

## Effect of an educational program about vesicular mole on women's knowledge and committing with follow up

Shaimaa Gomaa Hassen<sup>1</sup> & Terza S. Badia<sup>2</sup>

<sup>1</sup> Assistant Professor of Maternity & Newborn Health Nursing, Faculty of Nursing, Assiut University, Egypt.

<sup>2</sup> Lecturer of Maternity & Newborn Health Nursing, Faculty of Nursing, Assiut University, Egypt.

### Abstract:

**Background:** Vesicular moles might not be a common health issue for woman, but when they do, they can cause dangerous complications and, in some cases, they can develop into fatal malignant conditions include trophoblastic tumors at the placenta's location and invasive moles, and choriocarcinomas. **Aim:** The current study aimed to assess the effect of vesicular mole education program on women's knowledge and committing with follow up. **Design:** A quasi-experimental design (study and control) was used to accomplish the study's aim. **Setting:** The study was conducted on the fourth floor (ward for high risk pregnancy) and Clinic of Outpatient at the Woman Health Hospital, Assiut University Hospitals, Egypt. **Subjects:** A convenient sample of one hundred women was split into intervention and control groups each group contained fifty women. **Tools:** A structured interviewing questionnaire schedule was utilized to evaluate socio-demographic characteristics of women, obstetric history, women's knowledge about vesicular mole and committing to following up. **Results:** there are statistically significant differences in each issue of vesicular mole knowledge were found between the studied groups. Additionally, the intervention group showed highly statistically significant differences in their committing to following up. **Conclusion:** Educational program about vesicular mole improved knowledge of women and committing to following up in the intervention group relative to the control group. **Recommendation:** Program education regarding vesicular mole should be implanted as a part of the standard hospital care to improve women's knowledge and committing with follow up.

**Keywords:** Education, Follow up, Knowledge, Program & Vesicular Mole.

### Introduction:

Gestational trophoblastic disease (GTD) is a condition marked by multiplying extensively of embryonic chorionic tissue or trophoblast (Sharami & Saffarieh, 2020). Vesicular mole (VM), also known as molar pregnancy, is a type of GTN that has a chance of metastasizing after originating in the placenta. According to gross morphology, histology, and karyotype, VM is classify either a total or partial mole and it is typically considered a non-invasive form of GTN (Mittal & Menon, 2019 & Sarmadi, et. al., 2019)

A complete mole, which is the most common type, doesn't contain any fetal components, but a partial mole may have visible fetal remnants. Complete moles are frequently triploid, while partial moles tend to be diploid. Complete moles usually result in greater human chorionic gonadotropin (HCG) level, which is one of the key clinical characteristics of this procedure. 90% of the time, the karyotype of entire moles is 46, XX, and 10% of the time, it is 46, XY. It happen when two sperms or a haploid sperm fertilize an enucleated egg, after that divides and exclusively expresses paternal DNA. On the other hand, partial moles have the karyotype 90% of the time. (Yuk et. al., 2019).

The frequency of vesicular moles (Molar pregnancy) varies by location. Taiwan (8.0 per 1000 deliveries), Indonesia (9.9 per 1000 pregnancies), the Netherlands (0.68 per 1000), Japan (3.0 per 1000), and England (1.54 per 1000) are the countries with the highest hospital-based incidence rates. In the Egyptian population, molar pregnancies occur at a rate of 13.1 and 0.37 per 1000 live births, respectively. However, it is uncommon for spontaneous abortion specimens to be investigated for histopathologic assessment and registration in Egypt and many other underdeveloped nations. (Mahmood et al., 2019).

Genetic, ethnic, and excessive maternal age are among the risk factors for molar pregnancies (Lurain, 2019). The risk for a full mole is around twice as high for women under the age of 21 and older than 35, and it is 7.5 times greater for women over the age of 40 compared to the risk for the age group of 21 to 35. As a result, there may be a higher chance of unusual gametogenesis and fertilization of ovum produced at the end of the reproductive age. While family clustering and recurrent moles are the norm in familial biparental recurrent moles genes, prior molar pregnancy tenfold increases the probability of sporadic complete moles. (Fisher, 2021).

Women frequently complain of irregular vaginal bleeding and pelvic pressure caused by the fast enlargement of uterus due to bleeding. Internal hemorrhage, mass distention, nausea, and vomiting may sometimes produce acute abdominal pain in the first stage of pregnancy. The main indicators of hyperthyroidism are the absence of fetal heart tones, the presence of fetal parts, and the presence of a viable fetus. Rarely, shaking, irritability, and hypertension in the first stage of pregnancy might be found due to elevated level of hCG, (human chorionic gonadotrophic hormone), which weaken thyroid activation. (Lin, 2021)

Vesicular moles can cause serious complications include infection of uterus, broad infection in the blood, extremely hypotension that can result in a shock, hypertension with elevated protein level in the urine (preeclampsia), hyperthyroidism, and occasionally, the emergence of malignant conditions such as choriocarcinoma, trophoblastic tumors at the location of the placenta, and invasive moles (Gerstl et al., 2019).

Vesicular moles are managed by suction evacuation using an elastic plastic cannula while being monitored by ultrasonography. All patients must be maintained under observation after being evacuated in order to detect and treat the development of malignancies. Patients with higher serum B-HCG levels after 6 months of molar evacuation are commonly diagnosed with post-molar GTN. (Soper, 2021).

Each pregnancy has possible danger for the mother. Recognizing the warning signs of pregnancy risk is essential for improving maternal and fetal health outcomes. Vesicular moles are acknowledged as an abnormal pregnancy of clinical and epidemiological importance since they influence women of reproductive age, have multiple concomitant morbidities, and have a potentially fatal outcome. Delivering a healthy child is the main objective of each pregnancy. (O'Shaughnessy et al., 2021)

Thus, women should be knowledgeable about molar pregnancy to recognize their signs and symptoms for early detection of molar pregnancy in order to prevent the development of invasive moles and choriocarcinomas, (Benyian., 2020)

### Significant of study

Vesicular moles might not be a common health issue for woman, but when they do, they can cause dangerous complications and, in some cases, they can develop into fatal cancerous condition as invasive moles, trophoblastic tumors at the placental site, and choriocarcinomas. The experience of vesicular moles can be very distressing experience, they not only have experienced a miscarriage but also, they require ongoing medical monitoring for hCG levels

evaluated. In addition to having an influence on the family's financial condition, it also has an impact on the women's mental and psychological health. Lack of knowledge about vesicular moles and its discharge instructions results in lesser follow-up commitment, greater readmission rates, and lower satisfaction among women. (Zakaria et al., 2020).

A recent study conducted in Baghdad City by (Benyian, 2020) mentioned that knowledge of women about vesicular mole was inadequate, but there is a moderate level of relative sufficiency and mean score regarding vesicular mole knowledge. So, this level of knowledge may have an impact on women's health in the future if women do not commit to post-evacuation therapy and follow-up, using correct family planning methods, and in certain situations may become pregnant, they are having risk for vesicular mole recurrence..

A lack of knowledge & education may have a serious effect on health of women and elevated family financial cost from illness. Therefore, provide women with educational program may assist women to have knowledge and empower them to take a constructive responsibilities regard to earlier detection as possible. Additionally, they can also protect their own health and prevent subsequent problems. By this action women can assist achieving Egypt health strategy 2030.

Additionally, in Egypt, some research studies were conducted in this field. Gynecological nurse has crucial role in educating women about the signs and symptoms, necessary testing for diagnosis, monitoring, and significance of committing with follow up in order to avoid complications. Therefore, the researchers made the decision to assess the effect of a vesicular mole education program on women's knowledge & committing with following up.

### Aim of the study:

The current study aimed to assess the effect of vesicular mole education program on women's knowledge and committing with following up.

### Research hypothesis:

**H1:** Educational program about vesicular mole will improve women's knowledge and committing to following up than women who don't.

**H2:** Educational program about vesicular mole will not improve women's knowledge and committing to following up than women who don't.

### Subjects and Methods:

Subjects and methods of this study are displayed into four designs technical, operational, administrative, and statistical design.

**Technical Design**

Which involved research design, setting, study sample, and tools of data collection.

**Research Design**

A quasi-experimental design (study and control) was utilized to achieve the aim of this study.

**Setting:**

This study was carried out at the Woman Health Hospital, Assiut University Hospitals on the fourth floor (ward for high risk pregnancy) and Outpatient Clinic. The Women's Health Hospital serves the entire region of Upper Egypt. It is a building that has a six floor, five for governmental admission and one for private service.

**Study Subjects:**

100 women who were diagnosed with vesicular mole attended the mentioned setting for treatment and following up, the total sample was divided randomly into two groups, the intervention group included (50) women got routine protocol hospital care along with educational program and the control group included (50) women who got routine protocol hospital care merely, from the beginning of December 2021 to the end of December 2022.

**Sample type:**

A convenient sample was utilized regarding the following criteria:

**Inclusion criteria:**

Women with an excessively high HCG level who were diagnosed with vesicular mole based on ultrasound criteria.

**Sample size calculation**

The sample was calculated according to the following equation:

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

DEFF (Design effect) = 1    N (population) = 350  
p (Hypothesized %) = 10% +/- 5    d (tolerated margin of error) = 0.05

Z (level of confidence) = 1.96     $\alpha$  (Alpha) = 0.05  
n = 100

**Tools of the study:**

A Structured interviewing questionnaire which was designed by the researchers after reviewing the related literature. It is divided into five parts as following:

**Part I:** Included Socio- demographic data as: Name, age, residence, educational level, occupation and telephone number.

**Part II:** Data concerning the medical history as: the history of diabetes, hypertension, renal disease, cardiac disease, hepatic disease, and any other diagnosed medical disease.

**Part III:** Data concerning the obstetric history as: number of gravidity, number of parity and vesicular mole history.

**Part IV:** Assessment knowledge of women about vesicular mole:

It consisted of 13 questions about definition, kinds, signs and symptoms, risk factors, diagnosis, laboratory tests, complications, treatment, preventive measures and methods of contraception.

**Scoring system:**

Each right response was given one point and the wrong response was given zero point. The knowledge was regarded as satisfactory if the percent score is 75% (12) or more and unsatisfactory if the percent score is less than 75% (12).

**Part V:** Assessment of women's committing with following up. It included four items about the women's committing through (attend according the follow up card, take treatment as prescribed, HCG monitor as prescribed in card, use proper family planning method).

Each item was checked by the researcher as follows: done

completely = score (3), incompletely done = score (2), and not done = score (1). The total committing score was ranged from (3-12), and it was classified as follows: Not commit = (<6), Moderately commit = (6-<9), and commit = ( $\geq 9$ ).

**Tools Validity**

A panel of three professionals in the fields of maternity and newborn health nursing and obstetrics and gynecological medicine evaluated the tools for comprehensiveness and intelligibility.

**Tools Reliability**

The internal consistencies of both tools was calculated by using Cronbach's Alpha; was found 0.605.

**Ethical and legal considerations**

The nursing faculty's scientific research ethical committee gave its approval before the study could begin. The manager of the Assiut University women's hospital granted official permission. After explaining the study's goal to subjects, they gave their consent to participate in the study. The women were told of the purpose and the nature of the study, which didn't include any injury or discomfort, prior to the data collection. Additionally, they received assurances that the information would be kept private and used just for research. The researcher informed the Participants that their participation in the study was optional and that they were able to withdraw at any time.

**Operational design:**

It was displayed in two phases pilot study and field work.

**Pilot study:**

A pilot study was conducted on 10% of the total sample (10 women) to assess the clarity and applicability of the tools; no modifications were

made. A total of ten participants were recruited for the pilot study and included in the total sample.

#### Field work

Data collection of this study was achieved in three phases, pre intervention, intervention, and post intervention.

#### Pre-intervention phase.

Upon securing official permission to conduct the study. The researchers interviewed with each woman individually (study and control groups), explain the purpose of the study and method of implementation of educational program, and took their consent on participation on the study.

#### Intervention phase:

After assessment women's socio demographic data, medical and obstetric history, questions were asked to fill data regarding women's knowledge about vesicular mole as a form of pretest for all women in study and control group.

**For the intervention group:** women had attended the educational program sessions regarding vesicular mole issues as definition, kinds, signs & symptoms, risk factors, diagnosis, laboratory tests, complications, treatment, prevention, contraceptive

methods and following up committing. There are four sessions of contact with cases for giving educational program. Each interviewing session lasted 15 to 20 minutes, consisted of 5 women per session. Teaching methods included (lecture, group discussion).

**For the control group:** This group had received only routine protocol hospital care

#### Post intervention phase

All women in study and control group came to the outpatient clinic for getting routine treatment and following up. The researchers assessed women's knowledge about vesicular mole and posttest was completed by the same sheet about knowledge assessment, also assessment of women's committing with following up at outpatient clinic or through using the telephone after 3 months at the follow-up period.

#### Administrative design.

The Assiut University nursing faculty's ethical committee approved the study, and the director of the Woman Health Hospital also gave his official approval. Each participant in the study gave her informed consent, and confidentiality was maintained. The participant was able to leave the study at any time.

## Results

**Table (1): Distribution of the studied women according to personal data and medical history in the study and the control group (N=100):**

Personal data	Study group (50)		Control group (50)		P-value
	N	%	N	%	
<b>Age/ years:-</b>					
• Less than 20 year	18	36.0	20	40.0	0.604
• 20-30 year	10	20.0	12	24.0	
• More than 30 year	22	44.0	18	36.0	
<b>Mean±SD</b>	<b>30 ± 8.66</b>		<b>29.03 ± 9.79</b>		
<b>Employment</b>					
• Unemployed	42	84.0	44	88.0	1.000
• Employed	8	16.0	6	12.0	
<b>Residence:</b>					
• Urban area	16	32.0	21	42.0	0.300
• Rural area	34	68.0	29	58.0	
<b>Educational level:</b>					
• Illiterate	8	16.0	6	12.0	0.072
• Primary	3	6.0	13	26.0	
• preparatory	16	32.0	16	32.0	
• Secondary	13	26.0	10	20.0	
• University	10	20.0	5	10.0	
<b>Maternal Medical problem</b>					
• Non	40	80.0	42	84.0	0.263
• Diabetes mellitus	2	4.0	4	8.0	
• Hypertension	8	16.0	3	6.0	
• Heart disease	0	0.0	1	2.0	

**Table (2): Distribution of the studied women according to obstetric history in the study and the control group (N=100):**

Obstetric history	Study group (50)		Control group (50)		P-value
	N	%	N	%	
<b>Number of gravidity</b>					
• 1-2	22	44.0	20	40.0	0.193
• 3-5	22	44.0	27	54.0	
• More than 5 gravida	6	12.0	3	6.0	
<b>Number of Parity</b>					
• Primipara	23	46.0	24	48.0	0.841
• Multipara	27	54.0	26	52.0	
<b>History of puerperal abortion.</b>					
• Yes	16	32.0	11	22.0	0.260
• No	34	68.0	39	78.0	
<b>Number of previous VM</b>					
• Non	35	70.0	30	60.0	0.942
• Only one	10	20.0	13	26.0	
• Two	3	6.0	4	8.0	
• More than two	2	4.0	3	6.0	
<b>Mean±SD</b>	2.22±2.19		2.18±1.72		
<b>Types of molar pregnancy</b>					
• Partial	28	56.0	30	60.0	0.567
• Complete	22	44.0	20	40.0	

**Table (3): Distribution of the studied women according to correct answer regarding knowledge about vesicular mole before intervention in the study and the control group (N=100):**

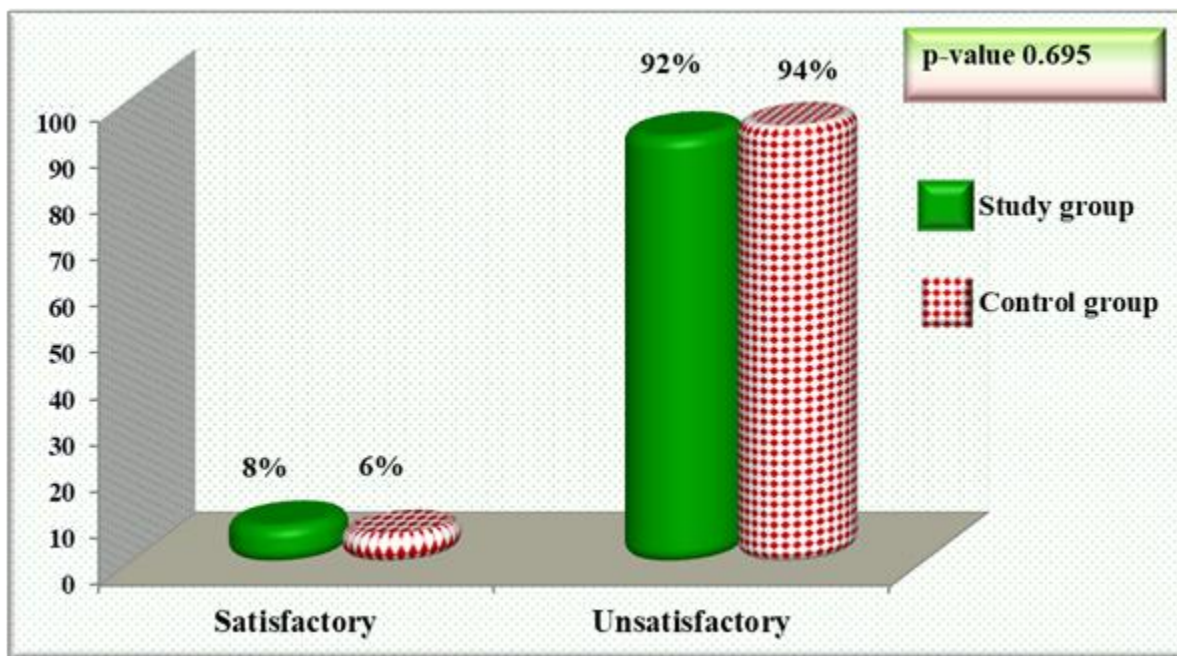
Items	knowledge about Vesicular mole				p-value
	Study group (50)		Control group (50)		
	N	%	N	%	
Vesicular mole is pregnancy outside uterus	22	44.0	24	48.0	0.688
Vesicular mole has two types	24	48.0	32	64.0	0.107
The Vesicular mole occurs as result of dysfunction in uterus	25	50.0	26	52.0	0.841
The Vesicular mole likely to occur in women with age older than 30	23	46.0	21	42.0	0.841
Infertility is a risk factor of Vesicular mole	13	24.0	18	36.0	0.280
Bleeding is a symptoms for Vesicular mole	20	40.0	14	28.0	0.205
Vesicular mole usually diagnosed at first month	13	26.0	8	16.0	0.220
HCG level in Vesicular mole is high	19	38.0	11	22.0	0.081
The early treatment of the Vesicular mole is chemotherapy	12	24.0	8	16.0	0.461
The women is advised to use contraception to avoid Vesicular mole recurrence	21	42.0	16	32.0	0.300
Patient with Vesicular mole use contraception for 6 month	16	32.0	11	22.0	0.260
Future Pregnancy for patient with Vesicular mole can be normal	24	48.0	18	36.0	0.224
The causes of Vesicular mole is Viral	16	32.0	11	22.0	0.260
The one of causes of Vesicular mole is a male factor	15	30.0	12	24.0	0.499
Vesicular mole is a Cancer	10	20.0	9	18.0	0.799
Vesicular mole can be recurrent	22	44.0	17	34.0	0.305

**Table (4): Distribution of the studied women according to correct answer regarding knowledge about Vesicular mole after intervention in the study and the control group ( N=100):**

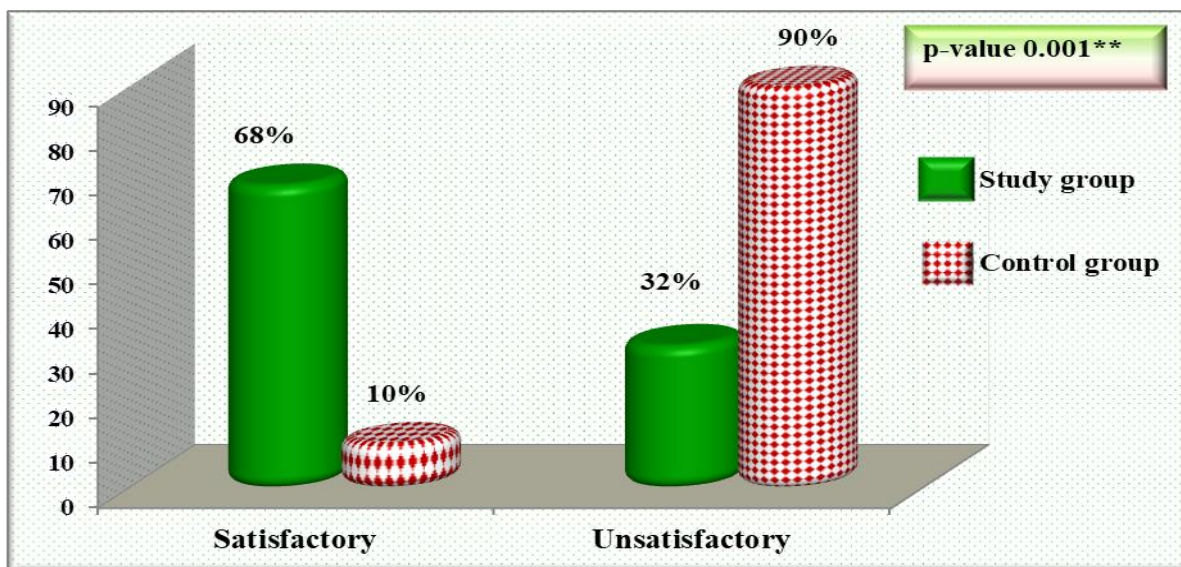
Items	knowledge about Vesicular mole disease				p-value
	Study group (50)		Control group (50)		
	N	%	N	%	
Vesicular mole is pregnancy outside uterus	50	100.0	27	54.0	<b>0.001**</b>
Vesicular mole has two types	49	98.0	30	60.0	<b>0.001**</b>
The Vesicular mole occurs as result of dysfunction in uterus	39	78.0	27	54.0	<b>0.011*</b>
The Vesicular mole likely to occur in women with age older than 30	40	80.0	24	48.0	<b>0.001**</b>
Infertility is a risk factor of Vesicular mole	38	76.0	22	44.0	<b>0.001**</b>
Bleeding is a symptoms for Vesicular mole	34	68.0	16	32.0	<b>0.001**</b>
Vesicular mole usually diagnosed at first month	36	72.0	12	24.0	<b>0.001**</b>
HCG level in Vesicular mole is high	41	82.0	13	26.0	<b>0.001**</b>
The early treatment of the Vesicular mole is chemotherapy	40	80.0	9	18.0	<b>0.001**</b>
The women is advised to use contraception to avoid Vesicular mole recurrence	35	70.0	17	34.0	<b>0.001**</b>
Patient with Vesicular mole use contraception for 6 month	34	68.0	12	24.0	<b>0.001**</b>
Future Pregnancy for patient with Vesicular mole can be normal	38	76.0	19	38.0	<b>0.001**</b>
The causes of Vesicular mole is Viral	37	74.0	11	22.0	<b>0.001**</b>
The one of causes of Vesicular mole is a male factor	41	82.0	14	28.0	<b>0.001**</b>
Vesicular mole is a Cancer	40	80.0	12	24.0	<b>0.001**</b>
Vesicular mole can be recurrent	47	94.0	19	38.0	<b>0.001**</b>

(\*\*) highly statistical significant difference

(\*) statistical significant difference



**Figure (1): Total knowledge levels about Vesicular mole before intervention in the study the control group (N=100):**



(\*\*) highly statistical significant difference

Figure (2): Total knowledge levels about Vesicular mole after intervention in the study the control group (N=100):

Table (5): Distribution of the studied women according to their committing level with follow up after implementing of educational program in the study and the control groups (N=100):

Items	Study group			Control group			p-value
	Completely commit	Fair Commit	Non commit	Completely commit	Fair commit	Non commit	
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	
Attend follow up visit	34(68.0)	11(22.0)	5(10.0)	16(32.0)	12(24.0)	22(44.0)	0.001**
Committing with treatment after evacuation	36(72.0)	10(20.0)	4(8.0)	17(34.0)	13(26.0)	20(40.0)	0.001**
HCG monitoring	40(80.0)	8(16.0)	2(4.0)	26(32.0)	12(24.0)	12(24.0)	0.001**
Use FP method	49(98.0)	0(0.0)	1(2.0)	30(60.0)	9(18.0)	11(22.0)	0.001**

(\*\*) highly statistical significant difference

Table (6): Relationship between the studied women’s level of knowledge before intervention in the study and control and personal data and medical history (N=100):

personal data and medical problem	The study group		PV1	The control group		PV2
	Satisfactory (4)	Unsatisfactory (46)		Satisfactory (3)	Unsatisfactory (47)	
	N (%)	N (%)		N (%)	N (%)	
<b>Age/ years:-</b> Less than 20 year 20-30 year More than 30 year	0 (0.0) 1(25.0) 3(75.0)	5(10.9) 34(73.9) 7(15.2)	<b>0.016*</b>	0(0.0) 2(66.7) 1(33.3)	4(8.5) 41(87.2) 2(4.3)	0.113
<b>Employment</b> Unemployed Employed	2(50.0) 2(50.0)	40(87.0) 6(13.0)	0.053	2(66.7) 1(33.3)	42(89.4) 5(10.6)	0.241
<b>Residence</b> Urban area Rural area	1(25.0) 3(75.0)	15(32.6) 31(67.4)	0.754	2(66.7) 1(33.3)	19(40.4) 28(59.6)	0.372
<b>Educational level:</b> Illiterate Primary preparatory Secondary University	0(0.0) 0(0.0) 0(0.0) 2(50.0) 2(50.0)	8(17.4) 3(6.5) 16(34.8) 11(23.9) 8(17.4)	0.261	0(0.0) 0(0.0) 0(0.0) 1(33.3) 2(66.7)	6(12.8) 13(27.7) 16(34.0) 9(19.1) 3(6.4)	<b>0.012*</b>
<b>Medical history</b> Non Diabetes mellitus Hypertension Heart Diseases	2(50.0) 0(0.0) 2(50.0) 0(0.0)	38(82.6) 2(4.3) 6(13.1) 0(0.0)	0.149	2(66.7) 1(33.3) 0(0.0) 0(0.0)	40(85.1) 3(6.4) 3(6.4) 1(2.1)	0.403

(\*\*) highly statistical significant difference

(\*) statistical significant difference

**Table (1):** Shows no statistically significant differences are found between the two groups in all terms of their socio-demographic characteristics. This table illustrates that the highest percentage (70.0% of study group and 86.0% of control group) of women's age were (20-30) years.

**Table (2):** Reveals no statistically significant differences are found between the intervention and control groups in terms of their obstetric history at  $p > 0.05$ . According to type of vesicular mole, it was noticed that more than half of them (56.0%, 60.0%) of the intervention and the control group respectively had partial vesicular mole.

**Table (3):** Shows distribution of the studied groups according to their knowledge about vesicular mole before applying educational program, and noticed that there was no statistically significant differences are found in all items of women's knowledge between the intervention and control groups ( $p > 0.05$ ).

**Table (4):** Reveals distribution of the studied groups according to their knowledge about vesicular mole immediately after applying educational program, and found that there were statistically significant differences in all items of women's knowledge between the intervention and the control groups ( $p < 0.05$ ).

**Figure (1):** Clarifies total knowledge levels about vesicular mole between study and control group before intervention, where found that ( 92% , 94%) were unsatisfactory in the intervention and the control group respectively .

**Figure (2):** Clarifies total knowledge levels about vesicular mole between study and control group after intervention, where found that ( 68%) were satisfactory in the intervention compared with (10%) in the control group .

**Table (5):** shows statistically significant differences are found in all items of women's committing between the intervention and control groups after applying educational program ( $p < 0.05$ ).

**Table (6):** Illustrates relationship between the studied women's level of knowledge before intervention in the study and control groups and personal data and medical history. This table shows that there are statistical. Significant difference ( $p$ - value 0.012) between women's knowledge about vesicular mole and educational level only.

### Discussion:

The most prevalent kind of gestational trophoblastic disease (GTD), vesicular mole pregnancy, is caused by abnormal placenta maturation. Rather, a tumor develops inside the uterus, causing the placenta to change into a mass of fluid-filled sacs resembling cysts. Molar pregnancies account for one in one thousand pregnancies (0.1%). This kind of pregnancy

often fails to continue beyond the first trimester because the placenta frequently is unable to provide any nutrition or growth for a baby. Occasionally, it may also put the mother's health in hazards. (Naif Almansour, 2021)

The current study aimed to evaluate the effect of educational program about vesicular mole on women's knowledge and committing with follow up. Statistically significant differences there were found in all items of women's knowledge between the intervention and control groups, the intervention group were more commit with VM follow up.

Regarding to the age of studied sample, VM occurs in the extremities of age this finding is similar with study by Lepore, & Conran, (2020) titled "educational case: hydatidiform, molar pregnancy" which indicated that molar pregnancies are more common at the extremes of childbearing age. The chance of getting GTD is 1.5 times higher in women under the age of 15 and 20 to 40 times higher in women over the age of 45 than women aged 20 to 40.

The current study noticed that the more than half of the studied sample had no history of VM, and around one quarter had previous history of HM, this finding was in the same line with Liu et. al., (2021) who carried out a study about " The effect of prophylactic chemotherapy on treatment outcome of post molar gestational trophoblastic neoplasia " stated that the effect of prophylactic chemotherapy on the outcome of neoplasia treatment post molar gestational trophoblastic neoplasia (PMGTN).

According to knowledge of women regarding VM at the post and follow up period, the current study found statistically significant differences in all items of women's knowledge between the intervention and control groups.

This is in line with Saadoon, et al 2023, who investigated the impact of supportive educational guidelines about Hydatidiform Mole on women's knowledge, satisfaction, compliance with treatment and follow up and found that there was statistically significant differences in all items of women's knowledge between the study and the control groups with regard to women's knowledge about HM at the post and follow up period.

This is consistent with Saadoon, et al 2023, who investigated the effect of supportive educational guidelines about Hydatidiform Mole on knowledge of women, satisfaction, adherence to treatment, and follow-up, which discovered statistically significant differences in all items of women's knowledge between the study and the control groups with regards to knowledge of women about HM at the post and follow-up period.

On the contrary, Benyian, (2020) who carried out a study at Maternity Hospitals in Baghdad City about"



assessment of women's knowledge regarding hydatidiform mole" and showed that women's understanding of HM was insufficient. This shows how the educational program used helped to clarify and correct misunderstanding about VM. It is evident from the study sample that they become more insistent on using proper contraception, and committing with follow up schedule.

The current study revealed that there was satisfactory level of knowledge among women in the intervention group after applying the educational program about VM, this means that educational program helped enhance women's knowledge and committing to following up. All this is reflected that the educational program gave the study group more support as well as it had no adverse effects and cleared up any misunderstanding about VM so, they become more knowledgeable, aware and able to play a role in the control and management of VM & saved their life.

This is in agreement with **Victoria et al., (2018)** who conducted study about "Experience with the use of an online community on facebook for brazilian patients with gestational trophoblastic disease". and found that healthcare professionals should think about forming of new partnerships of collaboration and advocacy with these groups, correct misinformation and provide a valuable resource for medical education. This is also in agreement with **Ghassemzadeh et al., (2022)** who conducted a study about "Hydatidiform Mole" and found that continuing education activities play a role in the management of patients effectively, also, **Langhe et al., (2018)** in their study about "Atypical presentation of molar pregnancy" mentioned that early recognition of the condition saves lives and decreases morbidity. Finally, the result of this study supported the hypothesis that educational program about VM improved knowledge of women regarding VM. As educational program had no adverse effects and corrected misconception that related to the disease process as a helpful intervention and clarified the provided health services from hospital to be utilized. So, the current study aim was accomplished.

### Conclusion

From the current study findings, it could be concluded that the educational program about vesicular mole improved knowledge of women and committing to following up in the intervention group relative to the control group.

### Recommendations:

In the light of the findings of this study, the following recommendation is suggested:

- Program education regarding vesicular mole should be implanted as a part of the standard hospital care

to improve women's knowledge and committing with follow up.

- Replicate this study on another place and large sample size for generalization.

### References:

- **Benyian F., (2020):** Assessment of Women's Knowledge Concerning Hydatidiform Mole at Maternity Hospitals in Baghdad City. *Indian Journal of Forensic Medicine & Toxicology*, October-December 2020, Vol. 14, No. 4: 1021-1027.
- **Fisher RA, & Maher GJ. (2021):** Genetics of gestational trophoblastic disease. *Best Pract Res Clin Obstet Gynaecol.*;S152 1–6934(21):00011.
- **Gerstl B, Sullivan E, Vallejo M, Koch J, Johnson M, Wand H, Webber K, Ives A, & Anazodo A. (2019):** Reproductive outcomes following treatment for a gynecological cancer diagnosis: a systematic review. *J Cancer Surviv. Apr*;13(2):269-281.
- **Ghassemzadeh S, Farci F, & Kang M. (2022):** Hydatidiform Mole, May 2, national center for biotechnology information, (<http://creativecommons.org/licenses/by/4.0/>).
- **Langhe, R., Muresan, B., Akpan, E., & Abdul Wahab, N. (2018):** Atypical presentation of molar pregnancy. *BMJ case reports*, 2018, bcr2018225545. <https://doi.org/10.1136/bcr-2018-225545>.
- **Lepore A , & Conran R (2021):** Educational Case: Hydatidiform, Molar Pregnancy, January 28, 2021 Case Report, <https://doi.org/10.1177/2374289520987256>.
- **Lin, M., Chen, J., Liao, B., He, Z., Lin, S., & Luo, Y. (2021):** When a vesicular placenta meets a live fetus: case report of twin pregnancy with a partial hydatidiform mole. *BMC Pregnancy and Childbirth*, 21(1), 1-9
- **Liu, Y, Ye, Y, Cheng, X, Lu, W, Xie, X, Wang, X, & Li, X, (2021):** The effect of prophylactic chemotherapy on treatment outcome of postmolar gestational trophoblastic neoplasia, *research square*, 25(2), <https://www.researchsquare.com/article/rs-226761/v1> DOI: <https://doi.org/10.21203/rs.3.rs-226761/v1>
- **Lurain, J. (2019):** Hydatidiform mole: Recognition and management. *Contemporary OB/GYN*, 64(3), 12-17
- **Mahmood, F., Hashim, G., Mahmood AL-Hakak, Z., & Faris, S. (2019):** Nurses' Knowledge Toward Hydatidiform Mole Pregnancy in The Women's Hospital and Obstetrics in the Holy City of Kerbala. *Indian Journal of Public Health Research & Development*, 10(4). p1525-1531
- **Mittal S, & Menon S. (2019):** Interstitial pregnancy mimicking an invasive hydatidiform mole. *Am J Obstet Gynecol*2019;220:501.

- **Naif Almansour, S. (2021):** Overview on the updates in vesicular molar pregnancy. *Open J Clin Med Images*, 1(1), 1009.
- **O'Shaughnessy, E., O'Donoghue, K., & Leitao, S. (2021):** Termination of pregnancy: Staff knowledge and training. *Sexual & Reproductive Healthcare*, 28, 100613. <https://doi.org/10.1016/j.srhc.2021.100613>
- **Saadoon O.M, (2023):** Effect of Supportive Educational Guidelines about Hydatidiform Mole on Women's Knowledge, Satisfaction, Compliance with Treatment and Follow up ,*Egyptian Journal of Health Care*, 2023 EJHC Vol. 14. No.1
- **Sarmadi S, (2019):** Inter-observer variability in the histologic criteria of diagnosis of hydatidiform moles. *Malays J Pathol*; 41:15–24.
- **Soper, (2021):** Gestational Trophoblastic Disease: Current Evaluation and Management. *Obstetric Anesthesia Digest*, 41(4), 168–169. <https://doi.org/10.1097/01.aoa.0000796088.25096.4b>
- **Victoria Diniz M, Sun SY, & Barsottini C, (2018):** Experience With the Use of an Online Community on Facebook for Brazilian Patients With Gestational Trophoblastic Disease: Netnography Study. *J Med Internet Res.*; 20(9):e10897.
- **Yuk JS, (2019):** Incidence of gestational trophoblastic disease in South Korea: a longitudinal, population-based study. *PeerJ.*;20(7):e6490
- **Zakaria A, (2020):** Incidence and outcome of gestational trophoblastic disease in Lower Egypt. *Afri Health Sci.*; 20(1):73-82. <https://dx.doi.org/10.4314/ahs.v20i1.12>.