan H. Effectiveness of Quality-of-Life Planned Teaching Program on Women Undergoing Gynecologic Cancer Treatment. *American Research Journal of Oncology*, 2018, 1(1): 1-17.
- Emem E, Hassan H. Correlation between Quality of Life and Dysmenorrhea among Nursing Schools Students. *International Journal of Nursing Science*, 2017, 7(6): 123-132. DOI: 10.5923/j.nursing.20170706.02
- Hassan H, Abd-ELhakam F, Kasem E. Androgen-related Alopecia and Infertility: Impact of Lifestyle Modifications. *International Journal of Clinical Research and Reports*, 2025, 4(2): 1-6. DOI: <https://doi.org/10.31579/2835-785X/071>
- Nady F, Said M, Youness E, Hassan H. Effect of Nursing Intervention Program on Quality-of-Life Improvement for Women Undergoing Gynecological and Breast Cancer Treatment. *Assuit Scientific Nursing Journal*, 2018, 6(15): 62-77.
- Mohammed F, Shahin M, Youness E, Hassan H. Survivorship in Women Undergoing Gynecological and Breast Cancer Treatment in Upper Egypt: The Impact of Quality-of-Life Improvement Educational Program'. *American Research Journal of Gynaecology*. 2018, 2(1): 1-28. doi:10.21694/2577-5928.18001
- Hassan H & Farag D. The impact of polycystic ovary syndrome on women's quality of life: Nursing guidelines for its management. *Clinical Nursing Studies*. 2019, 7(3): 42-57. doi: 10.5430/cns.v7n3p42
- Nady F, Said M, Youness E, Hassan H. Impact of Tailored Educational Program of Quality of Life Improvement on Women Undergoing Breast Cancer Treatment at El-Minia Region, Egypt. *American Research Journal of Gynaecology*, 2017, 1(1): 1-17. doi:10.21694/2577-5928.17001
- Hassan H. Evidence-Based Practice in Midwifery and Maternity Nursing for Excellent Quality of Care Outcomes. *American Journal of Nursing Research*, 2020, 8(6): 606-607. doi: 10.12691/ajnr-8-6-3.
- Magnus M. C, Havdahl A, Morken N, Wensaas K, Wilcox A. J & Häberg S. E. Risk of miscarriage in women with psychiatric disorders. *The British Journal of Psychiatry*, 2021, 219(3), 501-506. doi:10.1192/bjp.2020.259.
- Hassan H. The Impact of Evidence-Based Nursing as The Foundation for Professional Maternity Nursing Practices. *Open Access Journal of Reproductive System and Sexual Disorder*, 2019, 2(2): 195-197. OAJRSD. MS.ID.000135. DOI: 10.32474/OAJRSD.2019.02.000135.
- Hassan H, Ahmed W, Ahmed Arafa A. Physical Activity and Menstrual Disorders Among School Girls in Southern Egypt. *International Journal of Studies in Nursing*, 2019, 4(3): 54-59. doi:10.20849/ijsn.v4i3.614
- Farag D & Hassan H. Maternal Postpartum Sleep disturbance and Fatigue: Factors Influencing. *ARC Journal of Nursing and Healthcare*, 2019, 5(2): 33-46. doi: <http://dx.doi.org/10.20431/2455-4324.0502005>
- Hassan H, Nady F, Youns E, Zahran K. Call for Change Level of Knowledge, Awareness and Attitude to Follow a High Folate Diet Among Pregnant Women. *IOSR Journal of Nursing and Health Science*, 2016, 5(1): 93-100. doi: 10.9790/1959-051293100
- Nady F, Zahran K, Youness E, Hassan H. Women's Knowledge and Perception about Benefits of Folic Acid Intake Before and During Pregnancy According to Health Belief Model in Beni-Suef City. *Assuit Scientific Nursing Journal*, 2014, 2(3): 1-13.
- Hassan H, Zahran K, Youness E, Nady F. Pregnant Women's Awareness, Intention and Compliance regarding Folic Acid Usage for Prevention of Neural Tube Defects According to Health Belief Model in Beni-Suef City. *Pyrex Journal of Nursing and Midwifery*, 2015, 1(3): 13-26.
- Setti A. S, Halpern G, Braga D. P. D. A. F, Iaconelli Jr A & Borges Jr E. Maternal lifestyle and nutritional habits are associated with oocyte quality and ICSI clinical outcomes. *Reproductive BioMedicine Online*, 2022, 44(2): 370-379.
- Hassan H, Eid S, Hassan A, Abou-Shabana K. Pre-Gynecological Examination: Impact Counseling on Women's Pain, Discomfort, and Satisfaction. *American Journal of Public Health Research*, 2022, 10(2): 63-75
- Malk R, Fahem E, Hassan H, Sultana A. Efficacy of Training Program on Nurses Performance regarding Preventive Measures of Venous Thromboembolism among Critical Pregnant Women. *Egyptian Journal of Health Care*, 2022, 13(2): 401-413. DOI: 10.21608/EJHC.2022.230390
- Ali M, Elshabory N, Hassan H, Zahra N, Alrefai H. Perception about Premarital Screening and Genetic Counseling Among Males and Females Nursing Students. *IOSR Journal of Nursing and Health Science*, 2018, 7(1): 51-57. doi:10.9790/1959-0701065157
- Hassan H, Gamel W, Sheha E, Sayed M, Arafa A. Menstrual disorders Necessitating Counseling among Students in Beni-Suef University. *Clinical Nursing Studies*, 2019, 7(2): 29-36. doi:10.5430/cns.v7n2p29
- Eid S, Abou-Shabana K, Hassan A, Hassan H. Effect of Pre-Gynecological

- Examination Counseling Sessions on Relieving Women's Pain, Discomfort and Enhancing their Satisfaction. *Journal of Nursing Science - Benha University*, 2023, 4(1): 751-768.
27. Hassan H, Gooda W, Ahmed T, Farag D. Marital, Sexual Satisfaction and Quality of Life among Post-hysterectomy Women: Impact of Nursing Counseling Guided by BETTER Model. *Egyptian Journal of Health Care*, 2025, 16 (1): 99-116. Doi: 10.21608/ejhc.2025.402051
 28. Rinehart W, Rudy S & Drennan, M. GATHER guide to counseling. *Population reports. Series J, Family planning programs*, 1998, 234(48): 1-31.
 29. Mohammadi Z, Maasoumi R, Vosoughi N, Eftekhar T, Soleimani M & Montazeri A. The effect of the EX-PLISSIT model-based psychosexual counseling on improving sexual function and sexual quality of life in gynecologic cancer survivors: A randomized controlled clinical trial. *Supportive Care in Cancer*, 2022, 30(11), 9117-9126. doi:10.1007/s00520-022-07332-8.
 30. Hassan H, Saber N, Sheha E. Comprehension of Dyspareunia and Related Anxiety among Northern Upper Egyptian women: Impact of Nursing Consultation Context Using PLISSIT Model. *Nursing & Care Open Access Journal*, 2019, 6(1): 1-19. DOI: 10.15406/ncoaj.2019.06.00177
 31. Abou-Shabana K, Hassan A, Eid S, Hassan H. Effect of Counseling Sessions on Women's Satisfaction during Gynecological Examination. *Journal of Obstetrics Gynecology and Reproductive Sciences*, 2022, 6(4): 1-10. DOI: 10.31579/2578-8965/119
 32. Nashed N, Hassan H, Gooda W. Impact of Post Abortion Counseling Based on PLISSIT Model on Women's Life Style. *Egyptian Journal of Health Care*, 2025; 16 (2): 1009-1028. Doi: 10.21608/ejhc.2025.438157.
 33. Ramadan A, Abo Shabana K & Mossa S. Assessment of post abortion woman lifestyle. *Egyptian Journal of Health Care*, 2021, 12(3), 831-842. doi:10.21608/ejhc.2021.192060.
 34. Hassan H, Zahran K, Youness E & Nady F. Pregnant Women's Awareness, Intention and Compliance regarding Folic Acid Usage for Prevention of Neural Tube Defects According to Health Belief Model in Beni-Suef City. *Pyrex Journal of Nursing and Midwifery*, 2015, 1(3), 13-26.
 35. Said A. Effect of counseling intervention on women's knowledge, practices and lifestyle of fetal well-being among Primigravida. *International Journal of Nursing Science*, 2016, 6(4), 87-93.
 36. Mostafa H, Yousef F, Hassan H. Health Related Quality of Life Educational Interventions: Effect on Chronic Hepatitis C Patients'. *Saudi Journal of Nursing and Health Care*, 2018, 1(2): 56-67.
 37. Atwa A, Hassan H, Ahmed S. The impact of a hospital-based awareness program on the knowledge of patients about breast cancer and cancer cervix. *International Journal of Studies in Nursing*, 2019, 4(1): 20-29. doi:10.20849/ijns.v4i1.
 38. Hassan H, Nady F, Youns E & Zahran, K. Call for Change Level of Knowledge, Awareness and Attitude to Follow a High Folate Diet Among Pregnant Women. *IOSR Journal of Nursing and Health Science*, 2016, 5(1), 93-100. <https://doi.org/10.9790/1959-051293100>.
 39. Farg D & Hassan H. Study Hyperemesis Gravidarum Requiring Hospital Admission during Pregnancy: Effect of Nursing Implication on Its Progress. *American Journal of Nursing Research*, 2019, 7(3), 328-341. <https://doi.org/10.12691/ajnr-7-3-14>
 40. Hassan H, Said S & Hassanine Sh. Disparities of Prevalence and Causes of Maternal Antenatal Anxiety among Primigravida Pregnant Women in Egypt. *American Research Journal of Nursing*, 2017, 3(1), 1-15. <https://doi.org/10.9790/1959-051293100>
 41. Said S, Hassan H, Sarhan A. Effect of an Educational Intervention on Women's Knowledge and Attitude Regarding Cervical Cancer. *American Journal of Nursing Research*. 2018; 6(2): 59-66. doi: 10.12691/ajnr-6-2-4.
 42. Qian J. L., Pan P. E, Wu M. W, Zheng Q, Sun S. W, Liu L & Yu X. Y. The experiences of nurses and midwives who provide surgical abortion care: A qualitative systematic review. *Journal of advanced nursing*, 2021, 77(9), 3644-3656.
 43. Jarvis C. *Physical Examination and Health Assessment-Canadian E-Book: Physical Examination and Health Assessment-Canadian E-Book*. Elsevier Health Sciences, 2023, 1-(542): 8.
 44. Adams Y. J, Miller M. L, Agbenyo J. S, Ehla E. E & Clinton G. A. Postpartum care needs assessment: women's understanding of postpartum care, practices, barriers, and educational needs. *BMC pregnancy and childbirth*, 2023, 23(1), 502.
 45. Saharoy R, Potdukhe A, Wanjari M & Taksande A. B. Postpartum depression and maternal care: exploring the complex effects on mothers and infants. *Cureus*, 2023, 15(7): 467.
 46. Ouedraogo R, Kimemia G, Igonya E. K, Athero S, Wanjiru S, Bangha M & Juma K. "They talked to me rudely". Women perspectives on quality of post-abortion care in public health facilities in Kenya. *Reproductive Health*, 2023, 20(1), 35.
 47. Riddell G. *Abortion Care in the Primary Care Setting*. Collins-Bride & Saxe's Clinical Guidelines for Advanced Practice Nursing, 2024, 187(64): 86.
 48. Turesheva A, Aimagambetova G, Ukybassova T, Marat A, Kanabekova P, Kaldygulova L & Atageldiyeva K. Recurrent pregnancy loss etiology, risk factors, diagnosis, and management. *Fresh look into a full box*. *Journal of Clinical Medicine*, 2023, 12(12), 4074. doi:10.3390/jcm12124074.
 49. Haghghi M, Oladbaniadam K, Mohaddesi H & Rasuli J. Individual counseling in mothers bereaved by pregnancy loss. *Journal of Education and Health Promotion*, 2022, 11(1), 209. doi:10.4103/jehp.jehp_1765_21.
 50. Keshavarz Z, Karimi E, Golezar S, Ozgoli G & Nasiri M. The effect of PLISSIT based counseling model on sexual function, quality of life, and sexual distress in women surviving breast cancer: A single-group pretest-posttest trial. *BMC Women's Health*, 2021, 21(1). doi:10.1186/s12905-021-01570-4.
 51. Hassan H, Zahran K, Youness E & Nady F. Pregnant Women's Awareness, Intention and Compliance regarding Folic Acid Usage for Prevention of Neural Tube Defects According to Health Belief Model in Beni-Suef City. *Pyrex Journal of Nursing and Midwifery*, 2015, 1(3), 13-26.
 52. Hassan H, Nady F, Youns E & Zahran K. Call for Change Level of Knowledge, Awareness and Attitude to Follow a High Folate Diet Among Pregnant Women. *IOSR Journal of Nursing and Health Science*, 2016, 5(1), 93-100. <https://doi.org/10.9790/1959-051293100>.
 53. Said A. Effect of counseling intervention on women's knowledge, practices and lifestyle of fetal well-being among Primigravida. *International Journal of Nursing Science*, 2016, 6(4), 87-93.
 54. Farg D & Hassan H. Study Hyperemesis Gravidarum Requiring Hospital Admission during Pregnancy: Effect of Nursing Implication on Its Progress. *American Journal of Nursing Research*, 2019, 7(3), 328-341. <https://doi.org/10.12691/ajnr-7-3-14>
 55. Hassan H, Said S & Hassanine Sh. Disparities of Prevalence and Causes of Maternal Antenatal Anxiety among Primigravida Pregnant Women in Egypt. *American Research Journal of Nursing*, 2017, 3(1), 1-15. <https://doi.org/10.9790/1959-051293100>
 56. Mostafa H, Yousef F, Hassan H. Health Related Quality of Life Educational Interventions: Effect on Chronic Hepatitis C Patients'. *Saudi Journal of Nursing and Health Care*; 2018, 1(2): 56-67.
 57. Said S, Hassan H, Sarhan A. Effect of an Educational Intervention on Women's Knowledge and Attitude Regarding Cervical Cancer. *American Journal of Nursing Research*; 2018, 6(2): 59-66. doi: 10.12691/ajnr-6-2-4.
 58. Atwa A, Hassan H, Ahmed S. The impact of a hospital-based awareness program on the knowledge of patients about breast cancer and cancer cervix. *International Journal of Studies in Nursing*; 2019, 4(1): 20-29.

- doi:10.20849/ijns.v4i1.
59. Hassan H, Abd-ELhakam F, Ali E. Effect of Life Style Modification Implemented Program Among Infertile Women with Poly Cystic Ovary Syndrome on Obesity and Menstrual Regulation. *Journal of Clinical and Laboratory Research*, 2025; 8(2): 1-7. DOI:10.31579/2768-0487/166
 60. Masse S. Her Choice to Heal: Finding Spiritual and Emotional Peace After Abortion. *David C Cook*, 2024, 6734(43): 7836.
 61. Hassan H, Abd-ELhakam F, Ali E. Infertility and Obesity: Impact of Lifestyle Modification. *American Journal of Nursing Research*, 2025; 13(3): 59-67. doi: 10.12691/ajnr-13-3-1.
 62. Hassan H, Gooda W, Nashed N. Correlation between Women's Knowledge, Life Style and Impact Level of Social Networking Sites on Women After Abortion Using Counseling Based On PLISSIT Model. *American Journal of Public Health Research*, 2025, 13(5): 199-207. doi: 10.12691/ajphr-13-5-1.
 63. Abd-ELghafar F, Hassan H, Ali E. Lifestyle modifications among infertile women with poly cystic ovary syndrome. *Nursing & Care Open Access Journal*, 2026, 12(1): 1-10. DOI: 10.15406/ncoaj.2026.12.00332
 64. Hassan H, Abd-ELhakam F, Kasem E. Relationship between Infertile Overweight and Polycystic Ovary Syndrome Women's Characteristics and Lifestyle Habits: An Interventional Study. *Journal of General medicine and Clinical Practice*, 2025, 8(8): 1-7. DOI:10.31579/2639-4162/285
 65. Shi D, Liu C, Huang L & Chen X. Post-abortion needs-based education via the WeChat platform to lessen fear and encourage effective contraception: A post-abortion care service intervention-controlled trial. *BMC Women's Health*, 2024, 24(1): 79890. doi:10.1186/s12905-024-03004-3.
 66. Han Y, Sung H, Kim G, Ryu Y, Yoon J & Kim Y. S. Effects of a web-based weight management education program on various factors for overweight and obese women: Randomized controlled trial. *JMIR Cardio*, 2024, 8, e42402. doi:10.2196/42402.
 67. Ghimire P. R, Akombi-Inyang B. J, Tannous C & Agho K. E. Association between obesity and miscarriage among women of reproductive age in Nepal. *PLOS ONE*, 2020, 15(8), e0236435. doi:10.1371/journal.pone.0236435.
 68. Reardon D. C, Rafferty K. A & Longbons T. The effects of abortion decision rightness and decision type on women's satisfaction and mental health. *Cureus*. 2023, 567(12): 456. doi:10.7759/cureus.38882.
 69. Hassani R, Fadlalmola H, Said T, AlZahrani B & Mariod A. Effect of a psycho-awareness-training program on women's attitude and psychosomatic status post-abortion in Jazan, Saudi Arabia. *Afr J Reprod Health*, 2023, 27(8), 58-64. doi:10.29063/ajrh2023/v27i8.6.
 70. Raphi F, Bani S, Farvareshi M, Hasanpour S & Mirghafourvand M. Effect of hope therapy on psychological well-being of women after abortion: A randomized controlled trial. *BMC Psychiatry*, 2021, 21(1). doi:10.1186/s12888-021-03600-9.
 71. Heera K, Shrestha M, Pokharel N, Niraula S. R, Pyakurel P & Parajuli S. B. Women's empowerment for abortion and family planning decision making among marginalized women in Nepal: A mixed method study. *Reproductive Health*, 2021, 18(1). doi:10.1186/s12978-021-01087-x.
 72. Charlton B. M, Everett B. G, Light A, Jones R. K, Janiak E, Gaskins A. J & Austin S. B. Sexual orientation differences in pregnancy and abortion across the Lifecourse. *Women's Health Issues*, 2020, 30(2), 65-72. doi:10.1016/j.whi.2019.10.007.
 73. Hassan H. Integrative Nursing Science in Women's Pre-conceptional Wellness. *International Journal of Health and Biological Sciences*; 2019, 2(1): 17-18.
 74. Hassan H, Mohamady Sh & Abd El-Gawad N. Protocol for improving nursing performance towards placental examination at labor units. *Clinical Nursing Studies*; 2017, 5(2): 1-11. <http://dx.doi.org/10.5430/cns.v5n2p1>.
 75. Gamel W, Genedy A, Hassan H. Impact of Puerperal Sepsis Self-Care Nursing Guideline on Women's Knowledge and Practices. *American Journal of Nursing Research*, 2020, 8(2): 132-141. doi:10.12691/ajnr-8-2-1
 76. Hassan H, Nasr E. Improving nurses' knowledge and skills regarding tocolytics for inhibiting preterm labor. *Clinical Nursing Studies*; 2017, 5(1): 1-12. <https://doi.org/10.5430/cns.v5n1p1>.
 77. Nady F, Said M, Youness E, Hassan H. Impact of Tailored Educational Program of Quality of Life Improvement on Women Undergoing Breast Cancer Treatment at El-Minia Region, Egypt. *American Research Journal of Gynaecology*, 2017, 1(1): 1-17. doi:10.21694/2577-5928.17001.
 78. Hassan H, Gooda W, Nashed N. Post Abortion Women's Life Style: Impact of Counseling Based on PLISSIT Model. *American Journal of Nursing Research*, 2025, 13 (4): 89-96. doi: 10.12691/ajnr-13-4-1.
 79. Gaافر H, Saad H, Hassan H, Omran A. Maternity Nurses' Knowledge Regarding Nursing Care of First Stage of Normal Labor and Partogram Through Instructional Package. *Journal of Women Health Care and Issues*, 2026, 9(1): 1-8. DOI:10.31579/2642-9756/256
 80. Nady F, Zaki S, Hassan H. Beni-Suef University Female Workers' Breast Self-Examination Practices. *International Journal of Family & Community Medicine*, 2026, 10(1): 42-47. DOI: 10.15406/ijfcm.2026.10.00410
 81. Abd-ELhakam F, Kasem E, Hassan H. Effect of Physical Activity Habit Modifications on Gynecological Features among Studied Infertile Overweight and Polycystic Ovary Syndrome. *American Journal of Nursing Research*, 2026, 14(1): 1-7. doi: 10.12691/ajnr-14-1-1.
 82. Hassan H, Mohamed A. Elfattah N. Working Females' Knowledge, Attitude, and Intention at Beni-Suef University regarding Oocyte Cryopreservation: Effect of an Educational Program. *American Journal of Nursing Research*. 2025, 13(4): 97-102. doi: 10.12691/ajnr-13-4-2
 83. Zaki S, Nady S, Hassan H. Preventive Measures of Breast Cancer Female Workers' Knowledge. *Journal of Clinical and Laboratory Research*, 2025, 8(2): 1-6. DOI:10.31579/2768-0487/169
 84. Abd-Elfattah N, Mohamed A, Hassan H. Study women's attitude regarding Oocyte Cryopreservation: The Impact of an Educational Initiative. *American Journal of Public Health Research*, 2026, 14(1): 1-6. DOI: 10.12691/ajphr-14-1-1.
 85. Ali M, Elshabory N, Hassan H, Zahra N, Alrefai H. Perception About Premarital Screening and Genetic Counseling Among Males and Females Nursing Students. *IOSR Journal of Nursing and Health Science*, 2018, 7(1): 51-57. doi:10.9790/1959-0701065157
 86. Hassan H, Saad H, Gaافر H, Omran A. First Stage of Normal Labor: Impact of Instructional Package on Nursing performance. *Nursing and Healthcare Research*, 2026, 3(1): 1-9. DOI: 10.61148/3065-7679/NHR/033.
 87. Masters K. Edgar Dale's Pyramid of Learning in medical education: A literature review, *Medical Teacher*; 2013, 35(11): e1584-e1593. <https://doi.org/10.3109/0142159X.2013.800636>
 88. Said D, Gooda W, Mohamed E, Hassan H. Effect of Continuous Care Model on Recurrence of Vulvovaginal Candidiasis Infection among Pregnant Women. *Egyptian Journal of Health Care*, 2026, 17 (1): 121-144. Doi: 10.21608/ejhc.2026.479146.
 89. Abd-Elfattah NMohamed A, Hassan H. Enhancing Females' Knowledge regarding Oocyte Cryopreservation: Effect of an Educational Program. *International Journal of Clinical Research and Reports*, 2025, 4(6): 2-8. DOI: 10.31579/2835-785X/109.
 90. Hassan H, Mohamed H, Masoud H. Women's Knowledge and Attitude regarding Teratogenic Medications and Practices toward Minor Discomfort: Impact of an Educational Program. *International Journal of Family & Community Medicine*, 2025, 9(6): 146-152. DOI: 10.15406/ijfcm.2025.09.00397
 91. Mohamed H, Hassan H, Masoud H. Call for Enhancing Pregnant Women's Knowledge Regarding Teratogenic Medications and Most

- Common Drugs That Cause Congenital Anomalies. *NL Journal of Medical and Pharmaceutical Sciences*, 2025, 1(3): 27-35.
92. Masoud H, Mohamed H, Hassan H. Effect of An Educational Program on Pregnant Women's Knowledge Regarding Possible Side Effects of Drugs Used During Pregnancy on Fetus and Mother. *American Journal of Pharmacological Sciences*, 2026, 14(1): 1-6. doi: 10.12691/ajps-14-1-1.
93. Mohamed A, Hassan H, Mohamed N. Oocyte Cryopreservation Knowledge, Attitude, and Intention Effect of an Educational Program on Working Females at Beni-Suef University. *Journal of Health Care Research*, 2026, 3(1): 199-221. Doi: 10.21608/jhcr.2026.410856.1070
94. Hassan H, Nashed N, Gooda W. Impact of Counseling Based on PLISSIT Model on Women's Knowledge Regarding Modern Educational Information about Abortion. *Nursing & Care Open Access Journal*, 2026, 12(1):15-22. DOI: 10.15406/ncoaj.2026.12.00334
95. Gooda W, Hassan H, Nashed N. Women's General Knowledge Regarding Abortion: Impact of Counseling Based on PLISSIT Model, *International Journal of Health & Medical Research*, 2026, 5(2): 90 – 101. DOI: 10.58806/ijhmr.2026.v5i2n01
96. Abd-Elfattah N, Mohamed A, Hassan H. Effect of an Educational Program on Women's Intention regarding Oocyte Cryopreservation. *Journal of Comprehensive Nursing Research and Care*, 2025, 10(2): 1-8. doi: <https://doi.org/10.33790/jcnrc1100221>.
97. Hassan H, Omran A, Saad H, Gaafar H. Maternity Nurses Practices Abdominal Examination, Palpation, and Auscultation at First Stage of Normal Labor: An Instructional Package, *Journal of General Medicine and Clinical Practice*, 2026, 9(3): 1-9. DOI:10.31579/2639-4162/332