

Development of an Educational Booklet for Women about Self Care During Pregnancy

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Abstract: This study aimed at assessing the knowledge of women about pregnancy changes, self care during it, and development of an educational booklet based on the results of the assessment. The study was conducted at antenatal clinic at El-Shateby University Hospital. From the previous setting, a purposive sample consisting of 200 women was selected. A Structured Questionnaire sheet was developed and used to find out the knowledge and practice of the study sample about pregnancy changes and self care during it. The results found that the majority of women lack basic knowledge about pregnancy changes and self care during pregnancy.

INTRODUCTION

Currently, there is an international concern with women health. This because women are vulnerable group in the society and it has been shown that globally 500,000 women die each year because of reasons related to their reproductive function. Half of this death occurs in developing countries.^(1, 2)

Globally every year more than 200 million women become pregnant. Most of these pregnancies end with the birth of a live baby to a healthy mother, but for others, childbirth is not the joyous event it should be, but it is a time for pain, fear, suffering, and even death. Some of these pregnant women, 15%, are likely to develop complications that need skilled obstetric care to prevent death or serious ill health.

In Egypt, the Maternal Mortality Rate (MMR) was reported to be 174 per 100,000 live births in 1992/1993,^(2,3) the figure is considered very high when compared with figures recorded in the

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developed countries such as: 10 in USA,^(4,5) 7 in the UK,⁽⁶⁾ and only 4 in Sweden in 1982.⁽⁷⁾

In recent years, the Egyptian Government conducted several investigations on maternal mortality. These researches revealed that 69.5% of maternal deaths were due to direct causes such as hemorrhage, eclampsia, and genital tract infection, while 26.9% of maternal deaths were due to indirect causes such as anemia, cardiovascular diseases, and infections. Many underlying factors influence the capacity of women to survive complications emerging during pregnancy and childbirth. These factors include women's health and nutritional status, access to and use of health care services, as well as knowledge, attitudes, and behavior of pregnant women.⁽⁸⁻¹⁰⁾

The health of mothers and children is recognized to be closely related to the general health of the community, as they constitute more than two-thirds of any community. The best method for ensuring the health of expectant mother and her infant is proper antenatal care. Antenatal care has been downplayed in recent years as an intervention for reducing maternal morbidity and mortality.^(11,12)

Moreover, during pregnancy and antenatal period, women experience different types of pregnancy discomfort which resulted from normal physiological changes that take place during pregnancy. These discomforts if not anticipated by women and prepared to face it, they can make women anxious, worried, and lead to adverse reaction by women which may hinder their health

and development of risk complications such as anemia and infections.⁽¹³⁾

During pregnancy, women may have questions regarding healthy practices and lifestyle for their health and for the health of their babies such as healthy nutrition, rest, sleep, exercise, marital relation, and medications usage during pregnancy.⁽¹⁴⁾

One of the most important functions of antenatal care is to offer the woman advice and information about physiological changes during pregnancy, minor discomfort arises and how to cope with it, danger signs and symptoms and preparation for birth.

Antenatal care helps reduce the numbers and severity of pregnancy-related complications by careful monitoring and early treatment of diseases aggravated during pregnancy, such as anemia. So it will contribute to

the maintenance and promotion of women's health during this critical period in their life.⁽¹⁵⁻¹⁷⁾

Antenatal period offers maternity nurses and midwives the opportunities for delivering health information and services that can significantly enhance the health of women and their infants. Maternity nurses and midwives are important resource persons within the reproductive health team, they are qualified to provide women with the necessary knowledge and information that help them to understand physiological changes during pregnancy, minor discomfort arises and how to cope with it, danger signs and symptoms and to prepare women for childbirth. So this study was carried out to assess the knowledge of women about pregnancy changes and self care during it, and to develop an educational booklet to satisfy

their needs. Also to provide maternity nurses and midwives with valid health education tools that enables them to provide quality and effective health education. Therefore, this study will be undertaken to develop an educational booklet for women and to help nurses and midwives to teach and counsel women about self care during pregnancy.⁽¹⁸⁻²⁰⁾

Aim of the study

The aim of this study was to:-

- Assess the knowledge of women about pregnancy changes.
- Assess women's knowledge about self care during pregnancy, and
- Develop an educational booklet based on the results of the study.

MATERIAL AND METHODS

Material

Setting:

The study was undertaken in outpatient clinic at El-Shatbey Maternity University Hospital of Alexandria. The hospital provides antenatal care for normal pregnancy as well as for high risk antenatal patients who are usually referred from local primary health care centers.

Subjects:

A purposive sample consisting of 200 women attending the previous setting were randomly selected, and met the following criteria:

- In early pregnancy,
- Without any complication, and
- Just read and write

The researcher explained the purpose of the research to the study sample and obtained the sample approval to share in the research. The study was undertaken in outpatient clinic

at El-Shatbey Maternity University Hospital of Alexandria.

Tools:

Two tools were developed and used for data collection.

Tool (1): A Structured Questionnaire sheet was developed and used for data collection concerning the knowledge of women's about pregnancy changes and their knowledge related to self care during it based on thorough review of current literature. It will be divided into three main parts:

Part one: Included questions to identify the socio-demographic and biological characteristics of the sample such as age, education, occupation, gravidity, and parity.

Part two: Included questions to assess the study samples' knowledge related to pregnancy changes.

Part three: Included questions to assess the study samples' knowledge related to self care during pregnancy.

A scoring system for women's knowledge regarding self care during pregnancy was adopted. The correct answers were predetermined according to literature and questions were coded accordingly. Each knowledge was given a score and a total score of knowledge was obtained for each study member. The possible range of score was from 0-10. The score was classified as 7.5 points or more was considered good, 5- less than 7.5 was considered fair, and less than 5 was considered poor.

Tool (2): Development of an educational booklet based on the result of the Questionnaire sheet.

Methods

Permission to carry out this

study was obtained from the responsible authorities of the selected settings. The researcher explained the purpose of the research to the study member, and obtained the sample approval to share in the research. A structured questionnaire sheet was developed. Data collection was conducted in antenatal clinic of the previously mentioned setting. Interviewing technique was used to assess the women's knowledge regarding self care during pregnancy.

RESULTS

Table (1) shows the socio-demographic and biological characteristics of the study sample. The table shows slightly that more than one half of the study sample (53%) were between 25 to less than 30 years. While 29% were between 30 to less than 35 years.

The table also shows that more than two-thirds of the sample (69%) just read & write, while only 9% of the sample got secondary and /or more education.

As regards work experience, more than half of the study sample (57.5%) were housewife, and one-fifth of them work without income. Only 22.5% were working with income. The table also shows that 42% were nulligravida and 58% were Multigravida. Also 47.5% were nullipara and 52.5% were multipara.

Table (2) represents the number and percent distribution of the study sample according to their knowledge about the importance of antenatal care. The table shows that about (80%) gave wrong and didn't know the answer while, (12.50 %) gave correct and incomplete answer and only (7.50%) gave correct and complete answer.

Table (3) represents the number and percent distribution of the study sample according to their knowledge about changes during pregnancy. The table shows that (57%) gave wrong and didn't know the answer while, (25%) gave correct and incomplete answer, and only (18%) gave correct and complete answer about breast changes during pregnancy. The table also shows that (59%) gave wrong and didn't know the answer while, (22.50%) gave correct and incomplete answer and only (18.50%) gave correct and complete answer about the skin changes during pregnancy. As regard reproductive system changes during pregnancy the table illustrates that (39%) gave wrong and didn't know the answer while, (50%) gave correct and incomplete answer and only (11%) gave correct and complete answer. Concerning the urinary

system changes during pregnancy the table shows that (45%) gave wrong and didn't know the answer while, (42.50%) gave correct and incomplete answer and only (12.50%) gave correct and complete answer. About (29.50%) gave wrong and didn't know the answer while, (50.50%) gave correct and incomplete answer and only (20%) gave correct and complete answer regarding psychological changes during pregnancy. Moreover, (37%) gave wrong and didn't know the answer while, (50%) gave correct and incomplete answer and only (13%) gave correct and complete answer about sexual desire changes during pregnancy.

Table (4) shows the number and percent distribution of the study sample according to their knowledge about hygiene of pregnancy. The table shows that (60.50%) gave wrong and didn't

know the answer while, (25%) gave correct and incomplete answer and only (14.50%) gave correct and complete answer regarding personal hygiene during pregnancy. In relation to suitable clothes during pregnancy (61.50%) gave wrong and didn't know the answer while, (25%) gave correct and incomplete and only (13.50%) gave correct and complete answer. Concerning comfort shoes during pregnancy (78.50%) gave wrong and didn't know the answer while, (15%) gave correct and incomplete answer and only (6.50%) gave correct and complete answer. Regarding exercises allowed during pregnancy (90.50%) gave wrong and didn't know the answer while, (5%) gave correct and incomplete answer and only (4.50%) gave correct and complete answer. In relation to sleeping duration during the day and night (80%) gave wrong and didn't know the answer while, (12.50%) gave correct and incomplete answer and only (7.50%) gave correct and complete answer. As regard comfort sleeping position in late pregnancy (93%) gave wrong and didn't know the answer while, (4%) gave correct and incomplete answer and only (3%) gave correct and complete answer. The table shows that (93%) gave wrong and didn't know the answer while, (5%) gave correct and incomplete answer and only (2%) gave correct and complete answer about sexual relation allowed and not allowed during pregnancy. Regarding sexual position in the pregnancy (72%) gave wrong and didn't know the answer while, (18%) gave correct and incomplete answer and only (10%) gave correct and complete answer. Also the table shows that (79%) gave wrong and didn't know

the answer while, (13.50%) gave correct and incomplete and only (7.50%) gave correct and complete answer about traveling. Regarding medications (91.50%) gave wrong and didn't know the answer while (5%) gave correct and incomplete answer and only (3.50%) gave correct and complete answer. As regard radiation 90% gave wrong and didn't know the answer while, 6% gave correct and incomplete answer and only 4% gave correct and complete answer. Moreover, 88.50% gave wrong and didn't know the answer while, 7% gave correct and incomplete answer and only 4.5% gave correct and complete answer about smoking and passive smokers.

Table (5) shows the number and percent distribution of the study sample according to their knowledge about nutrition during pregnancy, it shows that

93% gave wrong and didn't know the answer while, 4% gave correct and incomplete and only 3% gave correct and complete answer about elements of balanced diet. Regarding food rich in iron 83.50% gave wrong and didn't know the answer while, (10%) gave correct and incomplete answer and only (7%) gave correct and complete answer. Concerning importance and amount of fluid per day (42%) gave wrong and didn't know the answer while, (45%) gave correct and incomplete answer and only (13%) gave correct and complete answer. As regard division of main meals and snacks (88%) gave wrong and didn't know the answer while, (7%) gave correct and incomplete answer and only (5%) gave correct and complete answer.

Table (6) represents the number and percent distribution of the study sample

according to their knowledge about minor discomforts of pregnancy and how to relieve it. The table shows that 89.50% gave wrong and didn't know the answer while, 6.50% gave correct and incomplete answer and only 4.% gave correct and complete answer about gums and teeth. Regarding morning sickness and vomiting 91% gave wrong and didn't know the answer while, 6% gave correct and incomplete answer and only 3% gave correct and complete answer. As regard heart burn 87.50% gave wrong and didn't know the answer while, 7.50% gave correct and incomplete answer and only 5% gave correct and complete answer. Concerning constipation 58% gave wrong and didn't know the answer while, 30% gave correct and incomplete answer and only 12% gave correct and complete answer. Regarding hemorrhoids 76% gave wrong and didn't know the answer while, 15% gave correct and incomplete answer and only 9% gave correct and complete answer. In relation to varicose vein 69% gave wrong and didn't know the answer while, 20% gave correct and incomplete and only 11% gave correct and complete answer. As regard limb edema 72% gave wrong and didn't know the answer while, 20% gave correct and incomplete answer and only 8% gave correct and complete answer. Concerning leg cramps 93% gave wrong and didn't know the answer while 5% gave correct and incomplete answer and only 2% gave correct and complete answer. The table also shows that 66% gave wrong and didn't know the answer while, 25% gave correct and incomplete answer and only 9% gave correct and complete answer about

urinary frequency. Moreover 73.50% gave wrong and didn't know the answer while, 20% gave correct and incomplete answer and only 6.50% gave correct and complete answer. about vagind dischavge.

Table (7) represents the number and percent distribution of the study sample according to their knowledge about warning signs during pregnancy and how to relieve it. The table shows that 69.50% gave wrong and didn't know the answer while, 25% gave correct and incomplete answer and only 5.50% gave correct and complete answer about absence of fetal movement. Regarding sudden increase in abdominal size 94% gave wrong and didn't know the answer while, 4% gave correct and incomplete answer and only 2% gave correct and complete answer.

Concerning excessive weight gain in short period 91% gave wrong and didn't know the answer while,5% gave correct and incomplete answer and only 4% gave correct and complete answer. As regard severe persistent headache 79% gave wrong and didn't know the answer while, 12% gave correct and incomplete answer and only 9% gave correct and complete answer. In relation to blurring of vision 83.50% gave wrong and didn't know the answer while, 10% gave correct and incomplete answer and only 6.50% gave correct and complete answer. Regarding generalized edema 87% gave wrong and didn't know the answer while, 10% gave correct and incomplete answer and only 3% gave correct and complete answer.

Concerning bleeding even spots 84% gave wrong and didn't know the answer

while, 10% gave correct and incomplete answer and only 6% gave correct and complete answer. Moreover, 79% gave wrong and didn't know the answer while, 15% gave correct and incomplete answer and only 6.00% gave correct and complete answer about leakage of liquor.

Table (8) represents the number and percent distribution of the study sample according to their knowledge about true signs of labor and what to do during this period. The table shows that 67.50% gave wrong and didn't know the answer while, 20% gave correct and incomplete answer and only 12.50% gave correct and complete answer about signs of labor. On the other hand, 70.50% gave wrong and didn't know the answer while, 15% gave correct and incomplete answer and only 14.5% gave correct and complete answer with respect to clothes of mother and baby. Correct.

Table (9) shows the number and percent distribution of the study sample according to their sources of information about pregnancy changes and self care during it. The table represents 49% and 53% get their information from either last pregnancy experience or from their biological mothers or mothers in law. Also from radio and TV were reported by 42.5% and nurses as a source of their information were reported by 41% followed by friends 29.5% and then physician reported by 27% of the study sample.

DISCUSSION

Pregnancy is a physiological process that is accompanied by various changes in all body systems. These changes produce some minor discomforts such as morning sickness, heart burn, constipation, hormonal and emotional

changes related to the growing uterus, and postural changes as the body accommodates to pregnancy. These minor discomforts can be troublesome, but most of them are self-limiting and disappear during pregnancy or after the birth of the baby.^(21,22)

It is important for every pregnant woman to have knowledge about physiological and psychological changes during pregnancy, and to practice its hygiene properly. So antenatal period offers opportunities for delivering health information and services that can significantly enhance the health of women and their infants. The present study revealed that nearly three-quarters of the study sample just read and write (table 1). Most of the study sample had wrong or don't know the correct answer of the question

related to antenatal care and pregnancy. About more than one half and one-quarter of the study sample had wrong answer or didn't know the answer related to importance of antenatal care (table 2). Three-fifths of the study sample knew the reproductive system changes during pregnancy, while more than half of the study sample had wrong answer or didn't know the answer about breast changes during pregnancy. As regard knowledge about psychological changes during pregnancy, near to three-quarters had correct answer and less than two-thirds gave correct answer related to sexual desire changes during pregnancy (table 3).

In relation to hygiene during pregnancy, about two-fifths of the study sample had correct answer. Also the study revealed that only near to one-

tenth of the study sample knew exercises allowed during pregnancy (table 4). These findings are in line with that of Jean (2002) who found- in a study done in USA about exercises during pregnancy- that two-thirds of his study sample did perform the recommended daily exercises during pregnancy.⁽²³⁾ One-fifth of the study sample had correct answer about sleeping duration during day and night (table 4). These findings are in line with the findings of the National Sleep Foundation (NFS) in London (1998) where they did a study about pattern of sleep during pregnancy. They reported that about three-fourths of their study sample had disturbed sleeping patterns.⁽²⁴⁾

In relation to nutrition during the vast majority of the study sample had wrong answer or don't know the answer

related to elements of balanced diet, food rich in iron, and division of main meals and snacks (table 5). This result is in line with the findings of Rashad (2001) who had conducted a study about dietary habit of pregnant women in Alexandria. She reported that her sample lacked both the knowledge as well as the proper practices in choosing their meal components.⁽²⁵⁾

In relation to minor discomforts occurring during pregnancy and how to relieve them, the majority of study sample had wrong answer or didn't know as regard morning sickness and vomiting (table 6). This result is in line with the result of Waddell (1995) who stated that occurrence of nausea and vomiting during pregnancy is a common complain⁽²⁶⁾. Also the majority of the study sample used harmful practices to

relief nausea and vomiting. This result is in line with Scott *et al* who mentioned that excessive intake of sodium should be discouraged during pregnancy because it may contribute to abnormal fluid retention and edema.⁽²⁷⁾ This result is in congruence with Wills (2005) who found out that more than one half of his study sample did try to avoid fatty, spicy, and fried foods and ate a small frequent meals (snacking) along the day to relieve nausea.⁽²⁸⁾ As regard heart burn, the majority of the study sample had answer or don't know. This result was in line with Melokhia (1986) who found that 84% of her study subjects had not any knowledge about heart burn and also did harm to treat it.⁽²⁹⁾ Also the result of the present study is in congruence with Platkin's (2005) who found that most of his study sample didn't eat spicy, fried or fatty foods. Spicy and acidic foods can further irritate an esophagus that has been damaged by acid reflux and increase the sensation of heartburn.⁽³⁰⁾ In relation to constipation more than two-fifths of the study sample had correct answer (table 6), while nearly three-fifths performed harmful practices to relieve this discomfort or didn't know how to relieve it. This in contrast with Owen who stated that the majority of his sample drank cold milk at bed time, this health practice is healthy and acceptable.⁽³¹⁾ Regarding minor discomfort occurring in circulatory system less than one-quarter of the study sample gave correct answer about headache, one-third gave correct answer about varicose vein, more than one-quarter gave correct answer related to lower limb edema, and less than one-tenth gave correct answer about leg

cramp. This result is in line with Heiba (2001) who denoted that a majority of women having knowledge about minor discomforts occurring in circulatory system⁽³²⁾. In addition, two-thirds of the study sample responded wrongly and didn't know the answer in regarding urinary frequency as a minor discomfort of genitourinary system. On the other hand, less than three-quarters gave wrong answer or didn't know the answer related to vaginal discharge (table 6). This result is in congruence with Guise (2001) who found three-fourths of his study sample were making perineal care to decrease vaginal discharge beside other measures such as local application for crème or antibiotics.⁽³³⁾

As regard knowledge about warning signs during pregnancy, less than one-third of the study sample knew absence

of fetal movement, less than one-tenth knew increase of the abdominal size as a warning sign during pregnancy, also a less than one-tenth had correct answer about excessive weight gain in short duration, one-fifth had correct answer about severe persistent headache, while less than one-fifth gave correct answer about blurring of vision. Moreover, generalized edema only more than one-tenth responded correctly. On the other hand, less than one-fifth had correct answer about bleeding as a warning sign during pregnancy (table 7). This result is in line with El-Zanaty and Way who stated that the women with age 45-49 and with no education were least likely to have heard messages about warning signs of pregnancy.⁽³⁴⁾

Concerning the knowledge about signs of labor, less than one-third knew

the correct answer, also near to three-quarters gave wrong or didn't know the answer about mother and infant clothes (table 8). In relation to the sources of knowledge, the majority of the study sample get their information from last pregnancy experience or from biological mothers or mothers in law. Radio and TV were reported by more than two-fifths. Also nurses were reported by two-fifths followed by friends were reported by less than one-third, while only the physicians were reported by more than one-quarter.

CONCLUSION

Assessing knowledge related to different reproductive health issues generally revealed inadequacy of women's knowledge especially in developing countries. According to result of the present study, it can be concluded

that there is lack of knowledge regarding importance of antenatal care, physiological and psychological changes during pregnancy, hygiene of pregnancy, nutrition during pregnancy, minor discomfort and warning signs, true signs of labor, and preparation for labor. This may be due to nearly to three-quarters of the study sample just read and write and also nearly to three-fifths of the study sample were housewife, and one-fifth work without income. So there is an important need for an educational booklet about self care during pregnancy.

RECOMMENDATIONS

Based on the results of the current research, the following recommendations are proposed:

- 1- The assessment of pregnant women's status as well as need- specially history taking- must include

- some questions about their self care practices.
- 2- Pregnant women should have an accurate information about physiological and psychological changes during pregnancy, hygiene of pregnancy, minor discomforts warning signs, and preparation for labor.
- 3- Antenatal health education should considere the reinforcement or modification of pregnant women's self care practices according to their benefit versus harm.
- 4- Adequate and variable books and magazine should be available in all services which offer antenatal care.
- 5- Proper and qualified care should be provided to all aspects, pregnant women including educational counseling.

Table (1): Number and percent distribution of the study sample according to their socio-demographic and biological characteristics.

Personal characteristics	No. =200	%
Age in years		
20-	22	11.00
25-	106	53.00
30-	58	29.00
35+	14	7.00
Mean ± SD	29.1±3.81	
Educational background		
Read & write	138	69.00
< Secondary	44	22.00
Secondary +	18	9.00
Work experiences		
Housewife	115	57.50
Work with income	45	22.50
Work without income	40	20.00
Gravidity		
Primigravida	84	42.00
Multigravida	116	58.00
Parity		
Nullipara	95	47.50
Multipara	105	52.50.

Table (2) Number and percent distribution of the study sample according to their knowledge about the importance of antenatal care.

Responses	No. = 200	%
Correct and complete	15	7.50
Correct and incomplete	25	12.50
Wrong and didn't knew	160	80.00

Table 3 : Number and percent distributions of the study sample according to their knowledge about changes during pregnancy

Responses	No. = 200	%
Physiological changes:		
Breast changes		
Correct and complete	36	18.00
Correct and incomplete	50	25.00
Wrong and didn't knew	114	57.00
Skin changes		
Correct and complete	37	18.50
Correct and incomplete	45	22.50
Wrong and didn't knew	118	59.00
Reproductive system changes		
Correct and complete	22	11.00
Correct and incomplete	100	50.00
Wrong and didn't knew	78	39.00
Urinary system changes		
Correct and complete	25	12.50
Correct and incomplete	85	42.50
Wrong and didn't knew	90	45.00
Psychological changes:		
Correct and complete	40	20.00
Correct and incomplete	101	50.50
Wrong and didn't knew	59	29.50
Changing in sexual desire		
Correct and complete	26	13.00
Correct and incomplete	100	50.00
Wrong and didn't knew	74	37.00

Table 4 : Number and percent distributions of the study sample according to their knowledge about hygiene of pregnancy

Responses	No. = 200	%
Personal hygiene		
Correct and complete	29	14.50
Correct and incomplete	50	25.00
Wrong and didn't knew	121	60.50
Suitable clothes during pregnancy		
Correct and complete	27	13.50
Correct and incomplete	50	25.00
Wrong and didn't knew	123	61.50
Characteristics of comfort shoes		
Correct and complete	13	6.50
Correct and incomplete	30	15.00
Wrong and didn't knew	157	78.50
Exercises allowed during pregnancy		
Correct and complete	9	4.50
Correct and incomplete	10	5.00
Wrong and didn't knew	181	90.50
Sleep duration during day and night		
Correct and complete	15	7.50
Correct and incomplete	25	12.50
Wrong and didn't knew	160	80.00
Comfort sleeping positions in late pregnancy		
Correct and complete	6	3.00
Correct and incomplete	8	4.00
Wrong and didn't knew	186	93.00
Sexual relation, when allowed & when should be not allowed		
Correct and complete	4	2.00
Correct and incomplete	10	5.00
Wrong and didn't knew	186	93.00
Sexual positions in late pregnancy.		
Correct and complete	20	10.00
Correct and incomplete	36	18.00
Wrong and didn't knew	144	72.00
Traveling		
Correct and complete	15	7.50
Correct and incomplete	27	13.50
Wrong and didn't knew	158	79.00
Medications		
Correct and complete	7	3.50
Correct and incomplete	10	5.00
Wrong and didn't knew	183	91.50
Radiations		
Correct and complete	8	4.00
Correct and incomplete	12	6.00
Wrong and didn't knew	180	90.00
Smoking and passive smokers		
Correct and complete	9	4.50
Correct and incomplete	14	7.00
Wrong and didn't knew	177	88.50

Table 5: Number and percent distribution of the study sample according to their knowledge about nutrition during pregnancy.

Responses	No. = 200	%
Elements of balanced diet		
Correct and complete	6	3.00
Correct and incomplete	8	4.00
Wrong and didn't knew	186	93.00
Food rich in iron		
Correct and complete	14	7.00
Correct and incomplete	20	10.00
Wrong and didn't knew	166	83.00
Importance and amount of fluid per day		
Correct and complete	26	13.00
Correct and incomplete	90	45.00
Wrong and didn't knew	84	42.00
Division of main meals and snacks		
Correct and complete	10	5.00
Correct and incomplete	14	7.00
Wrong and didn't knew	176	88.00

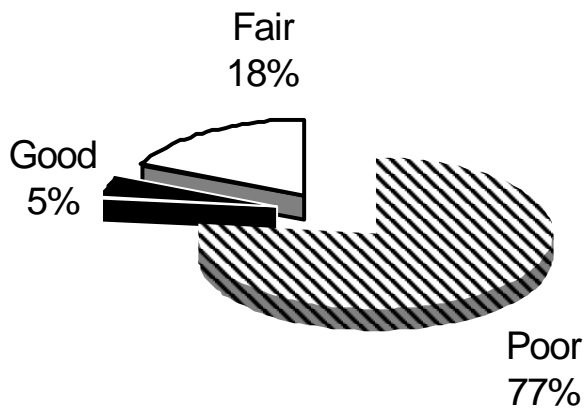


Figure (1): Distribution of the study subjects according to total score of knowledge

Table 6 : Number and percent distribution of the study sample according to their knowledge about minor discomforts occurring during pregnancy and how to relieve it.

Responses	No. = 200	%
Gastrointestinal system:		
Gums and teeth		
Correct and complete	8	4.00
Correct and incomplete	13	6.50
Wrong and didn't knew	179	89.50
Morning sickness and vomiting		
Correct and complete	6	3.00
Correct and incomplete	12	6.00
Wrong and didn't knew	182	91.00
Heartburn		
Correct and complete	10	5.00
Correct and incomplete	15	7.50
Wrong and didn't knew	175	87.50
Constipation		
Correct and complete	24	12.00
Correct and incomplete	60	30.00
Wrong and didn't knew	116	58.00
Circulatory system:		
Hemorrhoids		
Correct and complete	18	9.00
Correct and incomplete	30	15.00
Wrong and didn't knew	152	76.00
Varicose vein		
Correct and complete	22	11.00
Correct and incomplete	40	20.00
Wrong and didn't knew	138	69.00
Lower limb edema		
Correct and complete	16	8.00
Correct and incomplete	40	20.00
Wrong and didn't knew	144	72.00
Leg cramps		
Correct and complete	4	2.00
Correct and incomplete	10	5.00
Wrong and didn't knew	186	93.00
Genitourinary system:		
Urinary frequency		
Correct and complete	18	9.00
Correct and incomplete	50	25.00
Wrong and didn't knew	132	66.00
Vaginal discharge		
Correct and complete	13	6.50
Correct and incomplete	40	20.00
Wrong and didn't knew	147	73.50

Table 7: Number and percent distribution of the study sample according to their knowledge about warning signs during pregnancy and how to relieve it.

Warning signs during pregnancy	No. = 200	%
Absence of fetal movement		
Correct and complete	11	5.50
Correct and incomplete	50	25.00
Wrong and didn't knew	139	69.50
Sudden increase in the abdominal size		
Correct and complete	4	2.00
Correct and incomplete	8	4.00
Wrong and didn't knew	188	94.00
Excessive weight gain in short period		
Correct and complete	8	4.00
Correct and incomplete	10	5.00
Wrong and didn't knew	182	91.00
Severe persistent headache		
Correct and complete	18	9.00
Correct and incomplete	24	12.00
Wrong and didn't knew	158	79.00
Blurring of vision		
Correct and complete	13	6.50
Correct and incomplete	20	10.00
Wrong and didn't knew	167	83.5
Generalized edema		
Correct and complete	6	3.00
Correct and incomplete	20	10.00
Wrong and didn't knew	174	87.00
Bleeding even spots		
Correct and complete	12	6.00
Correct and incomplete	20	10.00
Wrong and didn't knew	168	84.00
Leakage of liquor		
Correct and complete	12	6.00
Correct and incomplete	30	15.00
Wrong and didn't knew	158	79.00

Table 8 :Number and percent distribution of the study sample according to their knowledge about labor and what to do during this period.

knowledge about labor	No. = 200	%
Signs of labor		
Correct and complete	25	12.50
Correct and incomplete	40	20.00
Wrong and didn't knew	135	67.50
Clothes for mother and baby		
Correct and complete	29	14.50
Correct and incomplete	30	15.00
Wrong and didn't knew	141	70.50

Table 9 :Number and percent distribution of the study sample according to their Sources of information about pregnancy changes and self care during it.

Sources of their information	No. =200	%
• Last experience	98	49.00
• Mother & or mother in law	106	53.00
• Friends	59	29.50
• Radio & TV	85	42.50
• Physician	54	27.00
• Nurses	82	41.00

The respondents gave more than one answer.

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