Perception and Health Care Seeking Behaviors of Women with Uterine Fibroids

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Abstract

Background: Uterine fibroids are benign tumors that impact the women's uterus during childbearing years. Perception and health care seeking behaviors of women with uterine fibroids can have major effects on their overall health, quality of life, and maternal morbidity and mortality rates. **Aim:** Was to assess perception and health care seeking behaviors of women with uterine fibroids. **Subjects and Method: Design:** A descriptive research design was used. **Setting:** The study was conducted in Egypt at outpatient clinics and inpatient units of obstetrics and gynecological departments of: Tanta University Hospitals and El-Menshawy General Hospital. **Subjects**: A convenient sample of 150 women was included. **Tools:** Three tools were used: Tool I: Women's knowledge regarding uterine fibroids structured questionnaire; consisted of: Socio-demographic characteristics of the studied women, obstetric and gynecological history, and women's knowledge regarding uterine fibroids. Tool (II): Women's attitudes toward uterine fibroids. Tool (III): Health care seeking behaviors of women with uterine fibroids. **Results***:* Four fifths of the studied women had low level of knowledge regarding uterine fibroids, the majority had positive attitudes, and less than three fifths had unsatisfactory health care seeking behaviors regarding uterine fibroids. Significant positive correlations were found between knowledge, attitudes, and health care seeking behaviors regarding uterine fibroids. **Conclusion:** There was low level of knowledge, positive attitudes and unsatisfactory health care seeking behaviors of the studied women with uterine fibroids. **Recommendations**: Health educational programs regarding uterine fibroids should be implemented for women in their childbearing years at all places, and communities.

Keywords*:* Perception, Health seeking behaviors, Fibroids**.**

Operational definition: Women's perception means women's knowledge and attitudes.

Introduction

Uterine fibroids (UFs) or leiomyomas are defined as benign (noncancerous) tumors that develop in the muscular wall of the uterus. These tumors are composed of smooth muscle cells and fibrous connective tissue which vary in size, number and location within the uterine wall **(Bano et al., 2023)**. Uterine fibroids are the most prevalent benign tumors that impact women during their childbearing years. They can be developed into sarcoma in about 0.1-0.8% of the affected cases. Uterine fibroids are also considered one of the leading indications for hysterectomies. Qualities of life of women with UFs are poor compared to healthy women without UFs **(Elsaied, Nour Eldin, Gad & Mohamed, 2020)**.

The risk factors for development of UFs include race and ethnicity, age, family history, diet high in red meat and low in fruits and

vegetables, body mass index (BMI), nulliparity as well as early onset of menstruation **(Freytag, Günther, Maass & Alkatout, 2021; Millien et al., 2021)**. The exact cause of UFs is not fully understood, but their growth may be stimulated by ovarian hormones like estrogen and progesterone. So, UFs are uncommon before the onset of menstruation and after menopause **(Giuliani, Sanie & Marsh, 2020)**.

Uterine fibroids (UFs) are classified into three types according to their location in one of the three basic layers of the uterus. These include submucosal fibroids that affect the endometrium, intramural fibroids that affect the myometrium, and subserosal fibroids that affect the visceral peritoneum or serosa **(Ali et al., 2023)**.

Symptoms and signs of uterine fibroids depend on their size and location inside the uterus. These include heavy or prolonged menstrual periods (menorrhagia), dysmenorrhea, dyspareunia, pelvic pain or pressure. in addition, enlarged abdomen or bloating, frequent urination, difficulty in emptying the bladder, constipation, pain in the back or leg, anemia, infertility and recurrent miscarriage **(Tinelli et al., 2021)**.

The impact or adverse obstetric outcomes of uterine fibroids on women health during childbearing years include; preterm labor, placental abruption, fetal growth restriction, mal-presentation, abnormal attachment of the placenta, miscarriage, caesarean section, and post-partum hemorrhage. Other adverse effects include; dyspareunia, decrease sexual desire, menorrhagia, irregular menstrual cycle, and dysmenorrhea (**Hayes, Arambage, Impey, Arulkumaran & Collin, 2023)**.

The diagnosis of uterine fibroids includes pelvic examination, transabdominal or transvaginal ultrasound, magnetic resonance imaging (MRI), hysterosalpingography, hysteroscopy, and endometrial biopsy (**Sasaran et al., 2022)**. Unfortunately, many women diagnosed with fibroids seek medical intervention within a year of diagnosis **(Valentyna & Kseniia, 2022)**.

Uterine Fibroids can't be prevented, but there are many measures that may reduce their risk **(Metwally & Li, 2020)**. Such measures include eating a balanced diet, increasing fiber intake, choosing organic foods, reducing processed foods, eating anti-inflammatory foods like fatty fish (salmon, mackerel), curcumin, ginger and green leafy vegetables. Other measures include maintaining a healthy weight, incorporating regular exercise, management of stress, sleeping 7-9 hours each night, avoid smoking, caffeine; alcohol consumption and exposure to environmental toxins **(Tinelli et al., 2021)**.

Management of UFs includes medical and / or surgical management. Medical management includes; gonadotropin-releasing hormone (GnRH) agonists or antagonists, selective progesterone receptor modulators (SPRMs), anti-fibrinolytic agents, and non-steroidal anti-inflammatory drugs (NSAIDs). Surgical management include hysterectomy (abdominal, vaginal and laparoscopic) and also myomectomy (laparotomy, laparoscopic and hysteroscopic) surgery **(Zhihong, Zhiwen, Fangwei, Lifen & Xinghua, 2022)**.

Therefore, perception and health care seeking behaviors of women with uterine fibroids are very important determinants for their overall health, and limitation of suffering and morbidity and mortality related to uterine fibroids and their complications. Maternity nurses also play a crucial role in the management and care of women with uterine fibroids, as well as in correction of misconceptions and unhealthy behaviors to improve the quality of women's health and reduce maternal morbidity and mortality thereby **(Zhu & Zhang, 2023)**.

Significance of the study:

Uterine fibroid is the most common benign gynecological tumor affecting as many as 25% of women in the reproductive age group and present in about 80% of all hysterectomy procedures **(Metwally & Li, 2020)**. Thus, UFs impact on women's quality of life, and have a major reproductive and public health concern. This study will contribute to improve women's perception for early detection of risk factors that might predispose to uterine fibroid, as well as, providing health education for women especially about health seeking behaviors regarding uterine fibroids to decrease the risk of maternal morbidity and mortality. Thus, the study of uterine fibroids is essential for improving women's health, fertility and overall quality of life. As well as it is critical to assess perception and health care seeking behaviors among women regarding uterine fibroids **(Elsaied et al., 2020; Valentyna & Kseniia, 2022)**.

The aim of this study

Assess perception and health care seeking behaviors of women with uterine fibroids.

Research question:

What is the level of perception and health care seeking behaviors of women with uterine fibroids?

Subjects and Method

Study Design:

A descriptive study design was used.

Setting:

The study was conducted in Egypt, at the outpatient clinics and inpatient units of the obstetrics and gynecological departments of: Tanta University Hospitals affiliated to Ministry of Higher Education and Scientific Research, and El-Menshawy General Hospital affiliated to Ministry of Health and Population.

Subjects:

Based on the number of women's attending at each setting, a convenient sample of 150 women with uterine fibroids was included in the study according to the following **inclusion criteria**:

-Women diagnosed with uterine fibroid.

-Women's age ranged between (17- 49) years.

Tools of data collection:

Three tools were used to achieve the aim of this study.

Tool (I): Women's knowledge regarding uterine fibroids structured questionnaire.

It was developed by the researcher after reviewing recent related literatures. **(Venugopal, Jacob, Nallasamy & Rmanathan, 2022; Elsaied, Nour Eldin, Gad & Mohamed, 2020; Abd El-Hakim, Moustafa & Abd El-Rahim, 2022; Riggan, Stewart, Berry, Venable& Allyse, 2021; Kaur & Nair, 2021)**. It included three parts; **Part (1): Socio-demographic characteristics of the studied women**: It was used to collect data about; age, age at marriage, marital status, residence, years of marriage, level of education, occupation, type of family and family income. **Part (2): Obstetrics and gynecological history of the studied women**: It included; age of menarche, menstrual history, contraceptive history, gravidity, parity, number of abortion, family history of uterine fibroids, and attendance of classes related to uterine fibroids. **Part (3): Women's knowledge regarding uterine fibroids**: It included 14 questions covered the following items; characteristics of normal menstruation such as (interval, duration, amount of blood loss), as well as signs and symptoms of menstrual abnormalities such as (dysmenorrhea, menorrhagia and premenstrual tension syndrome). This tool also included 10 questions about uterine fibroids covered the following items; definition, causes, risk factors, signs and symptoms, complications, diagnostic tests, risks of uterine fibroids on pregnancy, sexual function as well as life style,

management and sources of women's knowledge regarding uterine fibroids.

The scoring system of knowledge was as follows: Correct and complete answers were scored as (2), correct and incomplete answers were scored as (1), incorrect answers or don't know answers were scored as (0).

The total knowledge score was calculated as follows:

-High level of knowledge ≥ 75% of the total score.

-Moderate level of knowledge 50 - < 75% of the total score.

-Low level of knowledge < 50% of the total score.

Tool (II): Women's attitudes toward uterine fibroids.

This tool was adapted from **(Venugopal, Jacob, Nallasamy & Rmanathan, 2022; Rumun, Margaret & Nguavese, 2019; Akpenpuun, Fayehum & Jegede, 2019)**. It consisted of 23 statements to which the women with uterine fibroids were asked about their attitudes towards uterine fibroids such as uterine fibroid is a serious disease**,** uterine fibroids lead to barrenness (sterility), pregnancy is possible with uterine fibroids, uterine fibroids can affect childbearing.

Scoring system for women's attitudes regarding uterine fibroids was as follows:

Each statement was rated by using a 3-point Likert scale; Agree was scored as (2), uncertain was scored as (1), and disagree or don't know was scored as zero (0).

The total score of women's attitudes was calculated as follows:

-Positive attitude ≥ 60% of the total score.

-Negative attitude **<** 60% of the total score.

Tool (III): Health care seeking behaviors of women with uterine fibroids.

This tool was developed by the researcher after reviewing recent related literatures **(Akpenpuun, Fayehum & Jegede, 2019; Jarmusz, 2023; Todd, 2023; Adegbesan, Okunade & Gbadegesin, 2014).** It consisted of 11 statements such as seek health advice regarding uterine fibroids once symptoms appear, seek health screening for uterine fibroids, adhere (commit) to treatment of uterine fibroids that is prescribed by the doctor.

Scoring system of women's health care seeking behaviors regarding uterine fibroids was as follow: Done was scored as (1), not done was scored as (0).

The total score of women's health care seeking behaviors was calculated as follows:

-Satisfactory health care seeking behaviors ≥ 70%.

-Unsatisfactory health care seeking behaviors < 70%.

Method:

The study was implemented according to the following steps:

-Administrative approval: An official letter clarifying the purpose of the study was obtained from the Faculty of Nursing Tanta University and was submitted to the responsible authorities of the selected study settings to obtain their approval and cooperation for carrying out the study.

-Ethical and legal considerations were considered all over the study as the following:

-The approval of ethical committee was obtained (Code 259/5/2023). Women's informed consent was obtained to participate in the study after explaining the purpose of the study. The right to abstain or terminate participation at any time is respected. The nature of the study didn't cause any harm or pain for the entire sample. The women were assured about the privacy and confidentiality of the collected data and that the data will be used only for the study purpose.

-Tools' development: Tools (I, and III) were developed by the researcher after reviewing

recent related literatures **and tool (II)** was adapted from related literatures.

Validity and reliability: the study tools were translated into Arabic language and then tested for content validity by a jury of 5 experts in the field of maternal and neonatal health nursing.

- The reliability of the study tools was tested by using Cronbach's Alpha test that indicated high reliability of the study tools as follows; (0.859, 0.912, 0.845 and 0.878 respectively) for socio-demographic and obstetric and gynecological history, knowledge, attitudes and health seeking behaviors respectively.
- A pilot study was carried out on 10% of the total sample (15 women with uterine fibroids) from the previously mentioned settings before the actual data collection to ascertain the feasibility and applicability of the developed tools. Data obtained from the pilot study were excluded from the current study sample.

-Data were collected: The researcher introduced herself to each woman and the data were collected through a structured interview using the previously developed study tools as follows; Tool I: parts (1), and (2) were used to collect the socio-demographic characteristics, and obstetric and gynecological history. Part (3): was used to assess the women's knowledge regarding uterine fibroids. Tool II: was utilized to assess attitudes toward uterine fibroids. Tool III: was utilized to assess health care seeking behaviors regarding uterine fibroids.

-The study tools were applied individually for each woman in the morning shifts at the previously mentioned study settings from 9:00 a.m. to 1.00 p.m., three days per week, until the predetermined sample size was collected.

-Filling the questionnaire needed approximately 15-20 minutes.

-After collecting the required data, an instructional booklet regarding uterine fibroids was given to women upon their request to improve their knowledge, attitudes and health care seeking behaviors regarding uterine fibroids.

- Data collection was carried out over a period of six months started from September 2023 until the end of February 2024.

Statistical analysis:

The collected data were organized, coded, tabulated and statistically analyzed using SPSS (Statistical Package for Social Sciences) version 25 (IBM Corporation, Armonk, NY, USA).

-For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, which describe a categorical set of data frequency, and percentage or proportion of each category were calculated. Comparison between two groups and more was done using Chi-square test (χ^2).

-For comparison between means of two groups of non-parametric data of independent samples, Z value of Mann-Whitney test was used. For comparison between more than two means of non-parametric data, Kruskal-Wallis (χ^2) was calculated. Correlation between variables was evaluated using Pearson's correlation coefficient (r). Significance was adopted at $p<0.05$ for interpretation of results of tests of significance.

Results

Table (1): Shows socio-demographic characteristics of the studied women with uterine fibroids. It reveals that three fifths (60.0%) of the studied women were between 40 to 49 years old, two fifths (40%) were 22 and less than 40 years, with mean age of 40.46±6.80, slightly more than one half (53.3%) were married at 16-20 years old with a mean age of marriage of 20.72±3.44, slightly more than four fifths (83.3%) were currently married, and the majority (85.3%) of them were from rural areas.

The table also shows that nearly one half (48.0%) of the studied women had secondary

education, slightly more than three quarters (77.3%) were housewives, and slightly less than three fifths (56.7 %) had not enough family income.

Table (2): Shows obstetric history of the studied women with uterine fibroids. It clarifies that slightly less than one third (30.7%) of the studied women were gravida two, and similar percent were gravida three, slightly more than one third (37.3%) were para two, and slightly more than two thirds (69.3%) had no abortion.

Table (3): Shows history of uterine fibroids among the studied women. It clarifies that slightly more than three quarters (79.3%) suffered from severe bleeding followed by severe lower abdominal pain, irregular menstrual cycle, delayed pregnancy and recurrent miscarriage (16.0%, 2.0 %, 1.3%, 1.3% respectively). It also shows that slightly more than two thirds (68.0%) were treated surgically, the minority (5.3%) used herbs, slightly less than three quarters (72.0%) followed up with a doctor and slightly less than three quarters (72.7%) hadn't family history of uterine fibroids.

Table (4): Shows knowledge of the studied women regarding uterine fibroids. It clarifies that slightly more than three quarters (76.0%) gave incorrect answers or didn't know the definition of uterine fibroids, slightly more than four fifths (80.7%) gave incorrect answers or didn't know the risk factors for uterine fibroids. The table also presented that slightly more than three fifths (61.3%, and 69.3% respectively) of the studied women gave incorrect answers or didn't know signs and symptoms, and risks of uterine fibroids on pregnancy, and the majority (86.7%) gave incorrect answers or didn't know risks of uterine fibroids on life style.

Table (5): Shows attitudes of the studied women towards uterine fibroids. It revealed that slightly more than two fifths (43.3%) agreed that uterine fibroids is a serious disease, while slightly less than one half (46.7%) disagreed that uterine fibroids affect married women only, the vast majority (94.0%) agreed that follow up is important for uterine fibroids and it's development. It also illustrated that (59.3%, 50.7%, 58.0%, 56.7% and 52.0%) of the studied women agreed regarding; uterine fibroids can affect child bearing, uterine fibroids affect sexual function and lead to dyspareunia, uterine fibroids increase the risk of uterine cancer, risks of uterine fibroids increase with age, and uterine fibroids occur only for menopausal women.

Table (6): Shows women's health care seeking behaviors regarding uterine fibroids. it revealed that slightly more than two thirds (67.3%) of the women seeked health advice regarding uterine fibroids once symptoms appeared and slightly more than three fifths (62.0%) seeked health screening for uterine fibroids after appearance of symptoms, more than three quarters (76.0%) adhered to treatment of uterine fibroids that is prescribed by doctor. As well as, revealed that (92.7%) of them answered with not done regarding; seek and prefer traditional treatment for uterine fibroids and didn't prefer medications or surgery.

Table (7): Shows relationship between total score of knowledge and total attitudes and also total health seeking behaviors regarding uterine fibroids among the studied women. It illustrates that women who had low level of knowledge (85.8%) had positive attitudes towards uterine fibroids, with no significance. While, women who had moderate level of knowledge (95.5%) also had positive attitudes towards uterine fibroids.

The table also revealed that women who had low level of knowledge (65.0%) had unsatisfactory level. As well as, women who had moderate level of knowledge (68.2%) had satisfactory level regarding health care seeking behaviors toward uterine fibroids.

Figure (1): Shows sources of knowledge regarding uterine fibroids among the studied women. It revealed that nearly more than two fifths (42.0%) of the studied women the doctor was the primary source of their knowledge regarding uterine fibroids, followed by the internet, the nurse and relatives which were recalled by (14.7% 11.3% and 11.3% respectively) as a source of knowledge regarding uterine fibroids.

Figure (2): Shows total score of the studied women's knowledge regarding uterine fibroids. It revealed that about four fifths (80.0%) had low level of knowledge regarding uterine fibroids.

Figure (3): Shows total score of the studied women regarding their attitudes towards uterine fibroids. It clarified that the majority (88.0%) of the women had positive attitudes towards uterine fibroids.

Figure (4): Shows total score of the studied women regarding their health care seeking behaviors of uterine fibroids. It revealed that slightly less than three fifths (56.7%) of the women had unsatisfactory level towards health care seeking behaviors regarding uterine fibroids.

Figure (5): Shows correlation between total knowledge scores and total attitude scores regarding uterine fibroids among the studied women. It presented that there was a significant positive correlation between the women's total knowledge scores and their total attitudes scores regarding uterine fibroids where r=0.585 and P=0.0001*.

Figure (6): Shows correlation between total knowledge scores and total health care seeking behaviors scores regarding uterine fibroids among the studied women. It demonstrates that there was a significant positive correlation between the women's total knowledge scores and their total health care seeking behaviors scores regarding uterine fibroids where r=0.489 and P=0.0001*.

Figure (7): Shows Correlation between total attitudes scores and total health care seeking behaviors scores regarding uterine fibroids among the studied women. It demonstrates that there was a significant positive correlation between the women's total attitudes scores and their total health care seeking behaviors scores regarding uterine fibroids where r=0.362 and P=0.0001*.

Table (1): Socio-demographic characteristics of the studied women with uterine fibroids (n=150)

Socio-demographic characteristics	The studied women	
	No	%
Age (years)		
22-<40	60	40.0
40- 49	90	60.0
Range	22- 49	
Mean±SD	40.46±6.80	
Age at marriage (years)		
16-20	80	53.3
>20-32	70	46.7
Range	16-32	
Mean±SD	20.72±3.44	
Marital status		
Married	125	83.3
Divorced	9	6.0
Widow	16	10.7
Residence		
Rural	128	85.3
Urban	22	14.7
Years of marriage		
2-<20	70	46.7
20-33	80	53.3
Range	2-33	
Mean±SD	19.92±6.95	
Education level		
Illiterate	12	8.0
Read and write	17	11.3
Primary/preparatory education	16	10.7
Secondary education	72	48.0
University education	33	22.0
Occupation		
Housewife	116	77.3
Working	34	22.7
Type of work	n=34	
Farmer	1	0.6
Governmental employee	4	2.7
Non-governmental employee	19	12.7
Professional	10	6.7
Family income from women's view		
Enough	65	43.3
Not Enough	85	56.7

Table (2): Obstetric history of the studied women with uterine fibroids (n=150)

Obstetric history	The studied women	
	No	%
Number of gravidity		
No gravida	10	6.7
One	10	6.7
Two	46	30.7
Three	46	30.7
More than three	38	25.3
Number of parity		
No parity	17	11.3
One	13	8.7
Two	56	37.3
Three	45	30.0
More than three	19	12.7
Number of abortions		
No abortion	104	69.3
One	27	18.0
Two	13	8.7
Three	3	2.0
More than three	3	2.0

Table (3): History of uterine fibroids among the studied women (n=150)

Women's history of uterine fibroids	The studied women	
	No	%
Signs and symptoms of uterine fibroids		
Sever bleeding	119	79.3
Delayed pregnancy	2	1.3
Severe lower abdominal pain	24	16.0
Irregular menstrual cycle	3	2.0
Recurrent miscarriage	2	1.3
Duration since symptoms appear		
1 month -1 year	102	68.0
>1-4 years	29	19.3
>4-13 years	19	12.7
Range	One month -13 years	
Mean±SD	1.57±1.98	
Clinical management		
Surgical management	102	68.0
Medical management	48	32.0
Alternative management methods		
No method used	142	94.7
Herbs	8	5.3
Follow up by the doctor		
Yes	108	72.0
No	42	28.0
Family history of uterine fibroids		
No	109	72.7
Yes	41	27.3

Table (4): Knowledge of the studied women regarding uterine fibroids (n=150)

Knowledge items about uterine fibroids	The studied women					
	Incorrect or don't know (0)		Correct and incomplete answers (1)		Correct and complete answers (2)	
	No	%	No	%	No	%
knowledge about uterine fibroids						
1- Definition of uterine fibroids	114	76.0	8	5.3	28	18.7
2- Causes of uterine fibroids	104	69.3	25	16.7	21	14.0
3- Risk factors for uterine fibroids	121	80.7	16	10.6	13	8.7
4- Signs and symptoms of uterine fibroids	92	61.3	30	20.0	28	18.7
5- Diagnostic tests for uterine fibroids	87	58.0	41	27.3	22	14.7
6- Complications of uterine fibroids	109	72.7	27	18.0	14	9.3
7- Risks of uterine fibroids on pregnancy.	104	69.3	37	24.7	9	6.0
8- Risks of uterine fibroids on sexual function	112	74.7	35	23.3	3	2.0
9- Risks of uterine fibroids on life style	130	86.7	16	10.7	4	2.6
10- Treatment of uterine fibroids	97	64.7	24	16.0	29	19.3

Table (5): Attitudes of the studied women towards uterine fibroids (n=150)

Attitude statements towards uterine fibroids	The studied women					
	Disagree or don't know (0)		Uncertain (1)		Agree (2)	
	No	%	No	%	No	%
Uterine fibroid is a serious disease.	35	23.3	50	33.3	65	43.3
Uterine fibroids lead to barrenness (sterility).	27	18.0	59	39.3	64	42.7
Uterine fibroid always turn into malignant tumor.	19	12.7	72	48.0	59	39.3
Pregnancy is possible with uterine fibroids.	35	23.3	63	42.0	52	34.7
Nulli-parity increases the risk for uterine fibroids.	36	24	61	40.7	53	35.3
Uterine fibroids can affect child-bearing.	14	9.3	47	31.3	89	59.3
Uterine fibroids affect married women only.	70	46.7	52	34.7	28	18.6
Uterine fibroids affect sexual function and lead to dyapareunia.	10	6.6	64	42.7	76	50.7
Uterine fibroids increase the risk of uterine cancer.	3	2.0	60	40.0	87	58.0
Follow up is important for uterine fibroid and its development.	0	0	9	6.0	141	94.0
Surgery is the only remedy for uterine fibroids.	44	29.3	53	35.3	53	35.3
Uterine fibroid is a hereditary disease.	27	18.0	63	42.0	60	40.0
Uterine fibroids can be treated with herbs.	66	44.0	69	46.0	15	10.0
If uterine fibroid increase in its size, hysterectomy is performed.	4	2.7	4	2.7	142	94.6
Medications can treat the tumor and decrease its size.	19	12.6	64	42.7	67	44.7
Risks of uterine fibroids increase with age	20	13.3	45	30.0	85	56.7
Uterine fibroids more common occur after delivery.	43	28.7	57	38.0	50	33.3
Uterine fibroids may occur before marriage	79	52.7	48	32.0	23	15.3
Uterine fibroids occur only for menopausal women.	37	24.7	35	23.3	78	52.0
Uterine fibroids lead to anxiety.	9	6.0	5	3.3	136	90.7
Women with uterine fibroids afraid to go to the doctor.	22	14.7	3	2.0	125	83.3
Women need for learning more about uterine fibroids.	0	0	0	0	150	100
Family and friends should learn about prevention of uterine fibroids.	1	0.7	0	0	149	99.3

Table (6): The studied women's health care seeking behaviors regarding uterine fibroids (n=150)

Health care seeking behaviors regarding uterine fibroids	The studied women			
	Not done (0)		Done (1)	
	No	%	No	%
Seek health advice regarding uterine fibroids once symptoms appear.	49	32.7	101	67.3
Seek health screening for uterine fibroids.	57	38.0	93	62.0
Adhere (commit) to treatment of uterine fibroids that is prescribed by the doctor.	36	24.0	114	76.0
Compliance with healthy life style				
Eat well balanced diet as fresh fruits and vegetables such as apples, tomatoes, broccoli and Citrus fruits like oranges and lemons and avoid unhealthy fat and caffeine.	141	94.0	9	6.0
Eat foods rich in calcium and magnesium such as milk, yogurt, bananas and fish.	135	90	15	10.0
Eat foods rich in iron such as spinach.	122	81.3	28	18.7
Avoid exposure to infection and passive smoking as well as drink plenty of fluids such as green tea.	73	48.7	77	51.3
Control body weight by doing exercises as walking and avoid exposure to environmental toxins (hazards).	86	57.3	64	42.7
Avoid stress and sleep 8 hours per day	46	30.7	104	69.3
Seek and prefer traditional treatment for uterine fibroids such as using herbs and do not prefer medications or surgeries.	139	92.7	11	7.3
Visit the doctor every period to check developments of uterine fibroids.	31	20.7	119	79.3

Table (7): Relationship between total score of knowledge and total attitudes and total health seeking behaviors regarding uterine fibroids among the studied women (n=150)

Total attitude and health care seeking behaviors	Total knowledge level of the studied women						χ^2 test P value
	Low level (n=120)		Moderate level (n=22)		High level (n=8)		
	No	%	No	%	No	%	
Total attitude score degree							
Negative attitude	17	14.2	1	4.5	0	0	2.782
Positive attitude	103	85.8	21	95.5	8	100	0.249
Total health care seeking behaviors score level							
Unsatisfactory level	78	65.0	7	31.8	0	0	19.387
Satisfactory level	42	35.0	15	68.2	8	100	0.0001*

***Statistically significant (P<0.05)**

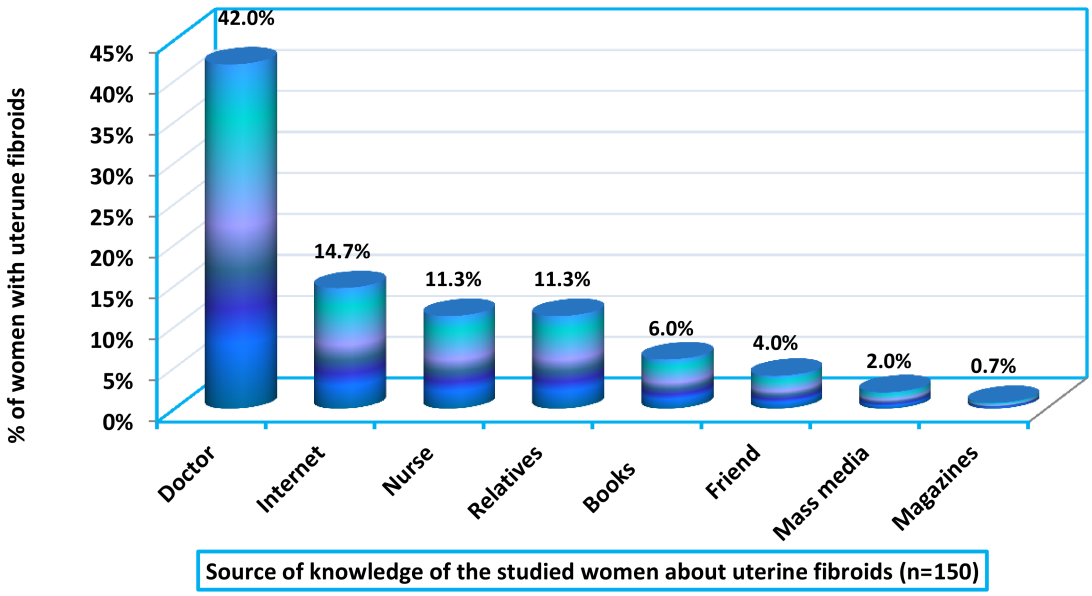

Figure (1): Sources of knowledge regarding uterine fibroids among the studied women (n=150)

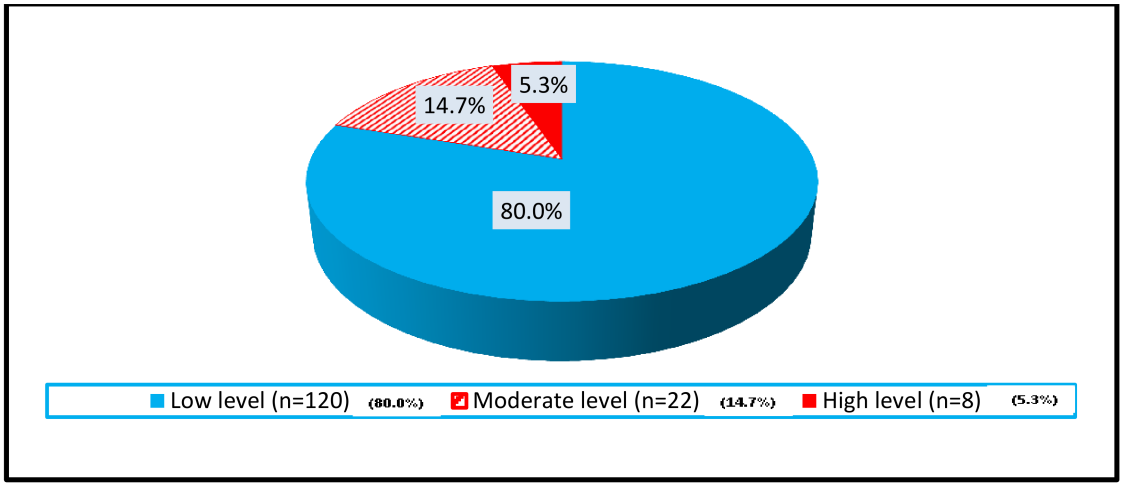

Figure (2): Total score of women's knowledge regarding uterine fibroids (n=150)

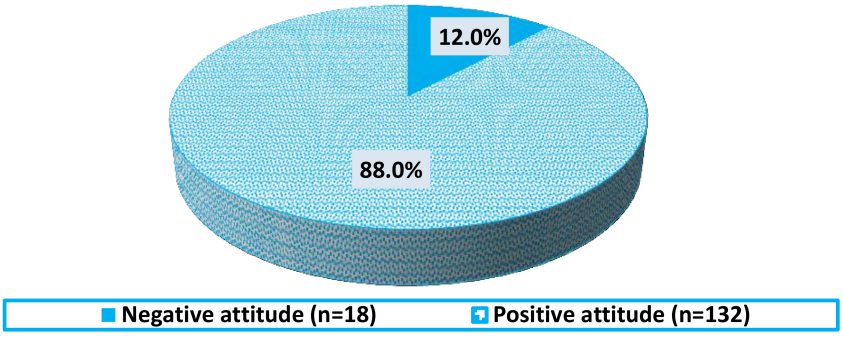

Figure (3): Total score of the studied women attitudes regarding uterine fibroids (n=150)

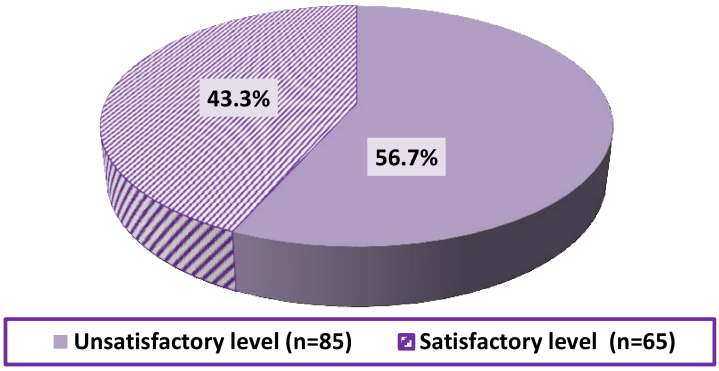

Figure (4): Total health care seeking behaviors score of the studied women regarding uterine fibroids (n=150)

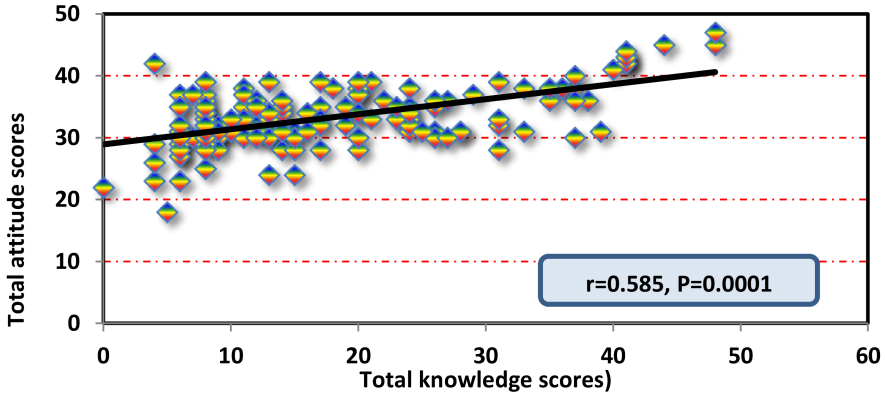

Figure (5): Correlation between total knowledge scores and total attitude scores regarding uterine fibroids among the studied women (n=150)

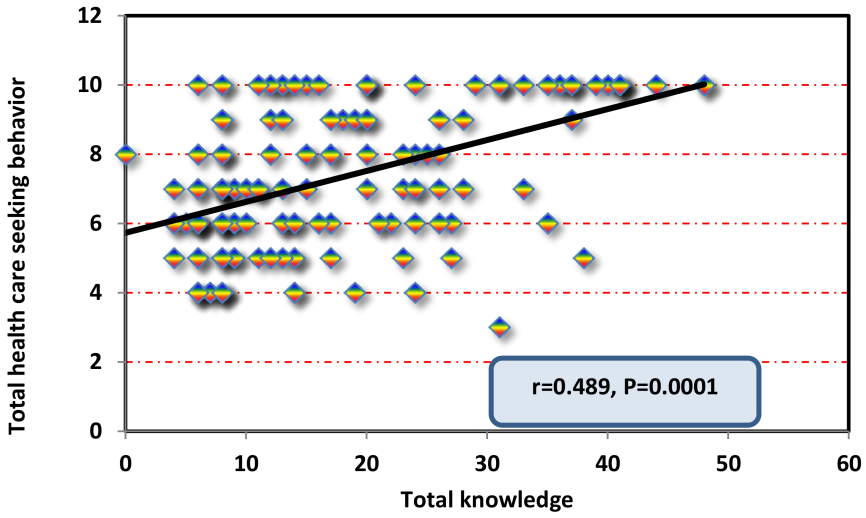

Figure (6): Correlation between total knowledge scores and total health care seeking behaviors scores regarding uterine fibroids among the studied women (n=150)

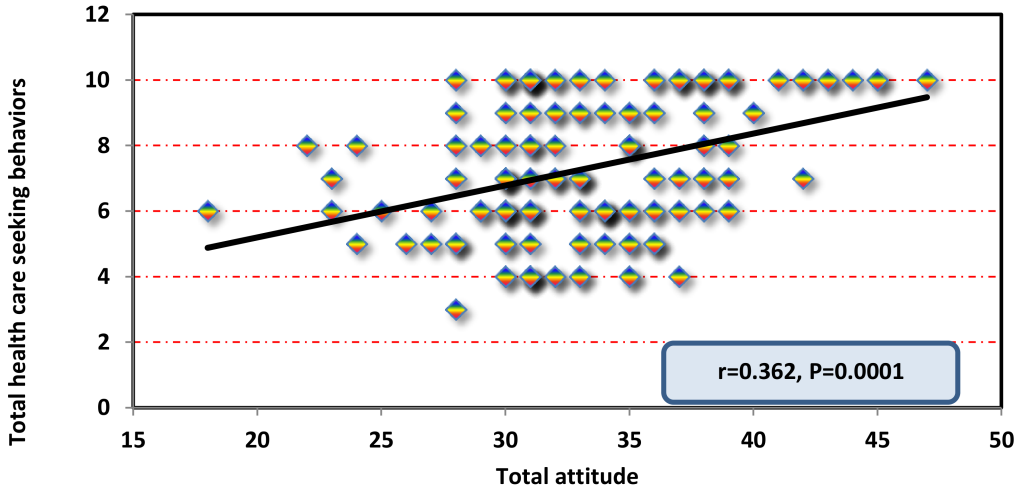

Figure (7): Correlation between total attitudes scores and total health care seeking behaviors scores regarding uterine fibroids among the studied women (n=150)

Discussion

Uterine fibroids (UFs) are abnormal growths located in the uterus and one of the most common pelvic non-cancerous tumors that affect women mostly within the reproductive age (**Rumun, Margaret, & Nguavese 2019)**. The prevalence of uterine fibroids varies between 20% and 80% of women in the childbearing. Uterine fibroids are associated with a range of symptoms and adverse health issues; including abnormal uterine bleeding, acute pelvic pain, abdominal swelling, pelvic pressure, urinary frequency, and compressive bowel symptoms.

Additionally, UFs are one of the major causes of infertility, miscarriage, abortion, pregnancy-related deaths and premature births among women. **(Bano et al., 2023)**. Uterine fibroids are responsible for 6.4% of all the gynecological admissions and 21.35% of all major gynecological surgeries **(Akpenpuun, Fayehun, & Jegede 2019)**. Perception and healthcare seeking behaviors of the women who have uterine fibroids can affect their early presentation to the hospital and worsen their conditions, their reproductive health, decrease their quality of life, and may increase morbidity and mortality rates **(Ramirez et al., 2023)**.

Concerning the socio-demographic characteristics of the studied women with uterine fibroids, the present results revealed that three-fifths of the studied women were between 40-49 years old. This finding is in line with (**Omilabu, Okunade and Gbadegesin (2019)** ,who found that more than one third of the studied women were between 40-49 years. Another supported study was conducted by **(Hassan, Ibrahim, Metwaly, Sarhan, and Gouda (2024)** ,who reported that more than one half of the studied women were equal or more than 40 years old. Moreover, **Alhashim and Ibrahim (2020),** who illustrated that more than two fifths of the studied women, were from 45 - 54 years old. In addition, study conducted by (**Alauddin, (2022)** stated that the most number of the studied women belonged to the age group 41-50 years. In contrast, (**Dlamini et al., (2024)**, who reported that the majority of the participants fell within the age range of 18-25 years old. From the researcher's point of view, this similarity as the peak in estrogen levels typically occurs during leading up to and during the early 40s, which corresponds with the highest incidence of uterine fibroids.

Regarding marital status and place of residence, the present results revealed that more than four fifths of the studied women were currently married and the majority of them were from rural areas. These findings match with (**Rumun et al., (2019); Hassan et al., (2024),** who found that the majority of the studied women were married and almost three quarters of them were from rural areas. In contrast (**Abd El-Hakim, Moustafa and Abd El-Rahim (2022); Abd Alazeam, Farag and Mohamady (2023),** they reported that more than one half of participants were from urban. From the researcher's point of view, this dissimilarity because the differences in access to health care, exposure to environmental toxins, and lifestyle factors (such as diet and physical activity) between rural and urban settings.

Concerning studied women's educational level, the current study revealed that nearly one half of the studied women had secondary education and only 11.3% of them read and write. These findings disagree with **(Dlamini et al., (2024)** ,who stated that slightly less than one fifth of the studied women had secondary education. Another contradicted study, **(Abd El-Hakim et al., (2022)** who reported that slightly less than one half of the studied women read and write.

Regarding obstetric history, the present study revealed that slightly less than one third (30%) of the studied women were gravida three, and more than one fifth of them were para three. This finding is similar to (**Abd Alazeam et al., (2023)** ,who mentioned that more than three fifths of the studied women were pregnant for more than three times and slightly more than one half of them was delivered more than three times.

In relation to women's family history of uterine fibroids, the current study stated that slightly less than three quarters of the studied women hadn't family history of uterine fibroids. This finding is matched with **Abd Alazeam et al., (2023)** who clarified that the majority of the studied women didn't have family history of uterine fibroid. This study contradicted with **(Alauddin, (2022),** who stated that more than half of the participants had a family history of fibroids. From the researcher's point of view, the reason may be due to uterine fibroids can have a genetic component, and certain genetic variations may predispose individuals to develop fibroids, while others may not have these genetic factors.

The current study revealed that slightly more than three quarters of the studied women suffered from severe bleeding followed by severe lower abdominal pain, irregular menstrual cycle, delayed pregnancy and recurrent miscarriage. These findings are supported by **(Dlamini et al., (2024)**, who reported that more than half of the studied women suffered from severe abdominal discomfort, acute pelvic pain, abnormal uterine bleeding.

As regards the studied women's knowledge regarding uterine fibroids, the current study clarified that more than three quarters of them didn't know definition of uterine fibroids and slightly more than two thirds of them didn't know causes of uterine fibroids. This finding is strongly similar to **(Abd-El-Hakim et al., (2022),** who revealed that slightly less than three quarters of the studied women gave incorrect answer about definition of uterine fibroids and the majority of them gave incorrect answer about causes of uterine fibroids.

Regarding the risk factors and signs and symptoms of uterine fibroids, the current result revealed that slightly more than four fifths of the studied women didn't know answer about risk factors of uterine fibroids and slightly more than three fifths of them didn't know answer regarding signs and symptoms of uterine fibroids. This finding is matched with **(Abd Alazeam et al., (2023),** who mentioned that slightly more than one half of them gave incorrect answer about risk factors of uterine fibroids. In contrast **(Venugopal, Jacob, Nallasamy and Ramanathan, (2022)** they reported that slightly more than two fifths of the studied women were aware about risk

factors of uterine fibroids and slightly more than two fifths of them were aware about signs and symptoms of uterine fibroids.

Concerning diagnostic tests and risk of uterine fibroids on pregnancy, the current study revealed that slightly more than one half of the studied women didn't know diagnostic tests for uterine fibroids and slightly more than three fifths of them didn't know risk of uterine fibroids on pregnancy. This finding is in line with (**Abd El-Hakim et al., (2022)** ,who mentioned that nearly three fifths of the studied women gave incorrect answer about diagnosis of uterine fibroids. In contrast, (**Venugopal et al., (2022) ,**who found that almost three fifths of the studied women gave correct answers regarding the effects of uterine fibroid on pregnancy.

Pertaining the total score of knowledge regarding uterine fibroids, the current study revealed that approximately four fifths of the studied women had low level of knowledge regarding uterine fibroids. This finding is strongly similar to (**Dlamini et al., (2024)** they mentioned that almost three quarters of the studied women had poor knowledge regarding uterine fibroids. In contrast, this finding of present study disagreed with **(Venugopal et al., (2022),** who found that the majority of the participants revealed good knowledge regarding uterine fibroid. As well as, the present study disagrees with **(Alhashim and Ibrahim, (2020)** they stated that slightly more than one half of the participants had good knowledge regarding various aspects of uterine fibroids. From the researcher's point of view, the discrepancy of these different results may be due to sample size for both studies, the characteristics of study participants, such as age, education level, cultural background, and prior knowledge or experience and time at which the studies are conducted can contribute to score differences.

Concerning the studied women's sources of knowledge regarding uterine fibroids, the present study clarified that slightly more than two fifths of the studied women mentioned that the doctor was the primary source of knowledge. This finding matches with **(Alhashim and Ibrahim (2020),** who mentioned that the most common source of participants' information was doctor. In addition, the study done by (**Hassan et al., (2024)** they revealed that slightly more than two thirds of the participants obtained their information about uterine fibroids from the medical team.

As regards with the studied women's attitudes towards uterine fibroids, the current study revealed that slightly more than two fifths agreed that uterine fibroids is a serious disease and slightly less than half of participants disagreed that uterine fibroids affect married women only. These results are in line with (**Venugopal et al., (2022) ,**who found that slightly more than one half of participants agreed that uterine fibroid is a serious disease, and about three fifths of their participants disagreed that uterine fibroid affect married women only.

Moreover, the current study revealed that more than half of the women were agreed that uterine fibroids increase the risk of uterine cancer. This finding contradicts with **(Venugopal et al., (2022)** they found that more than three fifths of their study subjects disagreed that uterine

fibroids increase the risk of uterine cancer. In addition to, the current study clarified that more than one half of the studied women agreed that uterine fibroids occur only with menopause. This finding is contradicted with **(Venugopal et al., (2022)** they found that slightly more than two fifths of participants disagreed that risk of developing fibroid decreases with menopause.

As well as, the current study illustrated that slightly more than one half of the studied women agreed that uterine fibroids affect childbearing and that the risk of uterine fibroids increase with age. This result is similar to (**Omilabu et al., (2019); Alhashim and Ibrahim, (2020)** ,who reported that slightly more than half of participants agreed that uterine fibroids affect childbearing, and the risk of uterine fibroids increase with age.

Moreover, the current study clarified that slightly more than two fifths of the studied women were uncertain that uterine fibroid is a hereditary disease. These findings are contradicted with **(Venugopal et al., (2022)**, who mentioned that about two fifths of participants disagreed that uterine fibroid is a hereditary disease. In addition, the current study revealed that slightly more than one half of the studied women agreed that uterine fibroids affect sexual function and lead to dyspareunia. This result is in line with (**Venugopal et al., (2022),** who mentioned that slightly more than two fifths of the studied women agreed that uterine fibroids affect sexual life.

Concerning the total score of attitudes regarding uterine fibroids, the current study revealed that the majority of the studied women had positive attitudes towards uterine fibroids, while slightly more than one tenth had negative attitudes. In contrast, (**Akpenpuun et al., (2019)** they stated that about two thirds of the studied women had negative attitudes towards uterine fibroids. From the researcher's point of view, this may be due to different cultural backgrounds, orientation, believes and attitudes of the studied women.

As regard to health care seeking behaviors of the studied women towards uterine fibroids, the current study revealed that slightly more than two thirds of the studied women seeked health advice regarding uterine fibroids once symptoms appeared and slightly more than three fifths of them had health screening for uterine fibroids after appearance of symptoms and slightly more than three quarters of them adhered (commit) to treatment of uterine fibroids that is prescribed by doctor, these findings are similar to (**Akpenpuun et al., (2019)**, they mentioned that the majority of women started treatment immediately the disease was diagnosed and few delayed initiation of treatment a week or more after the diagnosis stated and more than one half used drug prescribed by the doctor. while these findings are contradicted with (**Ghant, Sengoba, Vogelzang, Lawson, and Marsh (2020),** who reported that more than one third of the studied women waited on an average of 3.6 years after experiencing symptoms before seeking a diagnosis and about one third delayed seeking treatment more than 5 years**,** because they believed that what they were experiencing was normal.

Moreover, the current study clarified that the vast majority of the studied women

didn't use traditional methods such as using herbs to treat uterine fibroids. This finding is contradicted with **(Akpenpuun et al., (2019) ,**who found that most of the studied women used traditional methods and herbs for treatment of uterine fibroids such as turmeric (curcumin) and green tea extract.

Concerning the total score of health care seeking behaviors regarding uterine fibroids, the present study revealed that slightly less than three fifths of the studied women had unsatisfactory level towards health seeking behaviors regarding uterine fibroids. This finding is similar to **(Akpenpuun et al., (2019)** ,who reported that slightly more than half of the studied women had unsatisfactory level towards health care seeking behaviors regarding uterine fibroids.

As regard to correlation between total knowledge and total attitudes scores regarding uterine fibroids, the present study clarified that there was a significant positive correlation between the women's total knowledge and total attitudes scores regarding uterine fibroids. This finding is strongly matches with **(Don et al., (2023); Qin et al., (2021); Yang et al., (2022)** ,who reported that there was a significant positive correlation between the women's knowledge and their total attitudes regarding uterine fibroids. In contrast, **(Macgregor, Munro, and Lumsden (2023)** ,who revealed that there was no correlation between knowledge and attitudes of uterine fibroids among their studied women **.**

Concerning correlation between total knowledge and total health care seeking behaviors scores regarding uterine fibroids, the current study revealed that there was a significant positive correlation between the women's total knowledge and their total health care seeking behaviors scores regarding uterine fibroids. This finding is similar to **(Akpenpuun et al., (2019),** who revealed that there was a significant positive correlation between women's knowledge and their health care seeking behaviors regarding uterine fibroids. Another supported study done by **(Abd Alazeem et al., (2023)** ,who reported that there was strong positive correlation between total knowledge, attitude and practices of the studied women regarding uterine fibroids.

Regarding correlation between total attitudes and total health care seeking behaviors scores regarding uterine fibroids, the current study revealed that there was a significant positive correlation between the women's total attitudes and their total health care seeking behaviors scores regarding uterine fibroids. This finding is similar to **Macgregor et al., (2023),** who revealed that there was a correlation between attitudes and health care seeking behaviors regarding uterine fibroids among the studied women.

This study revealed that there was low level of knowledge, positive attitudes and unsatisfactory health care seeking behaviors of the studied women with uterine fibroids. Thus, health educational programs regarding uterine fibroids should target women of childbearing age at all places, and communities. So, this study was carried out to assess perception and health care seeking behaviors of women with uterine fibroids.

Conclusion

Based on the findings of the present study, the research questions have

been supported and answered. So, it can be concluded that:

There was low level of knowledge, positive attitudes and unsatisfactory health care seeking behaviors of the studied women with uterine fibroids. A significant positive correlation was found between the women's total knowledge scores and their total attitudes scores regarding uterine fibroids, significant positive correlations were found between the knowledge, attitudes and health care seeking behaviors of the studied women with uterine fibroids.

Recommendations

Based on the results of the current study, it is recommended to study the following:

- Effect of educational program on perception and health care seeking behaviors of reproductive age women with uterine fibroids.
- Relationship between uterine fibroids diagnosis and adverse obstetrical outcomes.

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