

Quality of Life among Infertile Women in Benha City

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Abstract

Background: Infertility is a global public health issue with a high impact on individuals of both sexes and society. Infertility is ranked as the 5th highest serious global disability. **Aim of study:** Was to assess the quality of life among infertile women in Benha City. **Research design:** Descriptive research design was used to conduct this study. **Setting:** The study was conducted at Obstetrics and Gynecology Outpatient Clinic in Benha University Hospital. **Sample:** A convenience sample was used, it included 120 infertile women. **Tools:** Two tools were used; **I:** A structured interviewing questionnaire to assess; A) Socio-demographic characteristics of the studied women. B) Past history of the studied women. C) Knowledge of the studied women about infertility. D) Reported practices to improve fertility. **II:** Scale to assess quality of life among infertile women. **Results:** 59.2% of the studied women were aged ranged from 30 to less than 40 years old, 43.3% of the studied women had university education, 10.0% of the studied women had good knowledge level about infertility, 51.7% of the studied women had satisfactory reported practices regarding infertility, and 53.3% of the studied women had poor quality of life. **Conclusion:** Only tenth of the studied women had good knowledge level about infertility, more than half of the studied women had satisfactory reported practices regarding infertility, more than half of the studied women had poor quality of life. There were highly statistically significant relation between the studied women total quality of life score, total knowledge score and total reported practices score. **Recommendations:** Develop health educational program for the infertile women to improve and update the most current knowledge, practices and quality of life about infertility.

Key words: Infertility, Infertile Women, Quality of Life.

Introduction

Infertility is a stressful situation with cultural aspects, which is associated with biological, mental, ethical, social and economic problems, affecting the women in all aspects of the life. Infertility can be broadly divided into two types namely, primary infertility, which is defined as inability to conceive or carry a pregnancy successfully to full term, while other type is secondary infertility, which is defined as difficulty in conceiving after already having previously conceived (either carrying a

pregnancy to term or a miscarriage). The causes of infertility vary based on the age of the partner and the age of the marriage. And although Poly-Cystic Ovarian Syndrome (PCOS) is still the most prevalent cause of tubal factor infertility, infections remain a major factor. The most common infections that induced infertility were gonorrhea and sexually transmissible illnesses (**Kanwal et al., 2022; Okafor et al., 2022**).

Infertility also can be defined as a reproductive system illness characterized by the failure to obtain the pregnancy following

twelve months of normal unprotected sexual intercourse. Infertility is considered a debilitating problem with negative effects on public health. Infertility is a major health problem that affects people around the world. Worldwide 48 million couples and 186 million individuals suffer from infertility (**Salman et al., 2022; Shahzad et al., 2022**).

Infertility is a unique disease that can cause emotional and social distress and affect the mental health of women. Reactions to infertility include shock, sadness, stress, depression, anger, frustration, and loss of self-esteem and self-confidence. Additionally, if the woman is stigmatized by relatives and wider society. Various strategies, which can often be maladaptive, are adopted by women with infertility to cope with stress and manage the personal and family life. For instance, avoidance coping strategies may lead to higher infertility-related stress. Women may seek advice, help, and support from family, friends and doctors to cope with stress (**Dadhwal et al., 2022**).

Quality of Life (QoL) can be defined as individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. QoL is an extensive idea affected in a difficult manner by a person's physical health, psychological state, social constraints, independence levels, personal values and characteristics, and also the association with main characteristics of the atmosphere (**Chaudhary et al., 2022**).

The health related QoL is believed as one of the major tools regarding outcome measurement among infertile women. Due to various psychological, physical and social inappropriate infertility effects, assessing QoL components among the women could lead to recognize various aspects of life style and help the women to schedule favorable

treatment more efficiently. Furthermore, in spite of different techniques development regarding infertility treatment and attaining reproductive health, concerns regarding quality of life among infertile married women have clearly been reduced caused by type of issues and its complicated association with psychological status. However, infertility is still a leading problem among infertile women which has great impact on the infertile women quality of life (**Vatanparast et al., 2022**).

Community Health Nurses (CHNs) play an important role in evaluation of infertility that requires careful history and physical examination carried out in a suitably sensitive setting, and in providing general advice for both partners includes limiting alcohol consumption, smoking cessation, maintenance of a healthy body weight, avoidance of tight-fitting underwear in men, and folic acid supplementation in women. Investigations aim to establish the presence of ovulation, normal uterine anatomy, and patent fallopian tubes in women and normal semen parameters in men (**Noël et al., 2022**).

Significance of study:

Infertility in Egypt affects 12% of Egyptian couples. 4.3% of women suffer from primary infertility and 7.7% suffer from secondary infertility. The number of women aged 15 to 49 years exceeds 25 million, which means that at least 3 million women are infertile in Egypt (**Ramadan & Said, 2022**). Female factors account for at least 64% of all fertility problems and may be happened due to underlying medical condition like fallopian tubes damage that interfere with ovulation, pelvic inflammatory disease, polycystic ovaries, endometriosis, and premature ovarian failure and may be due to environmental conditions, aging process, weight changes, and life styles (**Salman et al., 2022**).

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Aim of the study:

The aim of study was to assess the quality of life among infertile women in Benha City.

Research questions:

1. What is women knowledge about infertility?
2. What are women reported practices regarding infertility?
3. What is quality of life for infertile women?
4. Is there a relation between socio demographic characteristic of women and their knowledge, practices and quality of life regarding infertility?
5. Is there a relation between knowledge, practices, and quality of life regarding infertile women?

Subjects and method:

Research design:

Descriptive research design was used in carrying out the study.

Setting:

This study was conducted at Obstetrics & Gynecology Outpatient Clinic affiliated to Benha University Hospital.

Sampling:

A convenience sample of infertile women attending in previously mentioned setting for six months. Total sample of infertile women was 120.

Tools for Data Collection:

Two tools were used for collect the data:

Tool (I): A structured interviewing questionnaire: It comprised of four parts:

First part: Socio demographic characteristic of women. It included 6 questions.

Second part: Past medical history of infertile women which included (11) questions.

Third part: Was concerned with knowledge of women about infertility which included (10) questions.

Scoring system of patients' knowledge

The scoring system for infertility women knowledge was calculated as follows, (2) score for complete correct answer, (1) score for incomplete correct answer, and (0) score

for don't know answer or incorrect. For each section of knowledge, the score of questions was summed up and the total divided by the number of questions, these scores were converted into a percent score for the part. The total knowledge scores = (20 points) was considered good if the score of the total knowledge were $\geq 75\%$ (≥ 15 points), while considered average if it equals $50\% - <75\%$ (10-15 points) and considered poor if it is $<50\%$ or less than (10 points).

Fourth part: Was concerned with reported practices to improve fertility adapted from (Kamala et al., 2019) which included 28 items that divided into 1) **Nutrition** which included (10) questions, 2) **Rest and exercise** which included (3) questions, 3) **Medication regimen and follow up** which included (4) questions, 4) **Practices enhance fertility** which included (4) questions, and 5) **Personal hygiene** which included (7) questions.

Scoring system for practice scale:

The scoring system for infertile women reported practices were calculated as (1) score for done and (0) score for not done. The score of the items was summed up and the total divided by the number of the items, giving a mean score. These score were converted into a percent score. The total reported practices score = (28 points) was considered satisfactory reported practices if the score of total reported practices $\geq 60\%$ (≥ 16 point), while considered unsatisfactory reported practices if the score of total reported practices was $<60\%$ (< 16 points).

Tool (II): Was concerned with scale to measure quality of life for infertile women, which included (37) questions adapted from (Namedar et al., 2017). The questionnaire was measured on a three Likert scale of (always, sometimes and never) which was modified by the researchers to assess the impact physical, psychological, social,

spiritual and sexual status of life quality among infertile women.

Scoring system for quality-of-life scale:

Quality of life scale score was calculated as (2) score for always, (1) score for sometimes, and (0) for never. The score of the items was summed up and the total divided by the number of the items giving a mean score. These score were converted into a percentage score. The total quality of life score = (74 points) was considered good if the score is $\geq 75\%$ (≥ 55 points). Average if the score is between 50-75% ($37 < 55$ points), and poor if the score is $< 50\%$ (< 37 points).

Content validity:

Content validity of the tools was done by five of Faculty's Staff Nursing Experts from the Community Health Nursing Specialties they reviewed the tools for clarity, relevance, comprehensiveness, and applicability and give their opinion.

Reliability of the tools:

Reliability of the tools was applied by the researchers for testing the internal consistency of the tools, by administration of the same tools to the same subject under similar condition on one or more occasion. The reliability of the tools were done by Cornbrash's Alpha coefficient test which revealed that each of the two tools consisted of relatively homogenous items as indicated by the moderate to high reliability of each tool. The internal consistency of knowledge was $=0.729$, practices was $=0.734$ and quality of life was $=0.887$.

Ethical consideration:

All ethical issues were assured; oral consent has been obtained from each infertile woman before conducting the interview and gives a brief orientation to the purpose of the study. They were also reassured that all information gathered would be confidential and used only for the purpose of the study. No names were required on the forms to

ensure anonymity and confidentiality. They were also informed about the right to withdraw at any time from the study without giving any reasons.

Pilot study:

A pilot study was conducted on 10% (12 women) of the studied infertile women to test the content, applicability and simplicity of the tools using the interviewing questionnaires. Based on the pilot study, the modification of the tools included rephrasing, rearrangement of some questions. The pilot study was carried in two weeks before starting the study and No modification were done, so the pilot study sample was included in the total sample.

Field work:

Data were collected at a period of 6 months which started from the beginning February 2022 to end of July 2022; the study was conducted by the researchers for the studied sample in Obstetrics & Gynecology Outpatient Clinic in Benha University Hospital. The researchers visited the Benha University Hospital 2days/week (Monday and Wednesday) from 9:00 am to 12:00 pm to collect data. At the beginning of interview; The researchers explained the purpose and importance of the study to the women and obtained their oral consent, the researchers collect the data from the women, the average numbers of interviewing women was between 2-3 women/day depending on their response to the interviewer, each infertile women take about 20-25 minute to fill the sheet depending on their understanding and response.

Statistical analysis:

All data collected were organized, tabulated and analyzed by using the Statistical Package for Social Science (SPSS), version (20). Descriptive statistics was first applied (frequency, percentage, and mean \pm SD) then other statistical tests such as Chi square. Statistical significance is considered as:

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- Highly significant when p- value < 0.001.
- Significant when p- value < 0.05.
- No significant result when p-value >0.05.

Results

Table (1): Shows that, 59.2% of the studied women were age ranged from 30 to less than 40 years old with the Mean \pm SD. 39.21 ± 6.42 . 43.3% of the studied women had university education. 54.2% of studied women with infertility were not working, 68.3% of the studied women were lived in rural area. 54.2% of them had enough monthly income.

Table (2): Shows that, 70% of the studied women didn't suffer from previous health problems, 50% of them suffered from heart disease and cardiovascular disease, 55% of them didn't take any medicine without consulting a doctor. While 100% of the studied women didn't smoke, and 64.2% of the studied women exposed to passive smoking.

Figure (1): Illustrates that; 60.8% of the studied women had average knowledge level about infertility, while 29.2% of them had poor knowledge level about infertility and only 10% of them had good knowledge level about infertility.

Figure (2): Reveals that; 51.7% of the studied women had satisfactory reported practices regarding infertility and 48.3% of them had unsatisfactory reported practice regarding infertility.

Figure (3): Reveals that; 53.3% of the studied women had poor quality of life, only 11.7% of them had good quality of life, and 35.0% had average quality of life.

Table (3): Shows that; there were highly statistically significant relations between the studied women total knowledge levels and their monthly income, educational level and occupation.

Table (4): Reveals that; there were highly statistically significant relation between the studied women total reported practices level and their age, monthly income, educational level and place of residence.

Table (5): Reveals that; there were highly statistically significant relation between the studied women total quality of life level and their educational level, occupation, monthly income, age and place of residence.

Table (6): Reveals that; there were highly relations between the studied women total reported practices score and total quality of life of score.

Table (7): Reveals that; there were highly statistically significant relation between the studied women total quality of life score, total knowledge score and total reported practices score.

Table (1): Frequency distribution of the studied women regarding their socio-demographic characteristics (n=120).

Socio -demographic characteristics	No.	%
Age/years		
20 > 30	26	21.7
30> 40	71	59.2
40> 50	19	15.8
≤50	4	3.3
Mean ±SD 39.21±6.42		
Education level		
Can't read and write	6	5.0
Basic education	18	15.0
Secondary education	44	36.7
University education	52	43.3
Occupation		
Work	55	45.8
Not working	65	54.2
Place of residence		
Urban	38	31.7
Rural	82	68.3
Monthly income		
Enough and save	24	20.0
Enough	65	54.2
Inadequate	31	25.8

Table (2): Frequency distribution of the studied women regarding their past medical history (n=120).

Past medical history	No.	%
Suffering from co-morbidity disease		
Yes	36	30.0
No	84	70.0
Yes (n=36)		
Endocrine diseases such as diabetes	5	13.9
Heart disease and cardiovascular disease	18	50.0
Ovarian cysts	8	22.2
Chest allergy	5	13.9
Taking any medicine without consulting a doctor		
Yes	54	45
No	66	55
Yes (n=54)		
Painkillers	44	81.5
Treatment for allergies and Eltroxin	10	18.5
Smoking		
Don't smoke	120	100.0
Passive smoking		
Yes	77	64.2
No	43	35.8

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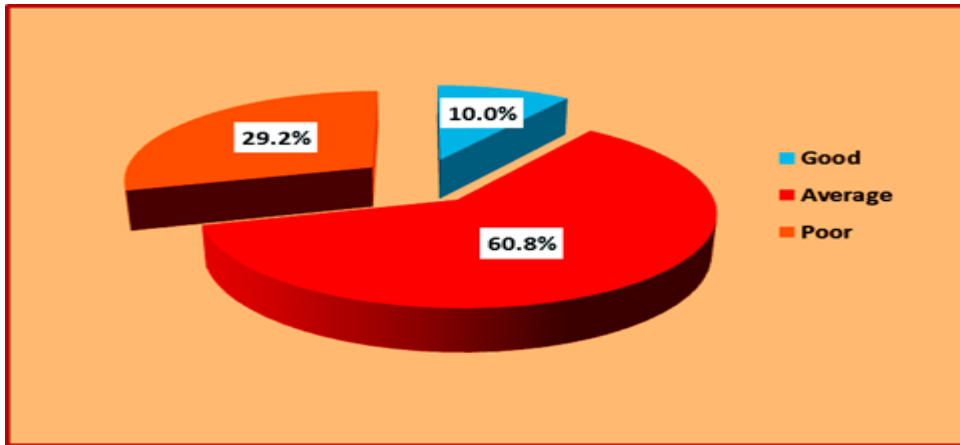


Figure (1): Percentage distribution of the studied women total knowledge level regarding infertility (n=120).

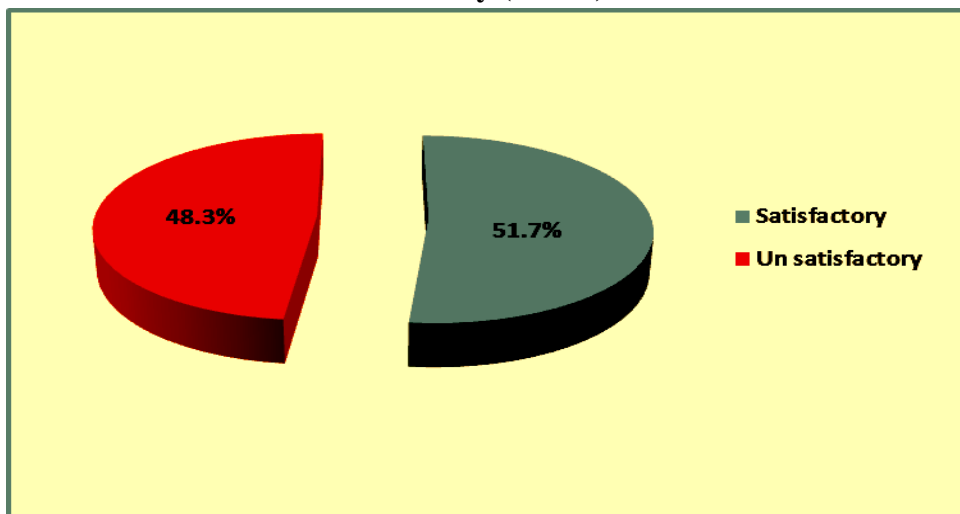


Figure (2): Percentage distribution of the studied women total reported practices level regarding infertility (n=120).

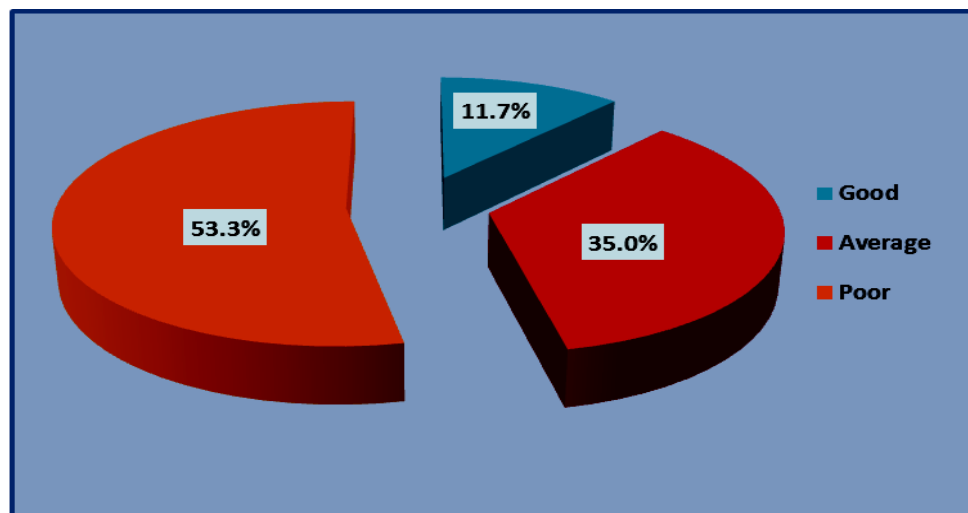


Figure (3): Percentage distribution of the studied women total quality of life level (n=120).

Table (3): Statistically relation between socio-demographic characteristics of women and their total knowledge level. (n=120).

Socio demographic characteristics	Total knowledge level						X ²	P-value
	Poor (n=35)		Average (n=73)		Good (n=12)			
	No.	%	No.	%	No.	%		
Age								
20 > 30	7	20.0	15	20.5	4	33.3	2.5	0.645
30 > 40	22	62.9	43	59.0	6	50.0		
40 > 50	2	5.7	15	20.5	2	16.7		
≤50	4	11.4	0	0.0	0	0.0		
Educational level							14.92	.020*
Can't read and write	2	5.7	3	4.1	1	8.3		
Basic education	6	17.1	10	13.7	2	16.7		
Secondary education	15	42.9	21	28.8	8	66.7		
University education	12	34.3	39	53.4	1	8.3		
Occupation							8.156	.017*
Working	9	25.7	39	53.4	7	58.3		
Not working	26	74.3	34	46.6	5	41.7		
Place of residence							0.81	0.667
Urban	13	37.1	22	30.1	3	25.0		
Rural	22	62.9	51	69.9	9	75.0		
Monthly income							25.746	.000**
Sufficient and save	3	8.6	18	24.7	3	25.0		
Sufficient	12	34.3	45	61.6	8	66.7		
Insufficient	20	57.1	10	13.7	1	8.3		

Table (4): Statistically relation between socio-demographic characteristics of the studied women and their total reported practices level (n=120).

Socio demographic characteristics	Total reported practices				X ²	p-value
	Unsatisfactory (n=58)		Satisfactory (n=62)			
	No.	%	No.	%		
Age						
20 > 30 years old	14	24.1	12	19.3	28.65	.000**
30 > 40 years old	27	46.6	44	71.0		
40 > 50 years old	13	22.4	6	9.7		
≤50	4	6.9	0	0.0		
Educational level					8.83	.032*
Can't read and write	4	6.9	2	3.2		
Basic education	5	8.6	13	21.0		
Secondary education	29	50.0	15	24.2		
University education	20	34.5	32	51.6		
Occupation Working	27	46.6	28	45.2	0.023	0.879
not working	31	53.4	34	54.8		
Place of residence					8.69	.003*
Urban	13	22.4	25	40.3		
Rural	45	77.6	37	59.7		
Monthly income Sufficient and save	0	0.0	24	38.7	32.97	.000**
Sufficient	37	63.8	28	45.2		
Insufficient	21	36.2	10	16.1		

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Table (5): Statistically relation between the studied women total quality of life level and their socio demographic characteristics (n= 120).

Socio demographic characteristics	Total quality of life level						X ²	p-value
	Poor (n=64)		Average (n=42)		Good (n=14)			
	No.	%	No.	%	No.	%		
Age							9.548	.049*
20 > 30	9	14.1	13	31.0	4	28.6		
30 > 40	42	65.6	23	54.8	6	42.9		
40 > 50	13	20.3	5	11.8	1	7.1		
≤50	0	0.0	1	2.4	3	21.4		
Educational level							75.161	.000**
Can't read and write	0	0.0	0	0.0	6	42.9		
Basic education	5	7.8	10	23.8	3	21.4		
Secondary education	20	31.3	19	45.2	5	35.7		
University education	39	60.9	13	31.0	0	0.0		
Occupation							29.529	.000**
Working	33	51.6	8	19.0	14	100.0		
Not working	31	48.4	34	81.0	0	0.0		
Place of residence							11.798	.003*
Urban	18	28.1	10	23.8	10	71.4		
Rural	46	71.9	32	76.2	4	28.6		
Monthly income							21.583	.000**
Sufficient and save	19	29.7	0	0.0	5	35.7		
Sufficient	28	43.7	33	78.6	4	28.6		
Insufficient	17	26.6	9	21.4	5	35.7		

Table (6): Statistically relation between the studied women total reported practices and total quality of life score (n = 120).

Items	Total reported practices score				X ²	p-value
	Unsatisfactory (n=58)		Satisfactory (n=62)			
	No	%	No	%		
Total quality of life score						
Poor (n=64)	31	53.4	33	53.2	17.377	.000**
Average (n=42)	27	46.6	15	24.2		
Good (n=14)	0	0.0	14	22.6		

Table (7): Statistically relation between total knowledge score, total reported practices score and Total quality of life score regarding infertile women (n =120).

Items	Total knowledge score						X ²	p-value
	Poor (n=35)		Average (n=73)		Good (n=12)			
	No.	%	No.	%	No.	%		
Total reported practices score								
Unsatisfactory (n=58)	30	85.7	28	38.4	0	0.0	33.72	0.000**
Satisfactory (n=62)	5	14.3	45	61.6	12	100.0		
Total quality of life score								
Poor (n=64)	22	62.9	42	57.5	0	0.0	83.16	0.000**
Average(n=42)	13	37.1	25	34.2	4	33.3		
Good (n=14)	0	0.0	6	8.3	8	66.7		

Discussion:

Infertility is a life crisis that not only affects the women being treated, but brings psychological threats to both spouses, emotional stress, suffering due to treatment and an important burden on families. The lack of fertility, which is an important function of adult development, negatively affects social life, psychological wellbeing, future, self-image, self-esteem, quality of life, marital relations and the sex lives of couples (Foroughameri et al., 2022).

This study aimed to assess the quality of life among infertile women in Benha City through assessing knowledge and reported practices of the studied women about infertility, and assessing effect of infertility on quality of life for infertile women.

Regarding socio-demographic data of the studied women, the present study findings showed that; slightly less than three fifths of the studied women age were ranged from 30 to less than 40 years old with the Mean±SD. 39.21±6.42. This finding inconsistent with Alkor & Abbassi (2022), who studied unilateral and bilateral tubal obstruction in female infertility: Comparison study between hysterosalpingography and laparoscopy, in Damascus, (n=60), and who found that, The

participants ages ranged between 17-41 years, and the average age of the participants was 29.67±6.78. This might be due to the most of infertility women attended to Obstetrics and Gynecology Outpatient Clinic are in child bearing age.

Regarding education level of the studied women, the present study findings showed that; slightly more than two fifths of the studied women had university education. This finding disagreed with Hamed et al. (2021), they studied the role of diagnostic laparoscopy in the unexplained infertility cases, in Egypt, (n=50), and they found that, 40.2% of the studied women had secondary education.

The present study findings showed that; more than half of studied women with infertility were not working. This finding was in the same line with Mikhael et al. (2022), they studied a preliminary study of stress and infertility among Egyptian female sample in Benha City, (n=30), and they reported that, 46.6% of the studied women were house wife.

The present study findings revealed that; more than two thirds of the studied women were lived in rural area. This finding incongruent with Wdowiak et al. (2021),

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they studied assessment of quality of life in infertility treated women in Poland, (n=1200), and they found that, 90.3% of respondents from all groups were urban inhabitants.

As regards monthly income of the studied women, the present study findings showed that; more than half of them had enough monthly income. This finding agreed with **Moridi et al. (2019)**, they studied etiology and risk factors associated with infertility, in the southern region of Iran, (n=250), and they reported that, 88.4% of participants had monthly income.

As regards past medical history, the present study findings revealed that; more than two thirds of the studied women didn't suffer from previous health problems. This finding incongruent with **Pisarska et al. (2019)**, they studied genetics and epigenetics of infertility and treatments on outcomes, in California, (n=189), and they reported that, 70% of cases suffered from ovulatory dysfunction.

The present findings revealed that; more than half of them didn't take any medicine without consulting a doctor. This finding disagreed with **Cebert-Gaitors et al. (2022)**, they studied psychobiological, clinical, and sociocultural factors that influence black women seeking treatment for infertility: A mixed-methods study, in Africa, (n=391), and they found that, 75.2% of the studied women took treatment under direct supervision of physicians.

The present study findings showed that; all of the studied women didn't smoke. This finding was in the same line with **Moridi et al. (2019)**, and they reported that, 92% of the studied subjects didn't have past history with smoking. This might be due to smoking may lead to reduced fecundity in human, or due to the fact that smoking is prohibited for Egyptian women according to society customs and traditions.

The present study findings revealed that; slightly less than two thirds of the studied women exposed to passive smoking. This finding congruent with **Sanad et al. (2019)**, they studied infertility and related risk factors among women attending rural family health facilities in Menoufia Governorate, in Egypt, (n=320), and they found that, more than 60% of studied women were exposed to passive smoking.

Regarding total knowledge level of the studied women, the present study findings showed that; less than one third of the studied women had poor knowledge level about infertility and only tenth of them had good knowledge level about infertility. This findings incongruent with **Ofosu-Budu et al. (2021)**, they studied ways of reducing the stigma of infertility: Views of infertile women and their herbalists, in Eastern Finland, (n=15), and they reported that, 57% of participant women had poor knowledge about infertility. Also this findings disagreed with **Bobmanuel & Charles (2019)**, they studied concept and factors associated with infertility among married women in obonnoma community, in Nigeria, (n=76), and they reported that, 51.32% respondents had good knowledge about infertility. This might be due to infertile women don't share their experiences of infertility with others because of feeling of brokenness and shame.

Regarding total reported practices level of the studied women, the present study findings showed that; more than half of the studied women had satisfactory reported practices regarding infertility. This finding disagreed with **Prémusz et al. (2019)**, they studied preliminary study on pre-treatment physical activity and quality of life in infertility, in South-Hungary, (n=350), and they found that, 43% of the women had satisfactory reported practises regarding infertility. Also this findings incongruent

with **Hassan et al. (2021)**, they studied health status and quality of life of women seeking infertility treatments in Baluchistan, Pakistan, (n=350), and they found that, 82.9% of women reported low to moderate levels of satisfaction practices regarding infertility. This might be due to infertile women adhere to the doctor's instructions.

Regarding total quality of life level of studied women, the present study findings showed that; more than tenth of the studied women had good quality of life. This findings disagreed with **Wdowiak et al. (2021)**, and they reported that, 92% of women had good or very good quality of life. This might be due to infertility is accompanied by numerous psychological and social problems.

Regarding statistically relation between socio-demographic characteristics of the studied women and their total knowledge level, the present study findings revealed that; there were highly statistically significant relation between the studied women total knowledge levels and their monthly income. This findings incongruent with **Mohammed et al. (2019)**, they studied effect of educational intervention about nutrition for infertile women on their knowledge in preconception period, in Egypt, (n=100), and they found that, there were no significant relations between the studied women total knowledge levels and their monthly income.

Futhermore there statistically significant relation between the studied women total knowledge level and their educational level and occupation. This findings were in the same line with **Abd El-Hameed et al. (2019)**, they studied assessment of socio-demographic characteristics and self-esteem among infertile women, in Egypt, (n=100), and they found that, there statistically significant relation between the studied women total knowledge

level and their educational level and occupation. This might be due to educational level and occupation have meaningful effects on the women knowledge.

Regarding statistically significant relation between socio-demographic characteristics of the studied women and their total reported practices level, the present study findings showed that; there were highly statistically significant relation between the studied women total reported practices level and their age and monthly income. This findings were in the same line with **Musa & Osman (2020)**, they studied risk profile of Qatari women treated for infertility in a tertiary hospital: A case control study, in Qatar, (n=136), and they found that, there were statistically significant relation between the studied women total reported practices level and their age and monthly income.

Moreover there were statistically significant relation between the studied women total reported practices and their educational level and place of residence. This findings were in the same line with **Tang et al. (2022)**, they studied influencing factors of dyadic coping among infertile women: A path analysis, in China, (n=482), and they found that, there were statistically significant relation between the studied women total reported practices and their educational level and place of residence.

Regarding statistically relation between the studied women total quality of life level and their socio demographic characteristics, the present study findings revealed that; there were highly statistically significant relation between the studied women total quality of life level and their educational level, occupation, and monthly income. This findings disagreed with **Golshani et al. (2021)**, they studied effect of cognitive behavioral therapy based counseling on perceived stress in pregnant women with

history of primary infertility: A controlled randomized clinical trial, in Iran, (n=56), and they found that, there were no statistically significant relation between the studied women total quality of life level and their educational level, occupation, and monthly income.

Furthermore there were statistically significant relation between the studied women total quality of life level and their age and place of residence. This findings were in the same line with **Fathey et al. (2022)**, they studied quality of life assessment among infertile couples, in Egypt, (n=300), and they reported that, there were statistically significant relation between the studied women total quality of life level and their age and place of residence.

Regarding statistically relation between the studied women total reported practices and total quality of life score, the present study findings showed that; there were highly relations between the studied women total reported practices score and total quality of life of score. This findings were in the same line with **Foroughameri et al., (2022)**, they studied effectiveness of educational intervention based on theory of planned behavior on health promoting behaviors and quality of life among infertile women, in Iran, (n=30), and they found that, there were highly relations between the studied women total reported practices score and total quality of life of score. This might be due to practices play an important role in changing quality of life which in turn enhancing coping strategies regarding infertility.

Regarding statistically relation between total reported practices score, total knowledge score and total quality of life score regarding infertile women, the present study findings showed that; there were highly statistically significant relation between the studied women total quality of life score,

total knowledge score and total reported practices score. This findings were in the same line with **Sharmaa et al. (2022)**, they studied knowledge, attitude, and practice of infertility: a comparative study in infertile and fertile Indian women", (n=500), and they found that, there were highly statistically significant relation between the studied women total quality of life score, total knowledge score and total reported practices score. This might be due to knowledge play an important role in changing practices and quality of life which in turn enhancing coping strategies regarding infertility.

Conclusion

The study showed that slightly less than three fifths of the studied women had average knowledge level about infertility, less than one third of the studied women had poor knowledge level about infertility, and only tenth of the studied women had good knowledge level about infertility. More than half of the studied women had satisfactory reported practices regarding infertility, and while less than half of them had unsatisfactory practice regarding infertility. More than half of the studied women had poor quality of life, only more than tenth of them had good quality of life, and more than one third had average quality of life.

There were highly statistically significant relations between the studied women total knowledge levels and their monthly income. There were highly statistically significant relation between the studied women total reported practices level and their age and monthly income. There were highly statistically significant relation between the studied women total quality of life level and their educational level, occupation, monthly income. There were highly statistically significant relation between the studied women total quality of life score, total

knowledge score and total reported practices score.

Recommendations

- Develop health educational program for the infertile women to improve and update the most current knowledge, practices and quality of life about infertility.
- Further research studies about infertility needed to be carried out with different larger samples in different setting of health care.

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جودة الحياة للسيدات اللاتي لديهن تأخر فى الإنجاب بمدينة بنها

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يعتبر تأخر الإنجاب مشكلة صحية عالمية رئيسية، وغالبا ما تكون مرتبطة بمشاكل كبيرة للسيدات المتضررين. وتشمل أسباب تأخر الإنجاب عند السيدات اضطرابات الغدد الصماء التي تؤدي إلى قلة التبويض، بالإضافة إلى الأسباب الهيكلية مثل اضطرابات الرحم والأنابيب وقناة فالوب. لذلك هدفت هذه الدراسة الى تقييم جودة الحياة للسيدات اللاتي لديهن تأخر فى الإنجاب بمدينة بنها. أجريت هذه الدراسة فى العيادات الخارجية لأمراض النساء والتوليد بمستشفى بنها الجامعى والتي تضم (120 سيدة). حيث اسفرت نتائج الدراسة أن 10% من السيدات لديهن معلومات جيدة عن تأخر الإنجاب، 29.2% منهم لديهن معلومات ضعيفة عن تأخر الإنجاب. 51.7% من السيدات لديهن ممارسات مرضية فيما يتعلق بتأخر الإنجاب، بينما 48.3% منهم لديهم ممارسات غير مرضية فيما يتعلق بتأخر الإنجاب. 53% من السيدات لديهن مستوى حياة ضعيف، بينما 35% منهم لديهن مستوى متوسط، و 11.7% منهم لديهم مستوى حياة جيدة. كما أوصت الدراسة بان هناك حاجة الي تطوير برنامج تثقيفى صحى للسيدات اللاتي لديهن تأخر فى الإنجاب لتحسين وتحديث المعلومات والممارسات وجودة الحياة حول تأخر الحمل..