Results

The results of the study are presented in the following sequence of figure & tables

PART I.   General characteristics of the studied nurses *(Figure 1)*

PART II.   Nurses' knowledge about nursing ethics in obstetrics and gynecology department *(Table 1)*

PART III.   Nurses' performance regarding nursing ethics in obstetrics and gynecology department *(Table 2-4)*

PART IV.   Nurses' attitude regarding nursing ethics in obstetric and gynecology department *(Table 5)*

PART V.   Relation between nurses' total knowledge regarding nurses' ethics and their general characteristics. *(Table 6)*

         Relation between nurses' total practice regarding nurses' ethics and their general characteristics. *(Table 7)*

         Relation between nurses' total attitude, regarding nurses' ethics and their general characteristics. *(Table 8)*

PART VI.   Correlation between nurses' total knowledge and nurses' total attitude scores regarding nurses' ethics in obstetrics and gynecology department. *(Table 9)*

         PART VII. Client satisfaction about nurses' performance before and after intervention in obstetrics and gynecology department. *(Table 10)*
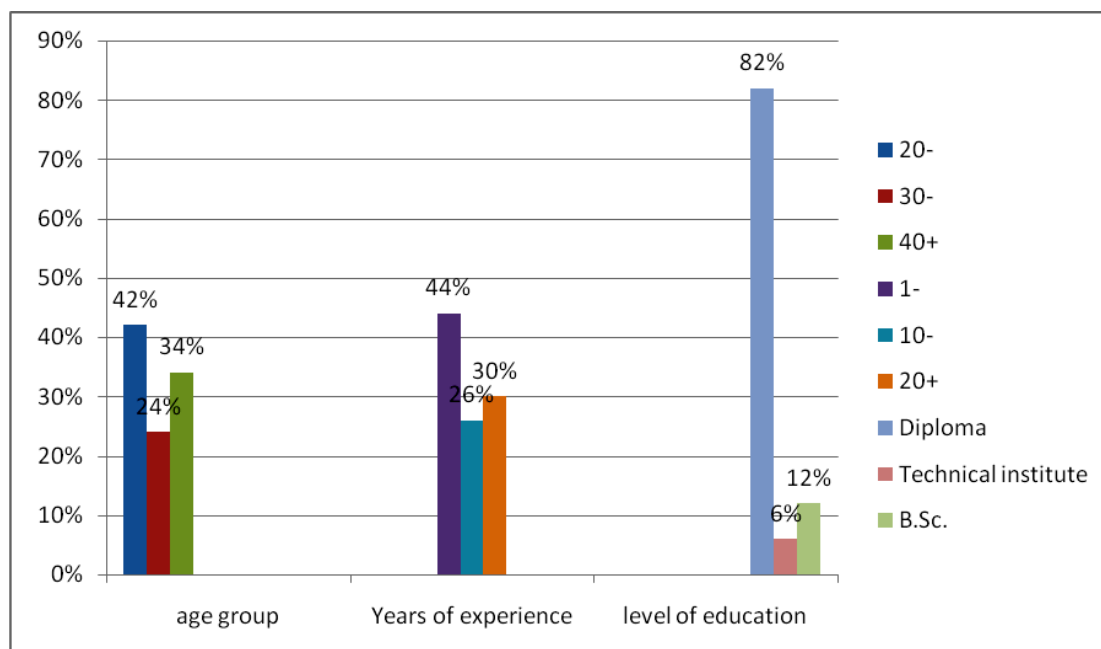
Part I: General Characteristics of studied Nurses

Figure (1): General characteristics of the study subjects

Figure (1) describes the general data of the studied nurses, where most of them (42%) in the age group of 20 to less than 30 years with mean age 36.47 ± 10.91 years, while the majority (82%) of them had Diploma degree, and the mean years of their experience was 18.67 ± 10.45.

PART II: Nursing knowledge about ethics in obstetrics and gynecology department

Table (1): Nursing knowledge about ethics in obstetrics and gynecology department (n=50)

Items	Pre-Intervention				Post-Intervention				x^2	p
	Correct		Incorrect		Correct		Incorrect			
	No	%	No	%	No	%	No	%		
• Definition of nursing ethics	11	22.0	39	78.0	42	84.0	8	16.0	38.58	≤ 0.001**
• Ethics of nursing	12	24.0	38	76.0	43	86.0	7	14.0	38.83	≤0.001**
• privacy Procedures	30	60.0	20	40.0	41	82.0	9	18.0	5.88	≤0.001**
• Nurse's ethics towards nurse profession	15	30.0	35	70.0	45	90.0	5	10.0	37.50	≤ 0.001**
• Nurse's ethics to the community	13	26.0	37	74.0	45	90.0	5	10.0	42.04	≤ 0.001**
• Nurse's ethics towards herself	17	34.0	33	66.0	46	92.0	4	8.0	36.08	≤ 0.001**
• Hospital discharge information	16	32.0	34	68.0	43	86.0	7	14.0	30.14	≤ 0.001**
• Pre operative guidelines given to patient	17	34.0	33	66.0	46	92.0	4	8.0	36.08	≤ 0.001**
• Nursing ethics among the nurse and her colleagues	16	32.0	34	86.0	44	88.0	6	12.0	32.67	≤ 0.001**

statistical significant (P ≤ 0.05)   **highly statistical significant (P ≤ 0.001)*

Table (1) shows a highly significant improvement of nurse's knowledge one month after intervention regarding nursing ethics in obstetrics and gynecology department (p value ≤ 0.001).

PART III: *Nurses' performance regarding nursing ethics in obstetrics and gynecology department*
Table (2) Technical procedure's ethics in obstetrics and gynecology department (n=50).

Items	Pre-Intervention				Post - Intervention				X^2	*p*
	Done Correctly		Not done		Done Correctly		Not done			
	No	%	No	%	No	%	No	%		
1. Integration of ethics in nurses practice	10	20.0	40	80.0	46	92.0	4	8.0	52.60	≤ 0.001**
2. Nurses utilize safety measure	12	24.0	38	76.0	42	84.0	8	16.0	26.41	≤ 0.001**
3. Nurses provide proper position for mothers during medical examination	9	18.0	41	82.0	46	92.0	4	8.0	55.31	≤ 0.001**
4. Nurses keep her voice low	16	32.0	34	68.0	28	56.0	22	44.0	5.84	=0.0156*
5. Nurses stand on the right of the patient while giving nursing care	9	18.0	41	82.0	44	88.0	6	12.0	49.18	≤ 0.001**
6. Nurses apply proper infection prevention technique before, during and after any nursing care	11	22.0	39	78.0	44	88.0	6	12.0	44.00	≤ 0.001**
7. Explains any procedure to mothers before do it	22	44.0	28	56.0	48	96.0	2	4.0	32.19	≤ 0.001**
8. Provides privacy	5	10.0	45	90.0	16	32.0	34	68.0	14.59	≤ 0.001**
9. Wash and swab the perineal area before vaginal examination and proper infection control procedures	6	12.0	44	88.0	27	54.0	23	46.0	13.33	≤ 0.001**
10. Instruct patient to obtain her consent to attend physician exam.	13	26.0	37	74.0	41	82.0	9	18.0	26.13	≤ 0.001**
11. Provide quite environment and do not disturb mother while sleeping	17	34.0	33	66.0	44	88.0	6	12.0	22.09	≤ 0001**.

statistical significant difference (P ≤ 0.05)   *highly statistical significant difference (P ≤ 0.001)*

Table (2) shows highly significant difference between pre and post intervention (p≤ 0.001) in all items except for the item of "nurses keep their voices low" it shows only significant difference (*p* value = 0.0156).

Table (3) Instrument preparation in obstetrics and gynecology department (n=50).

Items	Pre-Intervention				Post - Intervention				X^2	P
	Done Correctly		Not done		Done Correctly		Not done			
	No	%	No	%	No	%	No	%		
1-Nurses ensuring adequate equipment and excluding spoiled instruments	7	14.0	43	86.0	48	96.0	2	4.0	67.92	≤0.001**
2-Isolating the contaminated equipment between the patients	13	26.0	37	74.0	47	94.0	3	6.0	48.17	≤0.001**
3-Changing punctured gloves and immediate reporting to the director	23	46.0	27	54.0	48	96.0	2	4.0	30.35	≤0.001**

**highly statistical significant difference (P ≤ 0.001)

Table (3) shows highly significant improvement one month after intervention compared to pre intervention as regards handling of equipment in obstetrics and gynecology department ($p < 0.001$).

Table (4): Setting elements in obstetrics and gynecology department (n=50).

Items	Pre-Intervention				Post - Intervention				X^2	P
	Done Correctly		Not done		Done Correctly		Not done			
	No	%	No	%	No	%	No	%		
1-Nurses always adhere with the utilization of universal precautions to minimize infections	10	20.0	40	80.0	46	92.0	4	8.0	52.60	≤ 0.001**
2-Nurses providing adequate lighting and good ventilation in the delivery room	15	30.0	35	70.0	38	76.0	12	24	21.24	≤ 0.001**
3-Prevent air draft	9	18.0	41	82.0	42	84.0	8	16.0	43.58	≤ 0.001**
4-Provide cleanliness of room between deliveries	12	24.0	38	76.0	41	82.0	9	18.0	33.76	≤ 0.001**
5-Prevent examination of patients in the waiting area	33	66.0	17	34.0	46	92.0	4	8.0	10.19	=0.0014*
6-Prevent presence of visitors or others during medial examination	10	20.0	40	80.0	47	94.0	3	6.0	55.85	≤ 0.001**
7-Insure proper mobile light	5	10.0	45	90.0	44	88.0	6	12.0	60.86	≤ 0.001**

statistical significant difference (P ≤ 0.05)   **highly statistical significant difference (P ≤ 0.001)*

Table (4) shows highly significant difference between pre and post intervention (*p*<0.001) for all items of nurses' performance of settings elements in obstetrics and gynecology department except for the item of "Prevent examination of patients in the waiting area" it shows only significant difference (*p*=0.0014).

PART IV: Nursing Attitude Regarding Ethics in Obstetric and Gynecology Department

Table (5): Nursing attitude regarding ethics in obstetrics and gynecology department (n=50).

Items	Pre-Intervention						Post-Intervention						X^2	P
	Disagree		Uncertain		Agree		Disagree		Uncertain		Agree			
	No	%	No	%	No	%	No	%	No	%	No	%		
1. Nursing ethics utilized in delivery room	46	92.0	0	0.0	4	8.0.	0	0.0	0	0.0	50	100.0	Invalid sig.test	
2. Orient mother with delivery room and staff	49	98.0	0	0.0	1	2.0	4	8.0	3	6.0	43	86.0	81.30	≤ 0.001**
3. Nurses explain any procedures before doing it	22	44.0	4	8.0	24	48.0	7	12.0	3	6.0	40	82.0	11.90	=0.0026*
4. Nurses obtain full history before mother's admission the delivery room	34	68.0	16	32.0	0	0.0	5	10.0	2	4.0	43	86.0	75.45	≤ 0.001**
5. Nurses listen carefully and with respect mother's complain	32	64.0	0	0.0	18	36.0	3	6.0	3	6.0	44	88.0	37.12	≤ 0.001**
6. Provide confidentiality of the women	39	78.0	0	0.0	11	22.0	5	10.0	2	4.0	43	86.0	47.24	≤ 0.001**
7. Reassurance to the mother during nursing care	33	66.0	1	2.0	16	32.0	5	10.0	3	6.0	42	84.0	33.29	≤ 0.001**
8. Providing doctor's order immediately	45	90.0	1	2.0	4	8,0	7	14.0	3	6.0	40	80.0	58.22	≤ 0.001**

Items	Pre-Intervention						Post-Intervention						X²	P
	Disagree		Uncertain		Agree		Disagree		Uncertain		Agree			
	No	%	No	%	No	%	No	%	No	%	No	%		
9. Collaborating with members of the health team	27	54.0	0	0.0	23	46.0	0	0.0	6	12.0	44	88,0	39.58	≤0.001**
10. Keeping patient's articles in safe and clean place	28	56.0	14	28.0	8	16.0	1	2.0	3	6.0	46	92.0	59.0	≤0.001**

*statistical significant difference (P ≤ 0.05)   **highly statistical significant difference (P ≤ 0.001)

Table (5) shows highly significant improvement in nurses' attitude after implementing the ethics guidelines compared to pre intervention in all attitude items ($p \leq 0.001$) except for the item of "Necessary to explain nursing and medical care before started" it shows only significant difference (p=0.0026).

Part V: Relations between nurses' total knowledge, performance, and attitude and nurses' general characteristics.

Table (6): Relation between nurses' total knowledge and nurses' general characteristics (n=50).

Items	knowledge				Significance	
	Pre-intervention		Post-intervention			
Age (years)	Correct	Incorrect	Correct	Incorrect	X^2	p
20-	2	19	19	2	27.52	0.0000**
30-	0	12	11	1	20.31	0.0000**
40+	2	15	17	0	26.84	0.0000**
Level of education	Correct	Incorrect	Correct	Incorrect	X^2	P
Diploma	37	4	38	3	56.42	0.0000**
Technical institute	0	3	3	0	2.67^+	0.1024
B.Sc.	6	0	6	0	8.33^+	0.00389*
Years of experience	Correct	Incorrect	Correct	Incorrect	X^2	P
1-	6	16	15	7	7.38	0.0065*
10-	3	10	11	2	9.90	0.0016*
20+	5	10	13	2	8.89	0.0028*

*Statistical significant (P <0.05)   ** highly statistical significant (P ≤ 0.001)
$^+$Yate's corrected x^2

Table (6) shows a highly statistically significant difference between nurse's total knowledge scores and age groups, educational level, Diploma (*p=0.0000*), Years of experience groups significant (Yate's corrected x^2) difference in B.Sc. groups (*p=0.00389*), and insignificant difference in Technical Institute groups (*p=0.1024*).

Table (7): Relation between nurses' total performance scores and nurses' general characteristics (n=50)

Variable	Performance				Significance	
	Pre-intervention		Post-intervention			
Age	Good	Poor	Good	Poor	x^2	p
20-	4	17	18	3	18.71	0.000**
30-	0	12	11	1	20.31	0.000**
40+	5	12	14	3	9.65	0.001**
Level of education	Good	Poor	Good	Poor	x^2	p
Diplom	2	39	38	3	63.26	0.000**
Technical institute	0	3	3	0	2.67+	0.1024
B.SC	2	4	5	1	1.37+	0.2415
Years of experience	Good	Poor	Good	Poor	x^2	p
1-	8	14	17	5	7.5	0.006*
10-	5	8	11	2	5.85	0.015*
20+	4	11	12	3	8.57	0.003*

Statistical significant (P <0.05)   ** highly statistical significant (P ≤0.001)*
+*Yate's corrected x^2*

Table (7) shows a highly statistically significant difference between nurse's total performance scores and age groups, educational level Diploma (*p*=0.0000), significant difference in Years of experience groups and insignificant (Yate's corrected x^2) difference in Technical Institute and B.Sc. groups (*p*=0.1024 & 0.2415 respectively). Moreover, there was statistical significance in all groups of years of experience.

Table (8): Relation between nurses' total attitude scores and nurses' general characteristics (n=50)

Items	Attitude				Significance	
	Pre-intervention		Post-intervention			
Age	positive	negative	positive	negative	x^2	p
20-	1	20	20	1	34.38	0.000**
30-	1	11	11	1	16.67	0.000**
40+	0	17	16	1	30.22	0.000**
Level of education	positive	negative	positive	negative	x^2	p
Diploma	3	38	34	7	47.33	0.000**
Technical institute	1	2	3	0	0.75+	0.3864
B.Sc.	1	5	4	2	1.37+	0.24156
Years of experience	positive	negative	positive	negative	x^2	p
1-	5	17	19	3	17.27	0.0002**
10-	3	10	9	4	5.57	0.0182*
20+	3	12	12	3	10.80	0.0010**

Statistical significant (P <0.05)   ** highly statistical significant (P ≤ 0.001)*
+ Yate's corrected x^2

Table (8) shows highly statistically significant difference between nurses' total attitude score and nurses' age groups and years of experience groups except the group (10-) it shows only significant difference (*p*=0.0182). As regards the educational level of the nurses there was highly significant difference in Diploma group (*p*=0.0000), and insignificant difference in Technical Institute and B.Sc. groups (*p*=0.3864 and *p*=0.24156 respectively).

Part VI: Correlation between nurses' total knowledge and total attitude scores regarding nursing ethics in obstetrics and gynecology department.

Table (9): Correlation between nurses' total knowledge and total attitude regarding nursing ethics in obstetrics and gynecology department.

Attitude	Knowledge			
	Pre-program		Post-program	
	r	p	r	p
Pre-program	-0.075	>0.05	--	--
Post-program	--	--	0.82	⬚0.001**

Statistical significant (p <0.05)   *** highly statistical significant (P ≤ 0.001)*

Table (9) shows significant positive correlation (*r = 0.82 & p≤ 0.001)* between nurses' total knowledge and nurses' total attitude scores one month after intervention regarding nursing ethics at different times of assessment. Meanwhile, it shows negative insignificant correlation between nurses' total knowledge and nurses' total attitude scores before the intervention *(r = -0.075 & p>0.05).*

Part VII: Table (10): Client satisfaction about nurse's performance (n=20).

Client satisfaction	Before				After				Significant test	
	Satisfied		Not		Satisfied		Not		X^2	P-value
	No	%	No	%	No	%	No	%		
Considerate, receiving and respectful care	4	20.0	16	80.0	12	60.0	8	40.0	33.33	< 0.001**
Nurses orient mothers about the place & name of the health team members	7	35.0	13	65.0	19	95.0	1	5.0	79.12	< 0.001**
Nurses instructing the mothers with a simple and understandable manner	11	55.0	9	45.0	17	85.0	3	15.0	21.43	< 0.001**
Nurses call the mothers in a suitable gentle tone	7	35.0	13	65.0	14	70.0	6	30.0	24.56	< 0.001**
Nurses listening & responding to mother's complaints	8	40.0	12	60.0	8	40.0	12	60.0	0.00	1.000^{NS}
Nurses explain procedure intervention	2	10.0	18	90.0	12	60.0	8	40.0	54.95	< 0.001**
Nurses should be informed by any change or progress during stages of labor	1	5.0	19	95.0	15	75.0	5	25.0	102.0	< 0.001**
Room ventilation and good lightening	2	10.0	18	90.0	10	50.0	10	50.0	38.10	< 0.001**

*N.S (p>0.05)   *Significant (p< 0.05)   **Highly significant (p< 0.001)*

Table (10) explains the impact of ethics guidelines on the women's satisfaction (client satisfaction). There was highly significant improvement of women's satisfaction after applying the ethics guideline (*p< 0.001*) except for the item of "nurses listening & responding to complaints" it shows insignificant statistical difference (x^2 = zero & *p=1.00*).