



Original article

Sociodemographic and Clinical Characteristics of Pregnant Women Seeking Antenatal Care in Beni-Suef Governorate

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Article Info

Article history:

Received 6 June 2022

Accepted 1 August 2022

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Keywords:

Pregnant women

Antenatal care

Services

sociodemographic

Abstract

Pregnancy is an important time to prepare women and their families psychologically and emotionally for parenthood. Antenatal care (ANC) is defined as the care provided by skilled health-care providers to pregnant women to ensure the best health conditions for both mother and baby during pregnancy. **Objective:** is to study the sociodemographic and clinical characteristics of pregnant women seeking antenatal care in Beni-Suef Governorate. **Methodology:** A descriptive cross-sectional study conducted over a period of ten months (from April 2021 to January 2022), on 434 pregnant women attending for antenatal checkups at the ANC clinic of Beni-Suef University Hospital and 6 primary health care facilities which were randomly selected: El-kom El-ahmar, El mermah health care centers, El Ghamrawy and Sharq El-Nile health offices in Beni-Suef city, Bani-adi primary health care center and Naser health office from Naser City. A self-structured questionnaire prepared in Arabic language was used. **Results:** Pregnant women utilizing antenatal care services were mainly in the age

group 20-35 (78.6%), had preuniversity and university education (34.3%) and (30.0%), respectively. Three quarters of the pregnant women had a complicated previous pregnancy with abortion (73.9%), around one-half of them had previously delivered by cesarean section (48.2%). Pregnant women seeking ANC were mainly in the third trimester (53%), most of them had a planned pregnancy (68%) and the largest percentage of the studied women were multigravida (59.4 %) with a mean equal 2.9 ± 1.8 SD.

Conclusion and Recommendation: There should be proper health care programs for pregnant women with health education about ANC services all through the gestation period.

1. Introduction

Pregnancy is an extraordinarily complex process with important morphological, metabolic, physiological and immunological changes involving three interacting systems, the woman, the placenta and the fetus; which maintain a complex crosstalk simultaneously aimed at maintaining women homeostasis, promote fetal growth and maturation , as well as preparing the mother for labor and lactation [1]. Pregnancy has three trimesters, each of which is marked by specific fetal developments. A pregnancy is considered full-term at 40 weeks; infants delivered before the end of week 37 are considered premature. The following explain different physiological changes of pregnancy:

First Trimester (0 to 13 Weeks):

The first trimester is the most crucial to the baby's development. During this period, the fetus body structure and organ systems

develop. Most miscarriages and birth defects occur during this period [2].

Second Trimester (14 to 26 Weeks):

Somewhere between 16 weeks and 20 weeks, the pregnant woman may feel her baby's first fluttering movements [2].

Third Trimester (27 to 40 Weeks):

The stage of final stretch of pregnancy and almost many women are probably very excited and anxious for the birth of the baby. The average weight gain throughout pregnancy of 20 to 30 lb. (9.1 to 13.6 kg), most of the weight gain after week 20 [3].

Antenatal care (ANC) can be defined as the care provided by skilled health-care providers to pregnant women and adolescent girls in order to ensure the best health conditions for both mother and baby during pregnancy [4]. Antenatal care is one of the “four pillars” of

safe motherhood initiatives to promote and establish good health during pregnancy and the early postpartum period [5]. Good quality antenatal care services improve the survival and health of mothers as well as babies. Antenatal care also provides an opportunity for women to communicate with their healthcare provider and increases the chances of their using a skilled birth attendant [6].

Previously the World Health Organization (WHO) recommended 4 antenatal visits for uncomplicated pregnancies. The first of these took place within 12 weeks of gestational age [7]. However, in a recently published document, WHO now recommends a minimum of 8 visits to improve neonatal outcomes and to provide a more positive [4]. For instance, the focused antenatal care model of WHO emphasizes on screening and treating anemia, malaria, HIV/AIDS, and also be immunized against tetanus [8].

2. Aim of the study

This study aimed to assess the sociodemographic and clinical characteristics of pregnant women seeking antenatal in Beni-Suef Governorate.

3. Subjects and Methods

Population Frame:

The study was designed as a cross-sectional study conducted on pregnant women.

Inclusion criteria: pregnant women (in the first, second and third trimesters) attending for

their routine antenatal checkups during pregnancy in Beni-Suef Governorate.

Duration of the study:

The study was carried out over a period of ten months (from April 2021 to January 2022).

Sample Size:

Using Epi info stat-calc, the sample size for the population survey was calculated at 95% confidence level, 5% acceptable margin of error). The calculated sample size was found to be at least 384 pregnant women. However the study was conducted on 434 pregnant women, which is a larger number and believed to improve the power of the study.

Study Settings:

This study was conducted in 2 districts of the governorate selected randomly, Beni-Suef City and Naser City, where the following health care facilities were selected randomly:

- Two primary health care centers (El-kom El-ahmar and El mermah health care centers) from the 27 Beni-Suef City's primary health care centers, and two health offices (El Ghamrawy and Sharq El-Nile health offices) from the 4 health offices in Beni-Suef City.
- From Naser City, two health facilities were selected randomly; Bani-adi primary health care center and Naser health office.
- In addition to Beni-Suef university hospital ANC clinic.

Study implementation

A) Study tools:

A self-structured questionnaire prepared in Arabic language by highly expert supervisors (from community, obstetric & gynecology departments) covering the following parts:

Part 1: Socio-demographic characteristics of the participants including:

-Age of the pregnant woman -Age of marriage
-Educational level -Occupation
-Residence -Nature of Living home

-Family problems -Domestic violence
-Number of children -gender of children
-Husband's educational level and occupation.

Part 2: Questions about Medical and Obstetric history including:

* Medical health problems among participating pregnant women

* The previous pregnancies among the participants: (- Gravidity - mode of labor - pregnancy or labor complications)

* The current pregnancy of participants including: (- Gestational age (GA) -gender of the fetus -Desired gender or not -Planned pregnancy or not - health problems concerning this pregnancy).

B) Data Collection:

During this phase, data was collected from pregnant women attending for their routine antenatal care by a self-structured questionnaire prepared in Arabic language (Owing to a low level of literacy among some participants, the researcher read out the questionnaire and noted their responses).

C) Data management and analysis:

According to the type of the collected data, they were managed as follows:

- ✓ All collected questionnaires were revised for completeness, and logical consistency and items were then transferred to the Statistical Package of Social Science Software program, version 26 (SPSS) to be statistically analyzed. Incomplete ones were discarded.
- ✓ Description of qualitative variables by frequency and percentage.
- ✓ Description of quantitative variables in the form of mean and standard deviation (mean \pm SD).
- ✓ The data had been presented in tables, graphs, figures and organized to satisfy the study objectives.
- ✓ Chi-square (χ^2) (Fisher exact) test was used for pregnancy different categorical baseline characteristics.

Administrative and Ethical Issues:

- The study was approved by the Ethics Committee of the faculty of medicine Beni-Suef University in April 2021. -Informed consent was obtained from all participants after explaining the objectives of the study and they were informed that their

participation is voluntary.

- They were assured that their personal information will be kept confidential.

4. Results:

Around 3/4 of the studied pregnant women were in the age group 20-35 (78.6%). Around 2/3 reside in rural communities (65%).

The largest percentage of women were with preuniversity and university education (34.3%) and (30.0%), respectively. More than one-half of participants had got married in the age group from 20 to 35 years old (56.7%). Around 2/3 of them were housewives (65.9%).

The largest percent of the husbands were with preuniversity and university education (40.1%) and (30.9%). respectively. Regarding husbands' occupation, the largest percentage of them were worker and employee (46.8%) and (45.6%), respectively. Regarding children, 1\3 of participants have both males and females.

The largest percentage of the studied pregnant women had a stable relationship in their families with no domestic violence (79%) and (91.2 %) respectively.

Table (1): Sociodemographic Characteristics of the Studied pregnant Women.

| Sociodemographic Characteristics | Frequency (no=434) | Percentage (%) |
|----------------------------------|--------------------|----------------|
| Age in years | | |
| <20 | 26 | 6.0 |
| 20-35 | 341 | 78.6 |
| >35 | 67 | 15.4 |
| Residence | | |
| Rural | 282 | 65.0 |
| Urban | 152 | 35.0 |
| Educational Level | | |
| Illiterate | 112 | 25.8 |
| Preuniversity | 149 | 34.3 |
| University | 130 | 30.0 |
| Postgraduate studies | 43 | 9.9 |
| Marital age | | |
| <20 | 183 | 42.2 |
| 20-35 | 246 | 56.7 |
| >35 | 5 | 1.2 |
| Occupation | | |
| Housewife | 286 | 65.9 |
| Daily working outside home | 133 | 30.6 |
| Working from home | 15 | 3.5 |
| Husband Education | | |

| | | |
|-----------------------------|------------|-------------|
| Illiterate | 83 | 19.1 |
| Preuniversity | 174 | 40.1 |
| University | 134 | 30.9 |
| Postgraduate studies | 43 | 9.9 |
| Husband's Occupation | | |
| Employee | 198 | 45.6 |
| Worker | 203 | 46.8 |
| Not working | 15 | 3.5 |
| Traveling | 15 | 3.5 |
| Retired | 3 | 0.7 |
| Children \ offspring | | |
| Males | 80 | 18.4 |
| Females | 89 | 20.5 |
| Both | 138 | 31.8 |
| Absent (have no children) | 127 | 29.3 |

Table (2): Household Characteristics of the Studied Pregnant Women

| Household Characteristics | Frequency (no=434) | Percentage (%) |
|-------------------------------------|---------------------------|-----------------------|
| Living Home | | |
| Family home | 227 | 52.3 |
| Separate home | 207 | 47.7 |
| Family Stability | | |
| Stable(no family problems) | 343 | 79.0 |
| Not stable (having family problems) | 91 | 21.0 |
| Domestic Violence | | |
| Present | 38 | 8.8 |
| Absent | 396 | 91.2 |

The largest percentage of the studied women were multigravida (2-4): (59.4 %) with a mean equal 2.9 ± 1.8 SD. Around one-half of the studied pregnant women had previously delivered by cesarean section (48.2%) while only (12.9%) were experienced normal vaginal delivery, and (29.3%) who had no previous delivery due to being primigravida or had previous pregnancy loss. More than one-half of the studied pregnant women were in the third trimester of pregnancy (53.0%). Around 2/3 of them had planned for this current pregnancy (68%) and the largest percentage had male gender (40.3 %). The largest percentage of participants had No difference regarding gender of pregnancy (40.5%). More than two-thirds of them had no complications in the previous pregnancies (68.2%) and had no complications in the current pregnancy (73.7%).

Table (3): Obstetric History of the Studied Pregnant Women

| Obstetric History | Frequency (no=434) | Percentage (%) |
|----------------------------------------------|---------------------------|-----------------------|
| Gravidity | Mean±SD = 2.9 ± 1.8 | Range: 1-14 |
| Primigravida | 114 | 26.3 |
| Multigravida (2-4) | 258 | 59.4 |
| Multigravida (>4) | 62 | 14.3 |
| Mode of Delivery | | |
| Normal vaginal delivery (NVD) | 56 | 12.9 |
| Caesarian section (CS) | 209 | 48.2 |
| No previous delivery | 127 | 29.3 |
| Both NVD and CS | 42 | 9.7 |
| Gestational age (GA) | | |
| First trimester | 83 | 19.1 |
| Second trimester | 121 | 27.9 |
| Third trimester | 230 | 53.0 |
| Planning for Pregnancy | | |
| Planned pregnancy | 295 | 68.0 |
| Not planned | 139 | 32.0 |
| Gender of Fetus | | |
| Male | 175 | 40.3 |
| Female | 141 | 32.5 |
| Twin | 17 | 3.9 |
| Not known yet | 101 | 23.3 |
| Is it desired gender? | | |
| Yes | 100 | 23.0 |
| No | 57 | 13.2 |
| makes No difference | 176 | 40.5 |
| Not known yet | 101 | 23.3 |
| Complications of Previous Pregnancies | | |
| Present | 138 | 31.8 |
| Absent | 296 | 68.2 |
| Complications of Current Pregnancy | | |
| Present | 114 | 26.3 |
| Absent | 320 | 73.7 |

Figure (1): Complications of Previous pregnancies of the studied pregnant women

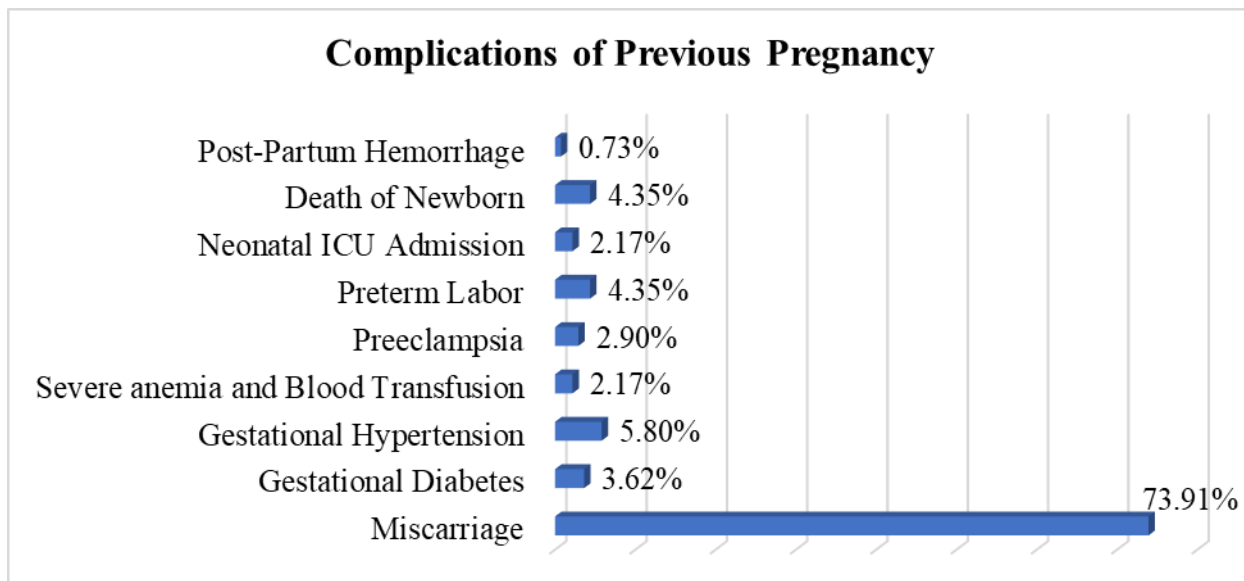


Figure (1) demonstrated that the most prevalent complication among previous pregnancies of the pregnant women seeking ANC, was miscarriage (73.9%).

Figure (2): Complications of the current pregnancy of the studied pregnant women.

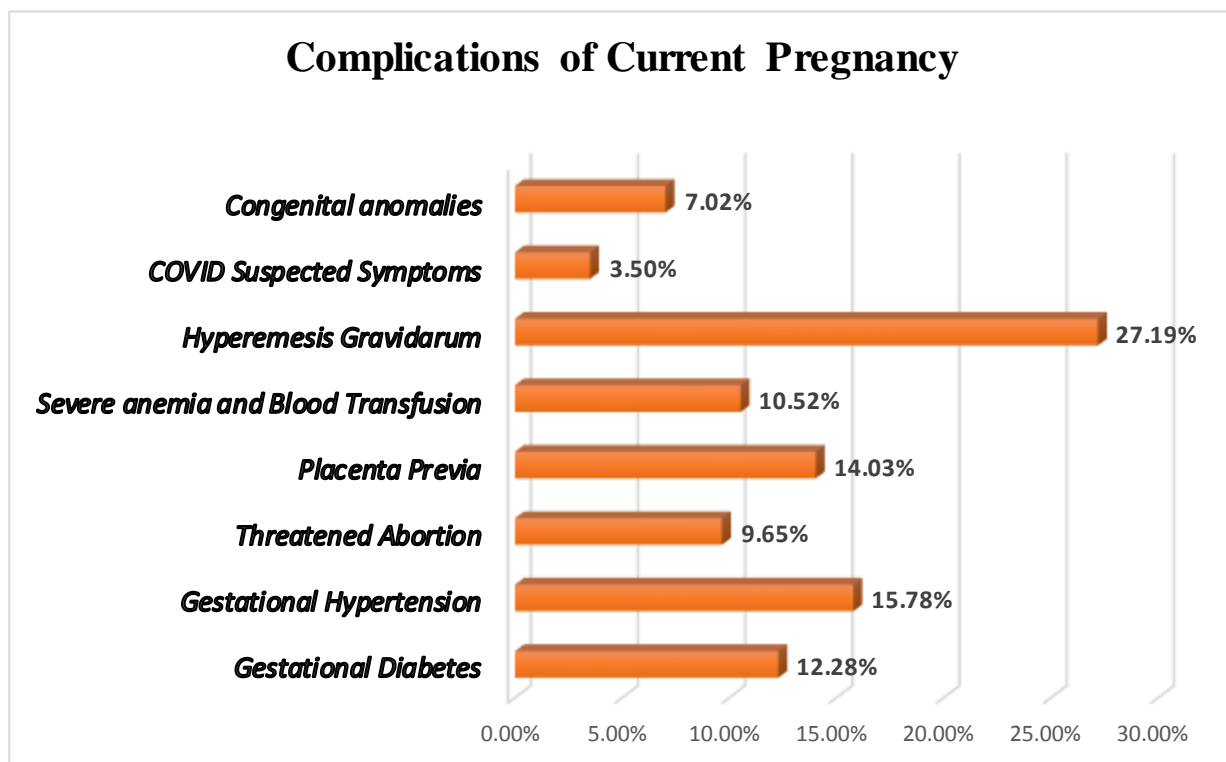


Figure (2) demonstrated that the most prevalent complication among the pregnant women utilizing ANC services, was hyperemesis gravidarum (27.19%).

5. Discussion:

In the current study concerning Sociodemographic Characteristics of the participants utilizing ANC services:

The largest percentage of the studied pregnant women was in the age group 20-35 (78.6%) similar to [9], the highest prevalence of participants were aged 21–30 years (86.9%).

Pregnant women with higher educational levels preuniversity and university education (34.3%) and (30.0%) respectively, similarly had a greater confidence to take actions regarding their own health and they had awareness on advantage of utilizing health services compared to women who had no education [10,11]

Most of the pregnant women were housewives (65.9 %) and this is similar to a study in which over a third of participants were high school graduates though over 90% were not working [12]. Regarding the medical and obstetric history of the pregnant women seeking ANC: The largest percentage of the studied women were multigravida (2-4): (59.4 %) with a mean equal 2.9 ± 1.8 SD. We found that women knowing of antenatal care (multigravida) were more likely to utilize antenatal care services as compared to the ones who did not know about ANC services (primigravida).

Having knowledge about health enables women to be aware of their health status in order to seek appropriate health services [13].

In this study, the presence of complications in previous pregnancies denoted abortion being the major complication (73.9%), similar to a correlational cross-sectional study on 209 pregnant women in the south of Minas Gerais, Brazil; in which the complications in previous pregnancies including the experience of an abortion was the most common and reflected how previous pregnancies impact women's experience in the ongoing pregnancy [14].

In the current study, most of the participating pregnant women were in the third trimester (53%), the possible explanation might be related to the closeness to delivery and the need for reassurance and close follow up, in contrary to the study [9] in which most of them were in the first trimester (41.8%) and only (3.2%) of women were in the third trimester.

Most of the pregnant women had a planned pregnancy (68%) that is similar to some estimates showing that women whose pregnancies were planned were more likely to receive antenatal care. This is supported by studies conducted in other

countries [15, 16, 17]. In addition to a study conducted in Kenya indicated that women who reported planned pregnancy were more likely to receive antenatal care while those who reported unplanned pregnancy were less likely to receive antenatal care [17]. It is possible that women whose pregnancies were unintended may fear the social ramifications of an unplanned pregnancy and so may avoid health services.

Limitations of the study:

- Some of the participants were not cooperative with the researcher.
- A cross-sectional study design in which causality and effect relationship cannot be built.

6. Conclusion and Recommendation:

This study of the sociodemographic and clinical characteristics of pregnant women seeking ANC and utilizing antenatal care services in Beni-Suef Governorate, resulted that: the largest percentage of the studied pregnant women was in the age group 20-35 (78.6%), with higher educational levels preuniversity and university education (34.3%) and (30.0%) respectively, multigravida (2-4): (59.4 %) with a mean equal 2.9 ± 1.8 SD. Around 2/3 reside in rural communities (65%).

In the study, the presence of complications in previous pregnancies denoted abortion being the major complication (73.9%). Most of the participating pregnant women were in the third trimester (53%) and most of them had a planned pregnancy (68%).

The study recommends that:

- There should be proper health care programs for pregnant women all through the gestation period.
- Increase the awareness and health education sessions should be arranged for pregnant women to increase their knowledge about antenatal care services.
- Empowering women through education and increasing their decision-making power, promoting family planning to prevent unplanned pregnancy.
- Future studies are required to assess the determinants at individual, household, community and facility levels to understand the determinants of ANC services holistically.

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