

Pregnant Women's Knowledge and Practice Regarding Minor Discomfort During Third Trimester

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Abstract

Background: Pregnancy is a normal physiological process in a woman's life and is accompanied by numerous of minor discomforts caused by anatomical, physiological and hormonal changes .These minor discomfort may affect the woman's quality of life and limit daily activities. **The Aim of study:** was to assess pregnant women's knowledge and practice regarding minor discomfort during third trimester. **Research design:** A descriptive study design was utilized for achievement the aim of the research. **Setting:** The study was conducted at antenatal clinic Ain Shams University of maternity hospital. **Sample:** A purposive sample was used in the current study included (353) of pregnant women's during third trimester .**Tools of data collection:** Two tools of data collection were used: **Tool I;** structured interviewing questionnaire sheet and **Tool II;** Self- care reported practice assessment tool. **Results:** The current study findings revealed that 51% of the studied sample had average level of total knowledge score regarding minor discomfort during third trimester, 26.9% of them had unsatisfactory, while 22.1% of them had satisfactory. Also, 72.2% of the studied sample had unsatisfactory level of total practice score regarding minor discomfort during third trimester, while 27.8%of them had satisfactory. In addition to that there was highly significant correlation between total knowledge score and total reported practice score of the studied sample. **Conclusion:** Based on the results, the current study concluded that more than half of the studied sample had average level of total knowledge score , more than one quarter of them had unsatisfactory knowledge. And less than three quarters of study sample had unsatisfactory level of total practice score regarding minor discomfort during third trimester. **Recommendations:** the current study recommended that design and implement periodically awareness-raising Health education programmed about minor discomfort during pregnancy using booklet, guideline, video and brochures.

Keywords: Pregnant Women's, Knowledge, Practice, Minor Discomfort, Third Trimester.

Introduction

Pregnancy is creative and productive period in the life of a woman and one of the vital events, which needs special care from conception to postnatal period, pregnancy defined as the state of carrying a developing embryo or fetus within the female uterus. During pregnancy, mother faces many minor discomforts due to physiological, anatomical, psychological, biochemical and immunological adaptations occurs in the body and can positively or negatively affect the woman, fetus and family consequently additionally, the wellbeing of pregnant mothers is threatened due to these minor discomforts and lead to unnecessary hospitalization (*Kumaris et al., 2023*).

Pregnancy consists of three trimesters marked by specific fetal developments. Whole pregnancy period is associated with number of discomforts which are otherwise easily manageable at home. Minor ailments varying during all periods of pregnancy and classified into discomforts that occur during the first, the second, and the third trimester of pregnancy. Dramatic hormonal changes in the first trimester of pregnancy embrace many discomforts that tend to ease with the start of the fourth month of pregnancy (*Farooq, & Gobindgarh., 2021*).

The pregnant, during 1st trimester, mostly nausea and vomiting, fatigue and frequency of micturition can be developed and most of these minor discomforts will be diminished during 2nd

trimester. But heart burn, constipation, vaginal discharge and mild back pain can be observed commonly in 2nd trimester. Furthermore, during 3rd trimester, minor discomforts such as hemorrhoids, leg cramp, edema, varicosities, urinary frequency, back pain, dyspnea and insomnia (*Shilpa, 2021*).

Varicose veins usually occur in the legs, but can also occur in the vulva and rectum, and may be associated with pain, night cramps, aching and heaviness, and worsen with long periods of standing. Constipation can be very troublesome and may be complicated by hemorrhoids. Leg cramps often occur at night and can be very painful, affecting sleep and daily activities. Suggested approaches to manage common physiological symptoms include a variety of non-pharmacological and pharmacological options. can be developed. Pregnant women experiencing multiple discomforts longer than few weeks are most likely to have health and well-being problems (*Ibrahim et al., 2020*).

Common minor discomforts might affect the woman during pregnancy but are not threatening their life. Minor discomforts are slight ailments of pregnancy that leads to lack of comfort. And also affect the health of pregnant mother as well as fetus which affects physical and mental functions of both. The pregnancy progresses the increasing size of the fetus produces physical stress on mothers' body and these pressure can also cause further uncomfortable symptoms. The majority of discomforts experienced during pregnancy can be associated to either hormonal changes or the physical changes related to growing fetus. (*Christiana et al., 2021*).

Pregnant women should have basic knowledge on common minor discomforts and how to manage these discomforts during pregnancy to avoid the complications and maintain their health condition. Moreover, successful management of minor discomforts requires adequate knowledge on minor ailments, self-management, dangerous signs that require more attention and how to cope and overcome the minor discomforts (*Mohamed et al., 2021*).

Self-care practices are defined as the ability of individuals, families and communities to utilize knowledge, self-regulation, skills, abilities in order to promote and maintain health, prevent disease and cope with the disability with or without the support of a healthcare provider (*WHO, 2019*). Self-management regarding minor discomforts and

practices during the prenatal period is the process whereby the pregnant women use knowledge, beliefs, self-regulation skills and abilities, also social facilitation to promote the positive outcome, reduce the discomfort and restore the healthy lifestyle during the pregnancy (*Sandal et al., 2019*).

Maternity nurse comprises the greatest group of health care providers and are responsible for the quality of care provided to the pregnant women. The nurse and other specialized personnel collaborate in providing services for pregnant women moreover, the obstetric health nurse act as a technical specialist, researcher, teacher and consultant and sometimes play an administrative role with the pregnant total health care experiences by providing information, suggestion, emotional support and ongoing reassurance to the mother and her partner. So, the nurse can focus on minor discomfort and special needs of the pregnant women to promote optimal maternal and child health (*Hassan et al., 2019*).

Significance of the study

According WHO Most discomforts experienced during pregnancy can be related to either hormonal changes or the physical changes related to the growing uterus. National Institute for Care and Health Excellence (NICE) report that minor discomforts are very common and reported by 50% - 80% of pregnant women . Most of them are not dangerous, but may threaten the women life if not managed well. So, it is better to be able to spot symptoms of any discomfort quickly to manage it as early as possible and avoid the negative consequences on women and their fetus if neglected (*Christiana et al., 2021*).

According to WHO, Common minor discomforts during the third trimesters **globally** are heart burn and affect 89.1% of all pregnant women. Constipation affecting 78.2% of women particularly on the third trimester, dyspnea affecting 94.1% of all pregnant women, edema of ankle and feet occurs 80% of normal pregnancies. Varicosities may develop in 40% of pregnant women. Polyuria 88.4%, fatigue 75-88.4% (*Sharma et al., 2021*).

Pregnancy- related physical symptoms range from heartburn, leg cramps, and leg edema hemorrhoids, shortness of breath, urinary frequency, insomnia, and varicosity many of which are unpleasant and have potential negative effects on a women's health life. (*Ruth et al., 2019*).

Minor discomforts might affect the health of mother and fetus, if pregnant women are helped

to change behaviors related to lifestyle, it effectively restores their health. Providing empathetic and sound advice about self management to elevate these discomforts helps promote the overall health and wellbeing of pregnant women (**Christiana et al., 2021**).

Aim of the Study

The current study aimed to assess pregnant women's knowledge and practice regarding minor discomfort during third trimester through:

1.Assessment of the pregnant women's knowledge regarding minor discomfort during third trimester.

2.Assessment of the pregnant women's practice regarding minor discomfort during third trimester.

Research Questions:

1.What is the knowledge level of pregnant women regarding minor discomfort during third trimester?

2.What is the practice level of pregnant women regarding minor discomfort during third trimester?

Subjects and Methods

Research design:

A descriptive design was used in this study.

Setting:

The current study was conducted at Antenatal clinic at Ain Shams University Maternity Hospital.

Subjects:

Sample type

A purposive sample will be utilized.

Sample size:

353 pregnant women will be included in the current study according of the following equation:

$$n = \frac{N \times p(1-p)}{\left[\frac{N-1}{d^2} \div z^2 \right] + p(1-p)}$$

$$n = \frac{4400 \times (0.5 \times 0.5)}{2.863 + 0.25} = 3.113$$

$$n = \frac{353}{4399 \times (.0025 / 3.8416) + 4399 \times .000651} = 2.863 + 0.25 = 3.113$$

Which:

n= Sample size

N= Total population.

Z=the standard value corresponding to confidence level which is (1.96).

d= Error level 5%.

p= 0.5.

Tools of data collection:

Two tools were used for data collection in the present study:

Tool I: A structured interviewing Questionnaire sheet:

It was developed by the researcher based on reviewing of recent and related literatures such as (**Khalil et al., 2019 & Hassan et al., 2019**). It was written in simple Arabic language considering the aim of the study and data needed to be collected and divided into four parts and including (26) multiple choice questions. It divided into four parts.

Part 1: Concerned with general characteristics of studied women which include age, level of education, residence, occupation status, marital status and physical characteristics (questions 1- 8).

Part 2: Concerned with obstetric history as parity, gravidity, previous abortion and follow up (questions 9 -12).

Part 3: Concerned with types and occurrence of minor discomfort among studied women during third trimester which include , minor discomfort related to respiratory system (dyspna related to growing uterus, nasal congestion) ,minor discomfort related to gastrointestinal system (heart burn ,hemorrhoids ,constipation extra salivation) , minor discomforts related to musculoskeletal system (leg cramps ,swollen leg ,Bach pain, varicose vines) , minor discomfort related to urinary system(urinary frequency) and minor discomfort related to nervous system (Insomnia). (Questions from 13-17).

Part 4: women's knowledge: Developed to assess pregnant women's knowledge regarding minor discomfort during third trimester including "definition of minor discomfort, causes of minor discomfort, types of minor discomfort (include 5items), (Questions 18 -25).

• Source of information. (Question number 26)

Knowledge scoring system:

Knowledge questions were given score (2) for correct answer and (1)for incorrect answer .

The total score ranged between. (1-16)

Total knowledge score classified into 3 categories as the following:

- **Satisfactory** knowledge > 7 5%. (12 -16)
- **Average** knowledge 50 – 7 4%. (8- 11)
- **Unsatisfactory** knowledge <50%. (1 -7)

Tool II: Self-care reported practice assessment tool:

It was adapted from (Ibrahim et al., 2021, Aldossary et al., 2018 & Samara Koon et al., 2020) and modified by investigator to assess pregnant women practice regarding minor discomfort during third trimester **including 12 elements** include (162)steps as a follow:

Heartburn (7) steps, varicose veins (7) steps, edema (8) steps, hemorrhoids (7) steps, low back pain (8) steps, leg cramps (6)steps, sleep disturbance (8) steps, constipation (9)steps, nasal congestion (3) steps, much salivation (4) ,dyspnea related to growing uterus (7) steps, Urinary frequency (7) steps.

Self-care reported practice scoring system:-

Each step was given (2) for “done” correctly and (1) for incorrectly done or “not done”

Total Self-care reported practice scores ranged between (81-162)

It consisted of (162) steps classified into (12) elements

The total practice scores were classified as the following:-

- **Unsatisfactory practice** (<60.0%). (< 96)
- **Satisfactory practice** (≥ 60.0%). (97-162)

Validity and reliability of the tool:

The tool of the study was assessed by three panel experts in the field of obstetric gynecological nursing Ain shams university to test the content validity of the tool and clarifies the sentences as well as appropriateness of content modification was done as omission or added to some questions.

Reliability:

Testing reliability of proposed tools was done by Alpha Cronbach test that was calculated to assess the reliability that indicated the tool consisted of reliability homogenous items as indicated by the moderate to high reliability the Alpha Cronbach test was (0.837) for first tool and was (0.814) for second tool.

II. Administrative Design:

An Official permission letter the title and purpose of the study was sent to the director of Ain Shams University Maternity Hospitals.

Ethical considerations:

The ethical considerations in this study include the following:

- The researcher approval obtained from scientific research ethical committee in faculty of nursing at Ain shams University Maternity Hospitals before starting the study

- Then official permission was obtained from the director of the Ain Shames University Maternity Hospitals where the study conducted.

- The researcher clarified the objective and aim of the study to the pregnant women included in the study.

- The researcher ensuring and maintaining anonymity and confidentiality of the subject data.

- Women’s informed that they are allowed to choose to participate or not in the study.

- The right of women to withdraw from the study at any time.

- Tools of data collection were not touching morals and religious, ethical and cultural aspect of sample size.

III. Operational Design:

It includes the preparatory phase, pilot study and fieldwork.

a) The preparatory phase:

The investigator reviewed the current local and international related literature using books, periodicals journals, magazines, and the internet to help the investigator to be more acquainted with the study and with the process of tool designing. Then tools were designed and tested for being valid and reliable.

b) Pilot study:

The pilot study was carried out on 10% of the total sample (35 pregnant women) that aimed to evaluate the applicability and clarity of the data collection tools. In addition, the pilot study also aimed to test the applicability to the current study and find possible problems that might face the investigator and interfere with data collection. No modification was done according to the results of the pilot study moreover; pregnant women who shared in the pilot study were included in the main study sample.

Fieldwork:

- Data collection took about 6 months from the beginning of August 2022 till the end of January 2023.

- The researcher attended the previous mention study setting 2 days per week (Monday and Tuesday) from 9 am to 2 pm.

- Firstly the researcher interviewed each woman individually in the waiting area of antenatal clinic.

- The researcher started by introducing herself to the participant and explains the aim of the study then written consent was taken.

- The researcher assessed general, physical characteristic, obstetric history and pregnant woman knowledge about minor discomfort by using (**tool I**) then the investigator assessed the self-care reported practice regarding minor discomfort by using (**tool II**) data collection tools took about 20-30 minutes to be completed by the researcher.

- The average number of pregnant women interviewed ranged from 7-10 women / day.

Statistical Design:

The statistical analysis of data was done by using the computer software of Microsoft Excel Program and Statistical Package for Social Science (SPSS) version 25. Data were presented using descriptive statistics in the form of frequencies and percentage for categorical data, the arithmetic mean (X) and standard deviation (SD) for quantitative data. Qualitative variables were compared using chi square test (X_2), P-value to test association between two variables and Pearson correlation test (r) to assess the correlation between the study variables.

Degrees of significance of results were considered as follows:

- P-value > 0.05 Not significant (NS).
- P-value $\leq 0.05^*$ Significant (S).
- P-value $\leq 0.01^{**}$ Highly Significant (HS).

Results

Table (1) shows that **43.6 %** of the studied sample their age ranged between 18 – 25 years, with the mean age 26.74 ± 4.90 years old whenever, 72.8% of them were from urban areas. Regarding the education, the current study revealed that 53.8% of the studied sample had secondary education in addition, 98.6% of them were married, and 74.5% were housewife.

Table (2) shows that 52.7% of the studied sample, their weight is ranged between (70 – 80) kg with mean weight 72.57 ± 9.01 Kg, while the height of studied sample ranged between (150 – 160) Cm with mean height 158.7 ± 7.14 Cm. In relation to body mass index 54.7% of them had normal weight .

Table (3) represents that 48.7% of the studied sample were primigravida and 51.0% of them were primipara. While 97.2% of studied sample didn't have previous abortion and 66.3% of them had four and more follow-up visit.

Table (4) reveals that regarding respiratory system, 85.3%, 71.7 % of the studied sample always

had dyspnea related to growing uterus and nasal congestion ,respectively. Regarding gastrointestinal system 88.1%, 85.6% of them always had heartburn and constipation, respectively. In relation to, musculoskeletal system 100.0%, 89.2% of studied sample always had back pain and swollen legs, respectively also, 68.3%, 62.6 % of them sometimes suffer from varicose veins and leg cramps respectively. While regarding urinary system 100.0% of studied sample always had urinary frequency .Regarding nervous system minor discomfort 71.2% of them always had insomnia.

Table (5) shows that, 76.5% and 59.5% of the studied sample had correct answer regarding the nervous and respiratory system minor discomfort, respectively. While, 80.7% and 81.6% of them had incorrect answer regarding the types of minor discomfort and the urinary system minor discomfort, respectively.

Figure (1): shows that, 54.7% of the studied sample had information about minor discomfort during third trimester from their family and friends .While, 27.5% of them had information from internet.

Figure (2): shows that, 51.% of the studied sample had average level of total knowledge score regarding minor discomfort during third trimester .While, 26.9% of them had unsatisfactory level. Also, 22.1% of them had satisfactory level .

Table (6) showed that, 52.1% and 50.1% of the studied sample had satisfactory total reported practice regarding back pain, constipation, while 97.2%, 82.4%, 77.3%, 76.8%, Of the studied sample had unsatisfactory total reported practice regarding leg and foot cramps, insomnia, dyspnea related to growing uterus and urinary problems, respectively.

Figure (3): shows that, 72.2% of the studied pregnant women had unsatisfactory level of total reported practice score regarding minor discomfort during third trimester. While, 27.8% of them had satisfactory level of total reported practice score.

Table (7) represent that, there were a highly statistically significant relation between total knowledge score of the studied sample and their general characteristics as age and educational level at ($P \leq 0.001^{**}$). Also, there was statistically significant relation between studied sample total knowledge and their occupation at ($P \leq 0.05^*$). While, there was no statistically significant relation with their, residence and marital status and at ($P > 0.05$).

Table (8): illustrated that, there was a highly statistically significant relation between total

reported practice score of the studied sample and their general characteristics as age and educational level at ($P \leq 0.001^{**}$). Also, there was statistically significant relation with their occupation at ($P \leq 0.05^*$). While, there was no statistically significant relation with their, residence and marital status and at ($P > 0.05$).

Part (I): General characteristics of the studied sample.

Table (1): Number and percent distribution of the studied sample according to their general characteristics (n=353).

General characteristics	No.	%
Age (years)		
18 -	154	43.6
25 -	120	34.0
30 – 35	79	22.4
Mean ± SD	26.74 ± 4.90	
Residence		
Rural	96	27.2
Urban	257	72.8
Educational level		
No red and write	8	2.3
Reading and writing	16	4.5
Primary education	91	25.8
Secondary education	190	53.8
High education	48	13.6
Marital status		
Married	348	98.6
Divorced	2	0.6
Widowed	3	0.8
Occupation		
Working	90	25.5
Housewife	263	74.5

Table (2): Distribution of the studied sample according to their physical characteristics (n=353).

Physical characteristics	No.	%
Weight (Kg)		
60 -	80	22.7
70 -	186	52.7
80-	47	13.3
≥ 90	40	11.3
Mean ± SD	72.57 ± 9.01	
Height (Cm)		
150 -	192	54.4
160 -	100	28.3
≥ 170	61	17.3
Mean ± SD	158.7 ± 7.14	
Body mass index		
Under weight	45	12.7
Normal weight	193	54.7
Overweight	89	25.2
Obese	26	7.4

Part (II): Obstetric history of the studied sample**Table (3):** Distribution of the studied sample according to their obstetric history (n = 353).

Obstetric history	No.	%
Gravida		
One	172	48.7
Two	91	25.8
Three	60	17.0
Four	20	5.7
More than four	10	2.8
Parity		
One	180	51.0
Two	85	24.1
Three	62	17.6
Four	18	5.1
More than four	8	2.2
History of abortion		
Yes	10	2.8
No	343	97.2
Follow-up		
One visit	22	6.2
Two visits	45	12.8
Three visits	52	14.7
Four and more	234	66.3

Part III: Reported minor discomforts by the studied sample.**Table (4):** Distribution of the studied sample according to their types and occurrence of minor discomforts (n=353).

Items	Always		Sometime		Never	
	No.	%	No.	%	No.	%
Minor discomfort related to respiratory system						
Dyspnea related to growing uterus	301	85.3	52	14.7	0	0.0
Nasal congestion	253	71.7	100	28.3	0	0.0
Minor discomfort related to gastrointestinal system						
Heartburn	311	88.1	42	11.9	0	0.0
Hemorrhoids	195	54.2	158	44.8	0	0.0
Constipation	302	85.6	51	14.4	0	0.0
Salivation	123	34.8	195	55.1	35	10.1
Minor discomfort related to musculoskeletal system						
Leg cramps	132	37.4	221	62.6	0	0.0
Swollen legs	315	89.2	38	10.8	0	0.0
Back pain	353	100.0	0	0.0	0	0.0
Varicose veins	112	31.7	241	68.3	0	0.0
Minor discomfort related to urinary system						
Urinary frequency	353	100.0	0	0.0	0	0.0
Minor discomfort related to nervous system						
Insomnia	235	71.2	100	28.8	0	0.0

Part (IV): knowledge of the studied sample related to minor discomfort during third trimester.

Table (5): Distribution of the studied sample according to their knowledge about minor discomfort during third trimester (n=353).

Items	Correct answer		Incorrect answer	
	No.	%	No.	%
Definition of minor discomfort	134	38.0	219	62.0
Causes of minor discomfort	100	28.3	253	71.7
Types of minor discomfort	68	19.3	285	80.7
Digestive system minor discomfort	130	36.8	223	63.2
Urinary system minor discomfort	65	18.4	288	81.6
Musculoskeletal system minor discomfort	132	37.4	221	62.6
Nervous system minor discomfort	270	76.5	83	23.5
Respiratory system minor discomfort	210	59.5	143	40.5

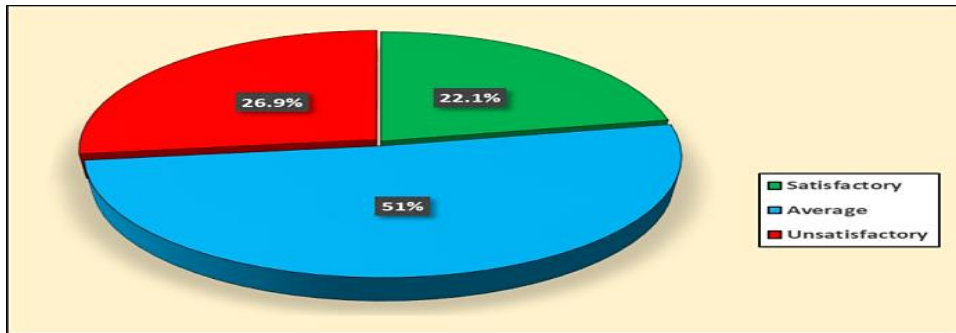
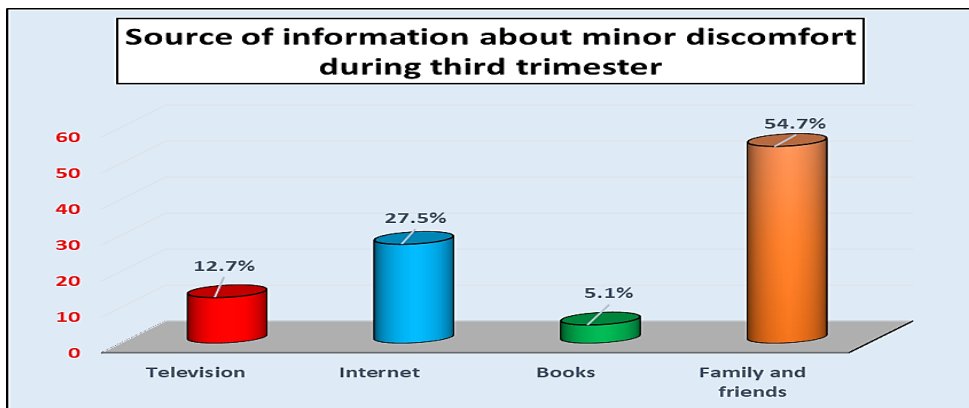
**Figure (1):** Percentage distribution of the studied sample according to their total knowledge score about minor discomfort during third trimester (n = 353).**Figure (2):** Percentage distribution of the studied sample according to source of information about minor discomfort during third trimester (n=353).

Table (6): Distribution of the studied sample according to their total reported practice score regarding minor discomfort during third trimester (n = 353).

Items	Satisfactory		Unsatisfactory	
	No.	%	No.	%
Dyspnea related to growing uterus	80	22.7	273	77.3
Heartburn	100	28.3	253	71.7
Urinary frequency and dysuria	82	23.2	371	76.8
leg and foot cramps	10	2.8	343	97.2
Leg swelling	150	42.5	203	57.5
Varicose veins	142	40.2	211	59.8
Constipation	177	50.1	176	49.9
Hemorrhoids	102	28.9	251	71.1
Back pain	184	52.1	169	47.9
Insomnia	62	17.6	291	82.4
Salivation	130	36.8	223	63.2
Nasal congestion	90	25.5	261	74.5

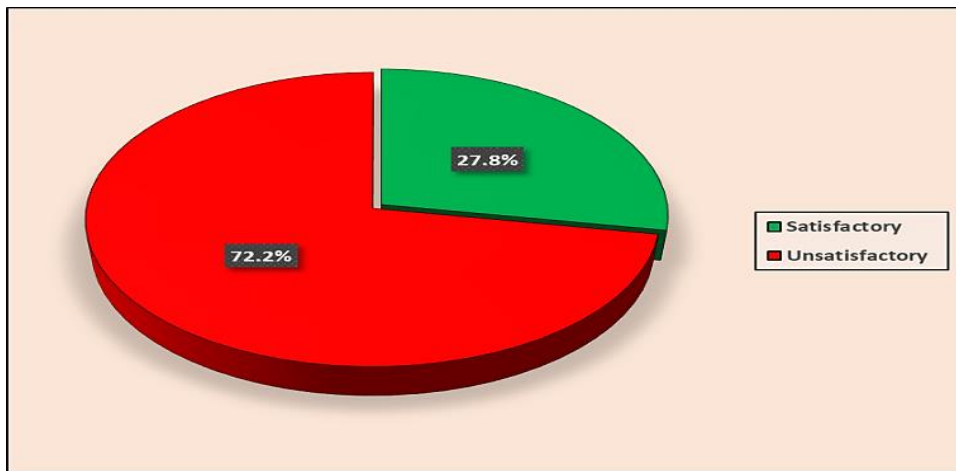
**Figure (3):** Percentage distribution of the studied sample according to their total reported practice score regarding minor discomfort during third trimester (n = 353).**Part (VI):** Relation between different variables:

Table (7): Relationship between general characteristics of the studied sample and their total knowledge score (n=353)

General Characteristic		Levels of total knowledge score						X ²	P-Value
		Satisfactory (n=78)		Average (n=180)		Unsatisfactory (n=95)			
		No.	%	No.	%	No.	%		
Age (years)	18 -	2	2.6	77	42.8	75	78.9	18.14	0.000**
	25 -	18	23.1	82	45.5	20	21.1		
	30 - 35	58	74.3	21	11.7	0	0.0		
Residence	Rural	26	33.3	55	30.6	25	26.3	1.300	0.390
	Urban	52	66.7	125	69.4	70	73.7		
Educational level	No read and write	0	0.0	0	0.0	8	8.4	17.10	0.000**
	Reading and writing	0	0.0	0	0.0	16	16.9		
	Primary & education	0	0.0	24	13.3	67	70.5		
	Secondary education	32	41.0	154	85.6	4	4.2		
	High education	46	59.0	2	1.1	0	0.0		
Marital status	Married	76	97.4	179	99.4	93	97.9	1.310	0.385
	Divorced	2	2.6	0	0.0	0	0.0		
	Widowed	0	0.0	1	0.6	2	2.1		
Occupation	Working	68	87.2	17	9.4	5	5.3	11.34	0.015*
	Housewife	10	12.8	163	90.6	90	94.7		

X²=chi-square test. No statistically significant at p > 0.05. *Significant at p < 0.05. **highly significant at p < 0.001.

Table (8): Relationship between general characteristics of the studied sample and their total reported practice score (n=353).

General characteristic		Levels of total reported practice score				X ²	P-Value
		Satisfactory (n=98)		Unsatisfactory (n=255)			
		No.	%	No.	%		
Age (years)	18 -	9	9.2	145	56.9	17.58	0.000**
	25 -	19	19.4	101	39.6		
	30 - 35	70	71.4	9	3.5		
Residence	Rural	36	36.7	60	23.5	2.041	0.339
	Urban	62	63.3	195	76.5		
Educational level	No read and write	0	0.0	8	3.1	18.41	0.000**
	Reading and writing	0	0.0	16	6.3		
	Primary & education	10	10.2	66	25.9		
	Secondary education	48	50.0	142	55.7		
	High education	40	40.8	8	3.1		
Marital status	Married	96	98.0	252	98.8	1.047	0.490
	Divorced	2	2.0	0	0.0		
	Widowed	0	0.0	3	1.2		
Occupation	Working	52	53.1	38	14.7	13.66	0.012*
	Housewife	46	46.9	217	85.3		

X²=chi-square test. No statistically significant at p > 0.05. *Significant at p < 0.05. **highly significant at p < 0.01.

Part (VII): Correlation between the studied variable.

Table (9): Correlation between total knowledge score of the studied sample and their total reported practice score regarding minor discomfort during third trimester (n=353).

Items	Total knowledge	
	r	P-value
Total reported practice	0.515	0.000**

r= correlation coefficient test. **highly significant at $p < 0.001$.

Discussion

Pregnancy is considered as a natural phenomenon; and is a transition phase in every women life towards motherhood which is associated with hormonal and physical changes to prepare women for motherhood. Pregnancy period is associated with number of minor discomforts which are otherwise easily manageable at home. Some of common discomforts of pregnancy during 3rd trimester includes varicosities, sleep disturbance and hemorrhoids (Hassan et al., 2019).

The adequate and proper information regarding management of minor discomforts leads to healthy pregnancy outcome and healthy baby. Healthy pregnancy outcome and management of minor discomforts depends upon the awareness level and the kind of practices women and family are performing to manage health issues during pregnancy despite that various studies reported that knowledge and practice among pregnant mothers are inadequate (Sharma et al., 2020). The current study was conducted to assess pregnant women's knowledge and practice regarding minor discomfort during third trimester. A descriptive study design was utilized and purposive sample was used in the current study included (353) pregnant women at third trimester.

Regarding general & physical characteristics of the studied sample present finding revealed that, less than half of them their age ranged between 18 – 25 years old, with mean age 26.74 ± 4.90 years. This result agreed with the study conducted by Abdelhaliem et al., (2018), about "Utilization of Self-Care Practice Guideline on Relieving Minor Discomfort (Ailments) Among New Pregnant Woman" and reported that man age of the studied women was 26.34 ± 7.09 .

In addition, this finding was supported by El-Sharkawy & Araby, (2020) who conducted a study entitled "Effectiveness of Self-instructional Module on Knowledge and Remedial Practices Regarding Selected Minor Ailments among Primigravida" and reported that the mean age of

the studied women was 23.02 ± 7.57 years. This result may be due to that marriage often occurs after the age of 20 years according to Egyptian society cultural and women are typically married and give birth between the ages of 18 and 35 years as reported by samari, (2017), who study, first birth and the trajectory of women's empowerment in Egypt.

Concerning residence, the present study results showed that less than three quarters of the studied sample were from urban areas. This result was supported by Lyimo et al., (2022) entitled "Pregnant women's self-care practices for relieve of minor discomforts in Dodoma Region, Tanzania" and mentioned that more than two third of studied women were from urban area.

This results also contradicted with Khalil & Hamad, (2019) who conducted a study about "Knowledge of Minor Discomforts during Pregnancy among Pregnant Women Attending Maternal and Pediatric Hospital in Soran City" and mentioned that more than half of the studied women were from rural area. This result may be due to increase health service provide and increase knowledge of pregnant women's about the availability of antenatal care serves and their importance in urban area than rural area .

As regard mother's education, the current study demonstrated that, more than half of the studied sample had secondary education. This finding was in agreement with Aziz & Maqsood, (2017) who conducted a study about "Self-Management of Pregnant Women Regarding Minor Discomforts in Primary Health Care Centers in Erbil Cite" and mentioned that most of the study participants were graduated from secondary school. Also, these results were agreed with Patil et al., (2022) about "A descriptive study to assess knowledge of primigravida mothers regarding minor ailments of pregnancy" and reported that less than half of the studied mothers had secondary education. **This results might be due to that, in the past most of women not reaching to high education level and they satisfied with their ability to read and write.**

Related to marital status and occupation, the current study results declared that, majority of the studied sample were married and almost three quarters of them were housewives. These results were consistent with a study conducted by **Ibrahim et al., (2020)**, entitled "The Effect of Tailored Psycho-Educational Program on Pregnant Women's Anxiety and Knowledge about Self-care Management Regarding Minor Discomforts" and found that majority of the studied women were married and housewives. This result could be due to, the low educational level and difficulty to catch work also might be related to their main role in caring for their family and children.

According to physical characteristics of the studied sample, the present study finding stated that more than half of them their weight was ranged between (70 – 80) kg, and had normal weight respectively. These findings were in the same line with a study conducted by **AbdElhaliem et al., (2018)** who stated that studied women weight ranged from (45-80Kgs) with body mass index ranged from (17.50±23.90).

Besides that, these results were in the opposite line with, a study performed by **Devkate et al., (2022)** entitled "A study to assess the knowledge regarding self-management of minor ailments in pregnancy among antenatal mothers" and reported that the highest percentage of the studied subjects were between 41-50 Kg. This contradiction may be related to different characteristics of study subjects and 22(55%) subjects were vegetarian.

In addition, the present study findings reflected that more than half of the studied sample their height ranged between (150 – 160) cm. Similarly with a study carried out by **Fitri & Lubis, (2022)**, entitled "Knowledge Extension of Pregnant Women About Pregnancy Exercises That Can Reduce Back Pain in the Baru Ladang Bambu Village in 2021" and stated that more than half of the studied women had ranged in height between 150 – 160 cm. This result might be due to ,the measuring the body mass index is important during pregnancy.

Regarding obstetric history, the current study findings demonstrated that less than half of the studied women were primigravida and more than half of them were primipara. This result was in agreement with **Ibrahim et al., (2021)**; they carried out a study entitled "Application of Evidence Based Measures for Alleviating Minor

Discomforts during 1st Trimester of Pregnancy" and declared that more than half of the studied women were primigravida and primipara respectively. From the researcher point of view, this could be due to mothers' young age and recent marriage.

As well, the present study results clarified that the majority of the studied sample hadn't previous abortion and more than two thirds of them had four follow-up visits. In the same context, this result was agreed with a study carried out by **Anwar et al., (2022)**, entitled "study of traditional methods utilized to relieve minor discomfort during the third trimester of pregnancy" and mentioned that most of the studied women hadn't history of abortion and had 4 follow up visits. This could be due to that the largest proportion of them were primigravida so that, they had lack of knowledge and experience about the importance of follow-up to conserve their pregnancy and upcoming fetus.

Concerning minor discomforts, the current study finding reflected that most of the studied women had dyspnea related to growing uterus and nasal congestion. The study result was in agreement with a study carried out by **Kaur et al., (2021)** whose study entitled "Minor Ailments during Pregnancy and their Remedial Measures Opted by Pregnant Women" and reported that dyspnea was common among most of women during the third trimester.

Moreover, our findings in agreement with a study done by **Ibrahim & Ali, (2020)** who studied "Minor discomforts among pregnant women attending in Beni-Sweif University Hospital" and represented that ,more than two third of the studied women had difficult of breathing and nasal congestion in the third trimester . **This result might be due to** that almost all mothers were in the third trimester and the fetus completely developed so that the uterus stretch and expand pushing the uterus and causing pressure on the diaphragm and decrease chest expansion and cause dyspnea or difficulty of breathing especially in the supine position.

In addition, the current study results revealed that the majority of the studied sample had heartburn and constipation. These results were agreed with a study conducted by **Sharma et al., (2020)** about "knowledge and practices regarding management of minor ailments of pregnancy among antenatal mothers: a descriptive study from

Rajasthan". And report that majority of studied sample had heart burn and constipation.

These findings were agreed with a study conducted by **Anwar et al., (2022)**, who report that, the most reported minor discomfort during third trimester of the current pregnancy was constipation and heart burning. **These results might be due to** the present study sample were at the third trimester that the most common minor discomfort regarding digestive system is heartburn and constipation. A burning feeling or pain in the stomach, or between the breasts, is called indigestion or heartburn. Heartburn happens because the growing baby crowds the mother's stomach and pushes it higher than usual. The acids in the mother's stomach that help digest food are pushed up into her chest, where they cause a burning feeling.

Concerning minor discomfort, the present study indicated that the entire studied sample had back pain and majority of them had swollen legs. Also, more than two thirds of them sometimes suffered from varicose veins, and more than two third of them had Leg cramps. Also, this result was supported by, **Samarakoon et al. (2020)** who carried out a study about "Knowledge and practices regarding self-management of minor ailments among pregnant mothers" and reported that more than half of pregnant mothers had backache, varicose vein and leg cramps in the third trimester.

This result was also, in accordance with a study conducted by **Bala et al., (2018)** who performed a study at new Delhi about "A Descriptive Study to Assess the Prevalence of Minor Ailments during Pregnancy, Home Care Remedies Adopted by Primigravida Mothers and to Develop an Information Booklet regarding the Management of Minor Ailments during Pregnancy in a Selected Hospital of Delhi" and revealed that the two third and three quarter of common ailment in pregnant women had Back pain, leg edema and leg cramp respectively. These results might be due to physiological changes resulting in joint ligament laxity, weight gain also, leg cramps were due to elevation of serum calcium and ankle edema results from excessive fluid retention as evidenced by marked weight gain and a possible explanation was that because enlargement and pressure of the uterine size .

In addition, the entire studied sample had urinary frequency. This result was in the same direction with a study done by **Ibrahim & Ali,**

(2020) who mentioned that the majority of the studied women had frequent urination in the third trimester. These findings are similar to the result of the study performed by **Aziz & Maqsood., (2017)** who mentioned that three quarter of the studied women had frequent urination a common complaint in the third trimester. The explanation might be due to increased intravascular volume, elevated glomerular filtration rate, pressure enlargement of the uterus.

Regarding minor discomfort related to nervous system the present study reveals that, less than three quarter of the studied sample had insomnia the study result was in agreement with a study carried out by **Khalil & Hamad, (2019)** and mentioned that ,most of studied women had insomnia during third trimester. **These results might be due to** physical discomfort and stress, anxiety ,hormonal and mach anatomical changes in pregnancy.

Concerning pregnant women's knowledge of the studied sample related to minor discomfort during third trimester .The current study result clarified that, more than three quarters of the studied sample had correct knowledge regarding the nervous system minor discomfort and more than half of them had correct knowledge regarding the respiratory system minor discomfort. The current study was in agreement with **Patil et al., (2022)** about "A descriptive study to assess knowledge of primigravida mothers regarding minor ailments of pregnancy" and stated that most of the studied women had sufficient knowledge about respiratory and nervous minor discomfort. In addition, these result agreed with the study conducted by **Aldossary et al., (2018)** about the "Across sectional study about knowledge and practice of primigravida women: minor common pregnancy discomfort " who clarified that the majority of the studied sample had correct knowledge about respiratory and nervous system minor discomfort.

Meanwhile, these results disagreed with the study conducted by **Alageswari & Dash, (2019)** entitled "Assessment of knowledge and expressed practice regarding self-management of minor ailment among antenatal mothers" and reported that more than two thirds of the studied mothers had moderately adequate level of knowledge regarding respiratory and nervous minor discomfort. **This discrepancy might be due to** different between two studied methodology tool samples.

Additionally, the current study revealed that the majority of the studied sample had incorrect answer regarding the types of minor discomfort and more than half of them had in correct answer regarding urinary system minor discomfort. This result was consistent with a study carried out by **Sowunmi et al., (2021)**, about "Enhancing Knowledge of Pregnant Women on Self-Management of Minor Disorders of Pregnancy at a State Specialist Hospital, Southwest, Nigeria" and found that the knowledge of pregnant women on types of minor disorders and urinary minor disorders during pregnancy was found to be poor among most of them prior intervention.

The present study's finding was also in the same line with **El-Sarkawy et al., (2020)** whose study entitled "Effectiveness of Self-instructional Module on Knowledge and Remedial Practices Regarding Selected Minor Ailments among primigravida" and found that majority of the studied sample had poor knowledge regarding minor ailments at pre-intervention and post-intervention phases respectively. In the opposite line, a study carried out by **Sharma et al., (2020)** who declared that more than two third of the studied mothers had fair knowledge levels regarding minor ailments of pregnancy. From the . These results might be due to the difference between mothers' level of education and health education about minor discomfort among study samples.

Concerning to total knowledge score of the studied sample about minor discomfort during third trimester, the present study illustrated that more than half of the studied sample had average level of knowledge. These results in consistence with, a study done by **Farooq & Gobindgarh, (2021)**, entitled "A Review Article related to knowledge among antenatal women regarding minor ailments in pregnancy" and reported that the majority of the pregnant women had average knowledge regarding minor disorders of pregnancy.

These results also supported by **Devkate et al., (2022)** who reported that minority of antenatal mothers had poor knowledge and three quarter of them had average knowledge and less than one fifth of them had good knowledge. This could be attributed to educational level of the studied women and lack of educational health programs that offered during antenatal follow up. The mother needs knowledge to cope with the

experience of pregnancy. Also needs knowledge when presents with discomforting or worrying symptoms. Providing information about physiology, prevention, and self-care of pregnancy discomforts can assist in relieving certain anxiety and fears related to health.

In contrast, a study conducted by **Hassan et al., (2020)** about "Impact of tailored educational program on primigravida anxiety and knowledge regarding minor discomforts in Upper Egypt" and stated that the majority of the participant women had poor knowledge regarding to minor discomfort of pregnancy. **This discrepancy might be due to** different educational level and different of the time of the study where the previous studied conducted.

Regarding the studied sample source of information about minor discomfort during third trimester, the current study displayed that more than half of them their source of information was family and friends, while less than one tenth of them had information from books. These results matched with **El Hoda et al., (2021)** who conducted a study about "Effect of Instructional Guidelines Regarding Minor Discomforts on Reducing Depression, Anxiety, and Stress Level among Primigravida" and reported that majority of the studied women's source of information was family and friends

Similarly, the study was supported by **Fatthy et al., (2021)** whose study entitled "Effect of Tele-nursing Application on Self –Management of Pregnant Women Regarding Minor Discomforts" and stated that less than half of the study group and control group received their information regarding minor discomfort from family member. From the researcher point of view, this might be due to sociocultural perspectives and that the largest proportion of mothers were primigravida so they had lack of knowledge and experience about pregnancy and minor discomfort which make them ask their relatives and expand their knowledge from them about pregnancy and minor discomfort related issues.

Concerning total reported practice score regarding minor discomfort, the current study represented that more than half of the studied sample had satisfactory practice toward back pain and constipation. This result was in harmony with **Aldossary et al., (2018)** who mentioned that measures practiced by the primigravida women to relief their discomforts toward back pain and

constipation during pregnancy were with good practice score among more than half of them. In addition, the present study declared that the highest percentage of the studied sample had unsatisfactory practice regarding leg and foot cramps, insomnia, dyspnea related to growing uterus, urinary frequency and dysuria, nasal congestion, salivation, varicose veins and leg swelling. These results were congruent with a study carried out by **Hashem et al., (2020)** about "Effectiveness of teaching program on awareness regarding the minor discomfort problems among pregnant women" and found that more than three-quarters of pregnant women had poor level of practice about minor discomforts in the pre-teaching program.

As regard the studied sample total reported practice score regarding minor discomfort during third trimester, the current study results showed that nearly three quarters of them had unsatisfactory total reported practice, whilst more than one quarter of them had satisfactory reported practice. These results were supported by **El-Sarkawy et al., (2020)** who stated that more than two thirds of women had poor level of practice regarding minor discomfort in pre intervention phase.

Our results also consistence with the result of the study performed by **Lyimo et al., (2022)** who showed that two third of pregnant women had unsatisfactory self-care practices compared to more than one third of those who had satisfactory self-care practice. These results attributed to the largest proportion of the studied sample had average level of knowledge. Also, might be related to lack of experience about minor discomfort because most of them were primigravida and insufficient knowledge and needed practices that provided by the obstetrician and maternity health nurse to relieve minor discomfort.

Regarding relationship between general characteristics of the studied sample and their total knowledge score, the current study represented that there were highly statistically significant relations with their age and educational level. Also, there was statistically significant relation with their occupation, while there was no statistically significant relation with their residence and marital status.

Consistently, a study carried out by **Fitri & Lubis, (2023)** about "Relationship between the Pregnant Women's Knowledge about Pregnancy Exercise and Back Pain Events at Mahdalena Pane

Clinic" and noticed that there was statistically significant relation between level of women's knowledge and their age and educational level.

Likewise, a study performed by **Kaur & Singh, (2018)** entitled "A Descriptive Study to Assess the Knowledge of Antenatal Mothers Regarding the Self-Management of Minor Ailments During Pregnancy in Selected Hospital of Jalandhar, Punjab, India" and found that there was statistically significant relation between level of mothers' knowledge and their occupation. **This can be explained** as older (30 – 35 years old) women, women with high level of education, and working women were more likely to have satisfactory level of knowledge and had more awareness about minor discomfort than others due to previous experience and reading or searching about minor discomfort and relieving measures.

Regarding relationship between general characteristics of the studied sample and their total reported practice score, the current study demonstrated that there was a highly statistically significant relation with their general characteristics as age and educational level. Also, there was statistically significant relation with their occupation, while there was no statistically significant relation with their, residence and marital status.

This finding was in accordance with a study conducted by **Samarakoon et al., (2020)** who reported that there was association between women's level of practice and their education. In the opposite line, a study performed by **Alageswari & Dash, (2019)** who found that there wasn't significant relation between women's level of practice and their age and occupation. **This can be explained as** older women (30 – 35 years old), women with high level of education, and working women were more likely to have satisfactory level of practice than others

Pertaining to correlation between total knowledge score of the studied sample and their total reported practice score regarding minor discomfort during third trimester, the present study highlighted that there was highly significant positive correlation between total knowledge score of the studied sample and their total reported practice score regarding minor discomfort during third trimester.

In the same concern, this result was compatible with a study performed **El-Sharkawy, (2020)** who stated that there was a highly positive statistical correlation between women's total

knowledge and total healthy practices regarding minor ailments. Also, the study result was in accordance with a study conducted by **AbdElhaliem et al., (2018)** who noticed that there was a highly positive correlation between women knowledge and practice score regarding minor discomfort. From the researcher point of view, this could be attributed to that adequate knowledge about minor discomfort and relieving measures is positively reflected on their practices to alleviate and relieve minor discomfort, reducing fatigue and becoming more comfortable. Subsequently, inadequate knowledge level is associated with lack of awareness and performance and unsatisfactory reported practice and alleviating measure of minor discomfort.

Conclusion:

Based on the results, the current study concluded that more than half of the studied sample had average level of total knowledge score regarding minor discomfort during third trimester, more than one quarter of them had unsatisfactory level, while more than one fifth of them had satisfactory level. In addition that , less than three quarters of them had unsatisfactory level of total reported practice score regarding minor discomfort during third trimester, whilst more than one quarter of them had satisfactory level . Also, there was highly significant positive correlation between total knowledge score of the studied sample and their total reported practice score regarding minor discomfort during third trimester.

Recommendation:

In the light of the result of the present study, the following recommendations are suggested:

- Design and implement periodically awareness-raising health education program regarding minor discomfort during pregnancy using booklet, guidelines, videos and brochures.
- Raising awareness program for women during pregnancy about self –care practice regarding minor discomfort.
- Further research . Is needed to: evaluate the effect of self care guidelines on pregnant women’s knowledge and practice regarding minor discomfort during third trimester.
- Replicate the present study in another cites and larger sample size.

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