RESULTS

The Results of this study are presented in the following sequences.

Part 1:

Description of the sample by their socio-demographic characteristics and the family history (1-2)

Part 11:

Disruptions of the women's according to their obstetric profile (1-7)

Part 111:

Disruptions of the women's according to history of infertility, diagnostic investigation (8-10).

Part IV:

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Part VIII:

Relationship between previous surgery for infertility treatment and the outcome of IVF (21-27).

Part 1: Description of the sample by their socio-demographic characteristics and the family history.

Table (1): Distribution of the subject according to their Sociodemo-graphic characteristics.

Variable	NO	%
***Age frequency**		
21-25 years	12	20.0
26-30	23	38.3
31-35	17	28.3
36- 40	8	13.4
* Mean age ±SD (29.88 ± 4.78 years).		
Level of education		
-Illiterate	10	16.7
-primary education	15	25.0
-Secondary education	26	43.3
-university education	9	15.0
Residence		
-Urban	25	41.7
-Rural	35	58.3
Occupation		
-Working	18	30.0
-House wife	42	70.0
Family income		
-Low	14	23.3
-moderate	24	40.0
-High	22	36.7
*** Mean income ±SD (495.5 ± 919)**		

Age:

The age range of the sample was 21-35 year old with mean (29.88± 4.78 years) among the women undergoing in- vitro fertilization (table 1).

Level of education:

Regarding educational level (table, 1) revealed that 43.3% of the studied group received secondary education. 25.0 % of sample received primary education. 16.7% of studied group illiterate. While 15 % of them received university education.

Residence:

Regarding residence (table, 1) revealed that more than half of the studied group that represent 58% of sample live at rural area. While 41.7% of the sample live at urban area.

Occupation:

Regarding occupation (table, 1) revealed that 70% of the studied sample was housewife, while 30% of them respectively were workers.

Family income:

Regarding Family income (table, 1) revealed that 40% of the studied sample has moderate family income, and 23.3% of them with low family income, 36.7% of them with high family income.

Table (2): Family history of chronic diseases, hereditary diseases and history of infertility.

Variable	No	%
***Chronic Diseases**		
*** Yes**	40	66.6
-Diabetes	15	(16.7)
-Hypertension	22	(15.0)
-Heart disease	9	(36.7)
-Rheumatism	10	(25.0)
***No**	20	33.3
***Hereditary diseases**		
-Positive	0	0
- Negative	60	100.0
***Family history of infertility**		
-Positive		
-Negative	21	35.0
	39	65.0

In relation to family history (table, 2) reveals that 66.6% of the participants their family had positive history of chronic disease such as heart disease by 36.7%, rheumatic disease by 25.0%, diabetic disease by 16.7% and hypertension by 15.0%. The majority of the participants their family had negative history of hereditary diseases. At the same time 65.0% of participants indicated no family history of infertility.

Part 11: Disruptions of the women's according to their obstetric profile.

Table (3): Distribution of the participants according to their obstetric history and menstrual character.

Variable	No (Total = 60)	% (Total = 100.0)
***Weight** /kg		
- 65-75	19	31.7
- 76-85	26	43.3
- 86-95	15	25.0
*** Mean weight ± SD (75.13 ±7.66 kg).**		
Menstrual character		
*** Age of menarche**		
- 11 years	4	6.7
- 12 years	18	30.0
- 13 years	17	28.3
- 14 years	15	25.0
- 15 years	6	10.0
*** Rhythm of menstrual cycle:**		
- regular	44	73.3
-Irregular	16	26.7
*** Mean age at menarche ± SD (13.02 ± 1.11 years)**		

In according to obstetric history and menstrual character (Tables, 3) revealed that the mean weight ± SD of the recruited sample (75.13 ±7.66 kg). As regarding to menstrual cycle mean age at menarche ± SD (13.02 ± 1.11 years) and the majority of the sample had regular

menstrual cycle that represent 73.3%, while 26.7 of them had irregular menstrual cycle.

Table (4): Distribution of the participant's according to their menstrual character.

Variable	NO (Total = 60)	% (Total = 100.0)
***duration of menstrual cycle /days**		
- 3	15	25.0
- 4	13	21.7
- 5	14	23.3
- 6	13	21.7
- 7	5	8.3
****interval of menstrual cycle/ days**		
≤ 25	9	15.0
28	17	28.3
29	9	15.0
30	16	26.7
>30	9	15.0
***Amount of menstrual blood**		
- Low	5	8.3
- Moderate	43	71.7
- Heavy	12	20.0
*** Mean no. of menstrual duration ± SD (4.67 ± 1.3 days)**		
**** Mean no. of menstrual interval ± SD (28.52 ± 4.23 days).**		

Table (4) show that mean number of menstrual duration ± SD of study group (4.67 ± 1.3 days). And mean number of menstrual interval/ days ± SD (28.52 ± 4.23 days). The majority of sample had moderate menstrual blood flow that represent 71.7 %, 20% of them with heavy menstrual blood and 8.3 % had low menstrual blood.

Table (5): Distribution of the participants according to menstrual Problem.

Variable	NO (Total = 60)	% (Total =100)
*** Bleeding spots between menses:**		
- Yes	39	35.0
- No	21	65.0
Menstrual pain		
- Yes	58	96.7
- No	2	3.3
*** Degree of menstrual pain**		
- Mild	9	15.0
- Moderate	23	38.3
- Sever	28	46.7
*** Time of menstrual pain**		
- Before menses	2	3.3
- During menses	57	95.0
- After	1	1.7
*** Drugs to relive menstrual pain**		
- Yes	2	3.3
- No	58	96.7

Regarding menstrual problem among recruited sample (table, 5) showed that more than half of the sample had negative bleeding spots between menses, the majority of participants had positive menstrual pain, 46.7% of them had sever menstrual pain, 96.7 % had pain during menses and 96.7 of them don't have any drugs to relive menstrual pain.

Table (6): Distribution of the participants according to their sexual relationship.

Variable	NO (Total = 60)	% (Total = 100)
***No. of sexual intercourse/week**		
- 2	14	23.3
- 3	27	45.0
- 4	19	31.7
* **Presence of pain during inter course:**		
-Yes	21	35.0
- No	39	65.0
Self care after sexual relation		
* Uses of lubricant during coital relation:		
- Yes	10	16.7
- No	50	83.3
* Vaginal douching before or after intercourse:		
- Before	25	41.7
- After	35	58.3
* Uses of contraception		
- Yes	1	1.7
- No	59	98.3

Regarding history of sexual relation among the participants (tables, 6) revealed that more than half of the recruited sample had sexual relation three time /week that represent 45.0 %, 31.7% of them had fourth time /

week and 23.3% of them had sexual relation twice time / week. The majority of the recruited sample had negative history of pain during sexual relation that represented 65.0 %, while 35.0% of them had positive history of pain during sexual relation. As regarding self care after sexual relation 86.7 % of the recruited sample had negative use of lubricant during sexual relation while 16.7 % of them had positive use of lubricant. More than half of the recruited sample doing vaginal douche after sexual relation that represented 58.3% while 41.7% of them doing vaginal douche before sexual relation. 98.5% of the sample had negative history of family planning, while 1.7% of them had positive history of family planning.

Table (7): Distribution of the participants according to their marital history.

Variable	NO (Total = 60)	% (Total = 100)
***Age at marriage/ year**		
≤ 25	8	13.3
26 – 30	39	65.0
> 30	13	21.7
*** Marriage years**		
2 - 5	29	48.3
6 - 10	22	36.7
> 10	9	15.0
*** Mean age at marriage ± SD (23.0 ± 2.17 yrs)**		
**** Mean of marriage years ± SD (6.8 ± 4.29 years)**		

Regarding marital history of the recruited sample (table, 7) show that the mean age of women's at marriage ± SD (23.0 ± 2.17 years) and the mean of marriage years ± SD (6.8 ± 4.29 years).

Part 111: Disruptions of the women's according to history of infertility, diagnostic investigation.

Table (8): Distribution of the participants according to history of infertility treatment.

Variable Studied	NO (Total = 60)	% (Total = 100)
***History of previous infertility treatment:**		
- Yes	38	63.3
- No	22	36.7
*** predisposing factor of infertility :**		
- Obstruction in fallopian tube	5	8.3
- Inflammation or adhesion in tube	4	6.7
- Congenital anomalies in tube	1	1.7
- Failure of ovulation	4	6.7
- Failure of sperm production	5	6.3
- Weakness in sperm movement	8	13.3
- Congenital anomalies in uterus	1	1.7
- Endometriosis	1	1.7
- Cervical ulcer	11	18.3
- varicocele	4	6.7
- inadequate sperm count	9	15.0
- ovarian cysts	7	11.7

Regarding history of previous infertility treatment among the recruited sample (table, 8) show that more than half of sample had positive history of previous infertility treatment that represented 63.3% of

the recruited sample, 18.3% of them had infertility due to cervical ulcer, while 1.7% of them had infertility due to congenital anomalies in fallopian tube, uterus and endometriosis.

Table (9): Diagnostic investigations conducted for diagnosing of Infertility.

Diagnostic investigations	NO	%
*** yes:**	60	100.0
- Hormonal assessment	60	100.0
- Uterine biopsy	9	15.0
- Ultrasonography	37	61.7
- Uterine or abdominal endoscope	25	41.7
- Thyroid gland investigation	12	20.0
- Hystrosalipingraphy	37	61.6
*** No:**	-	-
Total	60	100.0

Regarding laboratory investigations conducted for diagnoses of infertility (table, 9) show that the majority of the recruited sample had positive history of laboratory investigation that represented 100 % of the recruited sample**.**

Table (10): History of seminal analysis and previous infertility treatment for the husband

Variable Studied	NO (Total = 60)	% (Total = 100)
***Seminal analysis:**		
- Normal	20	33.3
- Abnormal	40	66.7
- Not done	-	-
***** **previous infertility treatment:**		
- Yes	40	66.7
- No	20	33.3

Regarding history of seminal analysis and previous infertility treatment for husband (table, 10) show that more than half of the husband had abnormal seminal analysis that represented 66.7%. The majority of the husband had positive history of previous infertility treatment that represented 66.7 % of them.

Part IV: History of previous surgery and previous trial for infertility treatment

Table (11): History of previous surgery for infertility treatment**.**

Type of operation	NO (Total = 60)	% (Total = 100)
*** Surgical operation in fallopian tube:**		
- Yes	10	16.7
- No	50	83.3
*** Cervical cautery:**		
- Yes	11	18.3
- No	49	81.7
*** Removing tumor from uterus:**		
- Yes	2	3.3
- No	58	96.7
*** Removing ovarian cyst:**		
- Yes	17	28.3
- No	43	71.7
*** other surgical operations:**		
- Yes	9	15.0
- No	51	85.0

Table (11) show that the majority of the recruited sample had negative history of surgical operation in fallopian tube that represented 83.3 %, 81.7 % of them had negative history of cervical cutary, 96.7% of the recruited sample had negative history of removing uterine tumor, 71.7 % of them had negative history of removing ovarian cysts and 15.0% of them had positive history of appendectomy.

Table (12): History of previous trials for in-vitro fertilization

Number of trials	No	%
- 1st trials	42	70.0
- 2nd trials	14	23.3
- More than once	4	6.7
Total	60	100.0

As Regarding history of previous trial of in-vitro fertilization this table show that 70.0 % of the participants had 1st trials of IVF, 23.3% of them had 2nd trials of IVF and 6.7% of them had previous history of IVF (more than once).

Part V: Disruption of the women according to the outcome of Previous and current IVF.

Table (13): Distribution of the participants according to the outcome of previous in-vitro fertilization.

Outcome of previous IVF	NO	%
- Ectopic pregnancy	1	5.6
- Abortion	6	33.2
- Twins	2	11.2
- Negative pregnancy	9	50.0
Total	18	100.0

Regarding the results of previous in-vitro fertilization this table shows that 33.2% of the recruited sample had positive history of abortion, 50.0 % have pregnancy, 5.6 % of the recruited sample had positive history of ectopic pregnancy and 11.2**%** of them had twins.

Table (14): Distribution of the participants according to the outcome of current In-vitro fertilization.

Results	NO	%
- Normal pregnancy	27	45.0
- Ectopic pregnancy	4	6.7
- Abortion	10	16.6
- Twins	4	6.7
- No pregnancy	15	25.0
Total	60	100.0

Regarding the outcome of current In-vitro fertilization (table, 14) show that 45.0 % of the participants had normal pregnancy, 25.0 % of them had negative pregnancy, 16.6 % of recruited sample had positive abortion, and 6.7% of sample had ectopic pregnancy and twins.

Part VI: Relationship between women's knowledge before and after giving Protocol of care (15).

Table (15): Relationship between women s' knowledge about infertility and in-vitro fertilization process before and after giving protocol of care.

Question	Score out off	Knowledge score				Paired T – test	P value
		Before		After			
		X ± SD		X ± SD			
1-Causes of infertility	30	8.5	2.91	19.8	3.05	32.1	<0.01
2- Factor may affect success of IVF	18	4.47	2.61	11.5	2.22	20.82	<0.01
3-Factor increase success of IVF	12	1.9	1.78	7.37	1.4	24.59	<0.01
4- Factor may prevent the women's to complete IVF	8	0.17	0.56	3.5	1.08	22.55	<0.01
5- Side effect of in fertility drugs	8	0.17	0.56	4.17	1.06	28.05	<0.01
6- Side effect of egg retrieval stage	14	4.6	1.7	10	1.52	22.15	<0.01
7-Instruction should be flowed before IVF	12	2.53	2.05	8.7	1.37	21.24	<0.01
8- Instruction should be flowed during IVF	12	2.27	1.64	7.36	1.08	21.32	<0.01
9-Instruction should be flowed after IVF	16	4.33	1.48	10.53	1.68	29.38	<0.01
10-Complication of IVF	14	1.07	1.63	6.43	1.43	21.15	<0.01
11- Discomfort during pregnancy	10	3.5	1.08	7.87	1.27	23.34	<0.01
12- Instruction should be flowed during pregnancy	16	4.6	1.29	10.9	1.62	26.6	<0.01
Total	170	37.8	10.68	107.9	11.43	61.35	<0.01
P < 0.05							

Table (15): Revealed that there were highly statistical significant difference between women s' knowledge about infertility and in-vitro fertilization process before and after giving protocol of nursing care (T = 61.35 & P < 0.05).

Part VII: Relationship between socio-demographic and the outcome of IVF.

Tables (16): Relationship between age of participants and the outcome of current in vitro fertilization (IVF)

Results of IVF	No	Age	
		$\overline{X}$	SD
Normal pregnancy	27	29.48	4.74
Ectopic pregnancy	4	30.75	4.79
Abortion	10	31.5	4.17
Twins	4	30.0	4.76
No pregnancy	15	29.27	5.56
Total	60	29.88	4.78
F test = 0.412		P > 0.05	

As shown in this table there is no statistical significance differences between age and the results of current in vitro fertilization (IVF) (F test =0.421 & P > 0.05).

Tables (17): Relationship between weight of participants and the outcome of current in vitro fertilization (IVF)

Results of IVF	No	Weight	
		$\overline{X}$	SD
Normal pregnancy	27	73.52	7.62
Ectopic pregnancy	4	75.75	4.35
Abortion	10	78.8	6.37
Twins	4	75.5	2.44
No pregnancy	15	75.47	9.61
Total	60	75.13	7.66
F test = 0.88		P > 0.05	

As shown in this table there is no statistical significance differences between weight and the results of current in vitro fertilization (IVF) (F test = 0.88 & P > 0.05).

Tables (18): Relationship between levels of education of participants and the outcome of current IVF.

Results of IVF	Level of education								Total	
	Illiterate		Read and write		Secondary education		University education			
	No	%	No	%	No	%	No	%	No	%
Normal pregnancy	4	14.8	7	25.9	11	40.7	5	18.5	27	45.0
Ectopic pregnancy	1	25.0	1	25.0	1	25.0	1	25.0	4	6.7
Abortion	3	30.0	1	10.0	5	50.5	1	10.0	10	16.6
Twins	1	25.0	1	25.0	1	25.0	1	25.0	4	6.7
No pregnancy	1	6.7	5	33.3	8	53.3	1	6.7	15	25.0
Total	10	16.7	14	23.3	26	4.33	10	16.7	60	100.0
$X^2 = 6.41$					P > 0.05					

As shown in this table there is no statistical significance differences between level of education and the results of current IVF ($X^2 = 6.41$ & $P > 0.05$).

Tables (19): Relationship between residence of participants and the outcome of current IVF.

Results of current IVF	Residence				Total	
	Urban		Rural			
	No	%	No	%	NO	%
Normal pregnancy	12	44.4	15	55.6	27	45.0
Ectopic pregnancy	1	25.0	3	75.0	4	6.7
Abortion	5	50.0	5	50.0	10	16.6
Twins	1	25.0	3	75.0	4	6.7
No pregnancy	2	22.2	7	77.8	9	15.0
Total	25	41.7	35	58.3	60	100
$X^2 = 1.303$			$P > 0.05$			

As shown in this table there is no statistical significance difference between residence and the results of current in vitro fertilization (IVF) ($X^2 = 1.303$ & $P > 0.05$).

Tables (20): Relationship between occupation of participants and the outcome of current IVF

Results of current IVF	Occupation				Total	
	Working		house wife			
	No	%	No	%	No	%
Normal pregnancy	9	33.3	18	66.7	27	45.0
Ectopic pregnancy	1	25.0	3	75.0	4	6.7
Abortion	3	30.0	7	70.0	10	16.6
Twins	3	75.0	1	25.0	4	6.7
No pregnancy	2	13.3	13	86.7	15	25.0
Total	18	30.0	42	70.0	60	100.0
$X^2 = 6.032$				P > 0.05		

As shown in this table their is no statistical significance differences between occupation and the results of current in vitro fertilization (IVF) (X2 = 6.023 & P > 0.05). 75% of women who pregnant in twins are working, which 86.7% who have no pregnancy are house wife.

Part VIII: Relationship between previous surgeries for infertility treatment and the outcome of IVF.

Tables (21): Relationship between previous operation in fallopian tube and the outcome of current IVF

Result of current IVF	Operation in fallopian tube				Total	
	Yes		No			
	No	%	No	%	No	%
Normal pregnancy	4	14.8	23	85.2	27	45.0
Ectopic pregnancy	2	50.0	2	50.0	4	6.7
Abortion	1	10.0	9	90.0	10	16.6
Twins	1	25.0	3	75.0	4	6.7
No pregnancy	2	13.3	13	86.7	15	25.0
Total	10	16.7	50	83.3	60	100.0
$X^2 = 3.907$		P > 0.05				

As shown in this table there is no statistical significance between previous operation in fallopian tube and the results of current in vitro fertilization (IVF**)** **(X^2**= 3.907 & P > 0.05). Regarding relation between previous operation in fallopian tube and results of current IVF. 90.0% of the recruited sample not done any operation in fallopian tube and have abortion, while 50.0% of them have pervious operation in fallopian tube and have ectopic pregnancy

Tables (22): Relationship between Previous cervical cauttery and the outcome of currant IVF

Result of currant IVF	Cervical cattery				Total	
	Yes		No			
	No	%	No	%	No	%
Normal pregnancy	4	14.8	23	85.2	27	45.0
Ectopic pregnancy	1	25.0	3	75.0	4	6.7
Abortion	4	40.0	6	60.0	10	16.6
Twins	1	25.0	3	75.0	4	6.7
No pregnancy	1	6.7	14	93.3	15	25.0
Total	11	18.3	49	81.7	60	100.0
$X^2 = 4.96$			P > 0.05			

As shown in this table there is no statistical significance between previous cervical cuttery and the results of current in vitro fertilization (IVF**)** **(**X^2= 4.96 & P > 0.05). Regarding relation between Previous cervical cattery and results of currant IVF fourty percent of the recruited sample have previous cervical cuttery and have ectopic pregnancy, while 93.3of them not done Previous cervical cuttery and have negative pregnancy (table, 22) .

Tables (23): Relationship between removing uterine tumor and the outcome of current IVF.

Result of current IVF	Removing uterine tumor				Total	
	Yes		No			
	No	%	No	%	No	%
Normal pregnancy	0	0.0	27	100.0	27	45.0
Ectopic pregnancy	0	0.0	4	100.0	4	6.7
Abortion	0	0.0	10	100.0	10	16.6
Twins	0	0.0	4	100.0	4	6.7
No pregnancy	2	13.3	13	86.7	15	25.0
Total	2	3.3	58	96.7	60	100.0

Regarding Relation between removing uterine tumor and the results of current IVF. 13.3% of the recruited sample have previous removing uterine tumor and had negative pregnancy, while the majority of the recruited sample had negative removing uterine tumor and have normal Pregnancy, ectopic pregnancy, abortion and twins.

Tables (24): Relationship between previous removal of ovarian cysts and the outcome of current IVF

Results of current IVF	Removing of ovarian cysts				Total	
	Yes		No		No	%
Normal pregnancy	4	33.3	18	66.7	27	45.0
Ectopic pregnancy	1	25.0	3	75.0	4	6.7
Abortion	3	30.0	7	70.0	10	16.6
Twins	2	50.0	2	50.0	4	6.7
No pregnancy	2	13.3	13	86.7	15	25.0
Total	17	28.3	43	71.7	60	100.0
$\mathbf{X^2}$ = 2.955			P > 0.05			

As shown in this table there is no statistical differences between previous removing of ovarian cysts and the results of current in -vitro fertilization (IVF) (X^2 = 2.955 & P > 0.05).

Table (25): Relationship between other surgical operation and the outcome of current IVF.

Results of IVF	Surgical operation				Total	
	Yes		No			
	No	%	No	%	No	%
Normal pregnancy	5	18.5	22	81.5	27	45.0
Ectopic pregnancy	1	25.0	3	75.0	4	6.7
Abortion	3	30.0	7	70.0	10	16.6
Twins	2	50.0	2	50.0	4	6.7
No pregnancy	5	33.3	10	66.7	15	25.0
Total	16	26.7	44	73.3	60	100.0
$\mathbf{X^2}$ = 2.498			P > 0.05			

As shown in this table there is no statistical differences between other surgical operation and the outcome of current in-vitro fertilization (IVF) (X^2 = 2.498 & P > 0.05).

Table (26): Relationship between knowledge score of the participants and the outcome of current IVF.

Results of current IVF	No	Knowledge score before X ± SD
Normal pregnancy	27	39.7 10.49
Ectopic pregnancy	4	34.0 4.2
Abortion	10	33.4 11.78
Twins	4	54.5 5.75
No pregnancy	15	35.2 7.51
Total	60	38.13 10.84
F test = 3.989		P < 0.05

As shown in this table there is highly statistical differences between knowledge score of the women and the results of current in-vitro fertilization (IVF) (F test = 3.989 & P < 0.05).

Table (27): Relationship between levels of education of the Participants and knowledge score before & after Providing Protocol of nursing care

Level of education	Knowledge Score			
	Before		After	
	X	SD	X	SD
Illiterate (n=10)	25.8	7.51	97.2	11.67
Read & write (n=14)	32.29	6.018	104.0	7.766
Secondary. Education (n=26)	39.77	6.53	109.85	10.055
University education (n=10)	54.4	4.40	120.4	4.97
Total (n= 60)	38.13	10.84	108.13	11.479
F test	39.659		11.827	
P value	P < 0.01		P < 0.01	

As shown in this table there are highly statistical differences between level of education of the Participants and knowledge score before & after providing the protocol of nursing care. (F test = 39.959 before & 11.827 after & P < 0.01).