

## Perinatal health awareness among adolescent pregnant women in El zawya Village, Assiut City, Egypt.

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**Abstract:** The aim of the study was to assess the prevalence of pregnancy among adolescent women at El Zawya Village, Assiut City, Egypt and to assess the perinatal knowledge of these adolescent pregnant women at the same village. A Cross Sectional study was used in carrying out this study. A Structured Interviewing questionnaire is designed by the investigator to be filled from each adolescent pregnant woman who visited Family Health Hospital, El Zawya Village, Assiut City. The results indicated that nearly two thirds of women (64%) were in the second trimester of pregnancy with the mean gestational age was  $20.6 \pm 4.6$  weeks. The vast majority of women didn't know any information about nutritional needs and warning signs during pregnancy and they had no information about postpartum family planning methods and postpartum complications (94% & 96.5%) respectively. more than half of adolescent pregnant women (58.5%) didn't know the cause of their early marriage. It is concluded that there is a lack of perinatal knowledge about adolescent pregnant women in rural village, Egypt

### I. Introduction:

Adolescent reproductive health and rights have received much global attention during the last two decades. Many of these issues among adolescents have become major public health problems in various parts of the world and need to be addressed: unintended pregnancies, abortions, and sexual transmitted infections (STI) [1].

The term "adolescent" is often used synonymously with "teenager". In this sense "adolescent pregnancy" means pregnancy in a woman aged 10–19 years [2]. In most statistics the age of the woman is defined as her age at the time the baby is born. Because a considerable difference exists between a 12- or 13-year-old girl, and a young woman of say 19, authors sometimes distinguish between adolescents aged 15–19 years, and younger adolescents aged 10–14 years [3].

The reasons for teenage pregnancy may be multifactorial and have a self-behavioral, traditional, social, cultural, or religious foundation. Poverty, low socioeconomic status, limited education, and early sexual activity are the main factors perpetuating the problem of adolescent pregnancy. Other factors such as risk-taking behavior and lack of information about contraception have also been proposed [4].

Adolescence is a critical period, during which a person is no longer a child but is not yet a fully mature adult. Adolescent pregnancy has been reported to have deleterious reproductive implications for women, in addition to placing a burden on the community. The most frequently reported complications are increased risk of preterm labor, intrauterine growth retardation, cesarean delivery, and low birth weight. However, the effect of confounders such as smoking and alcohol intake could not be ruled out in many previous studies [5].

In recent decades adolescent pregnancy has become an important health issue in a great number of countries, both developed and developing. However, pregnancy in adolescence (i.e. in a girl <20 years of age) is by no means a new phenomenon. In large regions of the world (e.g. South Asia, the Middle East and North Africa), age at marriage has traditionally been low in kinship-based societies and economies. In such cases most girls married soon after menarche, fertility was high, and consequently many children were born from adolescent mothers [6].

More than 14 million adolescent girls give birth each year. Although these births occur in all societies, 12.8 million, more than 90%, are in developing countries. In some societies girls marry and start their families before their own childhoods have ended. In other countries the majority of births to young mothers occur outside marriage where there is a high rate of sexual activity amongst adolescents, some of it coerced, or linked to poverty and social exclusion [7].

Some health risks associated with pregnancy and childbearing are more pronounced among adolescents than among older women (World Health Organization, 2003b), due to the adolescents' physiological and psychological immaturity, lack of adequate antenatal care and safe delivery. Health problems experienced by adolescent mothers are confounded by parity, because parity 1 and low age often occur simultaneously [8].

Adolescent girls who give birth each year have a much higher risk of dying from maternal causes compared to women in their 20s and 30s. These risks increase greatly as maternal age decreases, with

adolescents under 16 facing four times the risk of maternal death as women over 20. Moreover, babies born to adolescents also face a significantly higher risk of death compared to babies born to older women [9].

Adolescent pregnancy is one of the main issues in every health system since early pregnancy can have harmful implications on girl's physical, psychological, economic and social status [10].

Teenage pregnancy is a worldwide phenomenon affecting both developed and developing countries [11]. About 15 million women/girls aged less than 20 years give birth each year, roughly 11% of all births worldwide. The vast majority of these births, almost 95% occur in developing countries [12]. In Egypt, by the age of 19 years, one fifth of married women have already begun childbearing [13].

Egypt has a high birth rate, which is nearly constant at 2.7% and the rate of adolescent pregnancy ranges from 4.1% in urban societies to 11.3% in rural areas [13]. The data related to knowledge of adolescent pregnant women is little so the aim of the present study was to assess the knowledge of adolescent pregnant women about their Obstetrics health issues at El Zawya village.

## **II. Aim of the study:**

The aim of the study was to assess the prevalence of pregnancy among adolescent women at El Zawya Village, Assiut City, Egypt and to assess the perinatal knowledge of these adolescent pregnant women at the same village.

### **Research Questions:**

- What is the prevalence of adolescent pregnancy at El Zawya Village, Assiut City, Egypt?
- What is the perinatal knowledge of these adolescent pregnant women at the same village?

## **III. Subjects and Methods:**

### **Research Design:**

A Cross Sectional study was used in carrying out this study.

### **Setting:**

The study was conducted at Family Health Hospital, El Zawya Village, Assiut City. This hospital presents many health services such as: vaccinations during pregnancy, family planning services, Antenatal care, and referral of high risk cases to tertiary hospitals.

### **Sample:**

This prospective study comprised 200 simple random samples of adolescent pregnant women who received antenatal care at Family Health Hospital, El Zawya Villages, Assiut City, Egypt. This sample was recruited according to the sample size equation which is calculated by the researcher through the use of Epi Info program version 3.3 with power 80%, CI 95% and prevalence 11%, worst acceptable 22%, so sample size will 210 individual which will be inflated with 10% to avoid drop out 350.

### **Tools:**

The following tool was used in the current study:

A Structured Interviewing questionnaire is designed by the investigator to be filled from each adolescent pregnant woman who visited Family Health Hospital, El Zawya Village, Assiut City.

The data was collected in the sheet included the following data:

- **Part 1: Sociodemographic Characteristics:**
  - (Name, age, address, educational level, and occupation)
- **Part 2: Obstetric History:**
  - (No. of Gravidity, Parity, abortions,-----)
- **Outcomes of previous deliveries if present:**
  - **The history of previous last pregnancy complications:**
    - Antenatal complications: (Antepartum haemorrhage, pregnancy induced hypertension, abortion,-----)
    - Natal complications: (Intra-partum haemorrhage, prolonged labour, Obstructed labour,-----)
    - Postnatal complications: (Postpartum haemorrhage, Puerperal sepsis, others)
  - The place of delivery: (Hospital, Home, -----)
- **The data related to the current pregnancy:**
  - **Weeks of gestation:** wks
- **Data related to the perinatal health aspects of teenage pregnancy:**
  - Antenatal health aspects:
  - Natal health aspects:

- Postnatal health issues:
- The social aspects:

**The Procedure:**

The investigator interviewed the adolescent pregnant women at the Family Health Hospital, El Zawya Villages, Assiut City, Egypt. All ethical considerations were clarified to each woman before explanation of the nature of the study.

**Methods:**

Before implementation of the study, an official permission was obtained from the Dean of the Faculty of Nursing directed to the manager of Family Health Hospital, El Zawya Village, Assiut City, Egypt after full explanation of the aim of the study. The pilot study was carried out on 20 women before implementation of the study to test the validity and reliability of the tools. The purpose of the pilot test was to: evaluate the time needed for conducting the interview and the validity of the questions to create an easy flowing instrument. The necessary modifications were done based on the results of the pilot study. Women who participated in the pilot study were not included in the main study. The data were collected over one year, January 2013 to December 2014. The investigator started to introduce herself to the woman and explained the nature of the study to obtain an oral consent from them to participate in the study. Some women refused to participate in the research, so they were excluded from the research. The investigator met the women in the antenatal clinic. The investigator began to collect the questionnaire which included socio demographic characteristics such as name, age, education and occupation. Obstetric history such as gravidity, parity, abortion, and others. Then the investigator began to collect the data related to antenatal, natal and postnatal complications. The data related to current pregnancy and finally, the investigator assesses the perinatal knowledge of these adolescent pregnant women about their health aspects. The number of women interviewed per day was 2-3 women. The average time taken for filling each tool was around 15-20 minutes depending on the response of the woman. Each woman was reassured that the information obtained was confidential and used only for the purpose of the study.

**IV. Statistical analysis:**

Statistical analysis was done by using SPSS version 16 Software Package. Data collected were coded and analyzed. The results were tabulated and statistically compared using student t-test to compare difference between two mean and chi- square to compare differences in distribution of frequencies among postpartum women. A significant P-value was considered when it is less than or equal 0.05.

**Ethical consideration**

- Risk – benefit assessment. There is no risk at all during application of the research.
- Confidentiality was mentioned during all stages of the study.

Informed consent was taken from women for their approval to participate in this study

**V. Results:**

**Table 1: Distribution of the studied sample according to socio-demographic characteristics:**

Sociodemographic characteristics:	No. (200)	%	P. value
<b>Age</b>			
14 – 16 years	19	9.5	<0.001**
17 – 19 years	181	90.5	
Range	14 - 19 years		
mean ± SD	18.0±1.1		
<b>The age at marriage</b>			
<16 years	21	10.5	<0.001**
16 – 19 years	179	89.5	
Range	12 - 19 years		
Mean ± SD	16.7 ± 1.1		
<b>Educational level</b>			
Illiterate	18	9.0	<0.001**
Read & write	26	13.0	
Basic	127	63.5	
Secondary	26	13.0	
University	3	1.5	
<b>Occupation</b>			
Housewives	187	93.5	<0.001**
Employer	13	6.5	
<b>Consanguinity</b>			
Yes	142	71.0	<0.001**
No	58	29.0	

**Table (1)** shows that the majority of adolescent pregnant women aged from 17-19 years old which is considered as their age of marriage and they also housewives (90.5%, 89.5% and 93.5% ) respectively. Concerning education, nearly two thirds of them (63.5%) had basic educations. More than two thirds of the sample (71%) has consanguinity with their husbands. As regards Obstetric history, the majority of adolescent pregnant women (95%) were primigravida, only 5% of women were multigravida and more than half of them (55%) had previous antenatal complications.

The results show that the prevalence of pregnancy among adolescent women was  $200/600=33.3\%$

**Table 2: Distribution of the studied sample according to the current pregnancy:**

Data related to current pregnancy:	No. (200)	%	P. value
<b>The weeks of gestation</b>			
1 <sup>st</sup> trimester	4	2.0	<0.001**
2 <sup>nd</sup> trimester	128	64.0	
3 <sup>rd</sup>	68	34.0	
Range	7 - 32 weeks		
Mean ± SD	20.6±4.6 weeks		
<b>Regular antenatal visits:</b>			
Done	57	28.5	<0.001**
Not done	143	71.5	
<b>Frequency</b>			0.108 <sup>Ns</sup>
One monthly	16	28.1	
Once every two weeks	5	8.8	
Every weeks	13	22.8	
When I have a problem or complaint	10	17.5	
According to the doctor order	13	22.8	
<b>Antenatal counseling</b>			
Done	5	2.5	<0.001**
Not done	195	97.5	

**Table (2)** indicates that nearly two thirds of women (64%) were in the second trimester of pregnancy with the mean gestational age was 20.6±4.6 weeks. As regards antenatal care visits, only more than one fourth of women had regular antenatal visit every month (28.5% & 28.1%) respectively. The vast majority of women (97.5%) didn't receive antenatal counseling during these visits.

**Table (3): Distribution of the studied sample according to their knowledge about antenatal health needs:**

	No. (200)	%	P. value
<b>Nutritional needs according to her trimester:</b>			
Yes	10	5.0	<0.001**
No	190	95.0	
<b>Frequency</b>			
Correct information	1	10.0	<0.001**
Incorrect information	9	90.0	
<b>Vaccinations during pregnancy</b>			
Yes	22	11.0	<0.001**
No	178	89.0	
<b>Frequency</b>			
Tetanus Toxoid (TT)	22	100.0	
<b>Warning signs during pregnancy</b>			
Yes	10	5.0	<0.001**
No	190	95.0	
<b>Frequency</b>			
Correct information	4	40.0	
Incorrect information	6	60.0	
<b>Hygienic care during pregnancy</b>			
Yes	28	14.0	<0.001**
No	172	86.0	
<b>Frequency</b>			
Correct information	21	75.0	
Incorrect information	7	25.0	

**Table (3)** identifies that the vast majority of women didn't know any information about nutritional needs and warning signs during pregnancy (95% & 95%) respectively.

**Table (4): Distribution of the studied sample according to their knowledge about the ideal antenatal visits**

	No. (200)	%	P. value
<b>The ideal antenatal visits</b>			
Yes	16	8.0	<0.001**
No	184	92.0	
<b>Frequency</b>			
From 1st to the end of 7th month (one monthly)	6	37.5	0.687 <sup>Ns</sup>
From 8th to its end (twice monthly)	6	37.5	
From 9th month uptill delivery (once weekly)	4	25.0	

**Table (4)** shows that the majority of adolescent pregnant women (92%) had no information about the ideal antenatal visits.

**Table (5): Distribution of the studied sample according to their knowledge about natal aspects:**

	No. (200)	%	P. value
<b>The signs of true labour pain</b>			
Yes	8	4.0	<0.001**
No	192	96.0	
<b>Frequency</b>			
Correct information	4	50.0	1.000 <sup>Ns</sup>
Incorrect information	4	50.0	
<b>warning signs that need hospitalization</b>			
Yes	9	4.5	<0.001**
No	191	95.5	
<b>Frequency</b>			
Correct information	6	66.7	0.156 <sup>Ns</sup>
Incorrect information	3	33.3	
<b>Timing of bearing down during labour</b>			
Yes	3	1.5	<0.001**
No	197	98.5	
<b>Frequency</b>			
Correct	3	100.0	0.014*
Incorrect	0	0.0	
<b>The place of delivery</b>			
Home	41	20.5	<0.001**
Hospital	159	79.5	

As regards to the natal aspects, **table (5)** identifies that the vast majority of adolescent pregnant women had no information about signs of true labour pain, warning signs and the time of bearing down during labour (96%, 95.5% & 98.5%) respectively.

**Table (6): Distribution of the studied sample according to their knowledge about postnatal aspects:**

	No. (200)	%	P. value
<b>Time of initiation of breast feeding</b>			
Yes	28	14.0	<0.001**
No	172	86.0	
<b>Frequency</b>			
Correct information	20	71.4	0.001**
Incorrect information	8	28.6	
<b>Making perineal care</b>			
Yes	23	11.5	<0.001**
No	177	88.5	

<b>Frequency</b>			
Correct information	15	65.2	<0.001**
Incorrect information	8	34.8	
<b>Making newborn care</b>			<0.001**
Yes	30	15.0	
No	170	85.0	
<b>Frequency</b>			<0.001**
Correct information	30	100.0	
Incorrect information	0	0.0	
<b>Postpartum nutritional needs</b>			<0.001**
Yes	170	85.0	
No	30	15.0	
<b>Frequency</b>			
Correct information	5	16.7	
Incorrect information	25	83.3	

As regards to the postnatal aspects, **table (6)** shows that the majority of adolescent pregnant women had no information about the time of initiation of breast feeding, making perineal care and newborn care (86%, 88.5% & 85%).

**Table (7): Distribution of the studied sample according to their knowledge about proper postpartum family planning methods:**

	No. (200)	%	P. value
<b>Postpartum family planning methods</b>			<0.001**
Yes	11	5.5	
No	189	94.5	
<b>Frequency</b>			<0.001**
Correct information	1	9.1	
Incorrect information	10	90.9	
<b>The common postpartum complications</b>			<0.001**
Yes	7	3.5	
No	193	96.5	
<b>Frequency</b>			<0.001**
Correct information	7	100.0	
Incorrect information	0	0.0	

**Table (7)** shows that the vast majority of adolescent pregnant women had no information about postpartum family planning methods and postpartum complications (94% & 96.5%) respectively.

**Table (8): Distribution of the studied sample according to their social aspects:**

Social aspects:	No. (200)	%	P. value
<b>The causes of early marriage:</b>			<0.001**
I don't know	117	58.5	
Family decision	17	8.5	
Customs & traditions	53	26.5	
Financial problems	5	2.5	
literally	4	2.0	
Relative marriage	1	0.5	
Social problems	3	1.5	
<b>The decision of early marriage by whom:</b>			<0.001**
By my father	183	91.5	
By my self	17	8.5	
<b>The decision about her health care by whom:</b>			<0.001**
By her husband	98	49.0	
Jointly with her husband	102	51.0	

As regards to social aspects, **table (8)** identifies that more than half of adolescent pregnant women (58.5%) didn't know the cause of their early marriage.

**Table (9): The relationship between Obstetric aspects and knowledge of adolescent pregnant women:**

Obstetric aspects:	Unsatisfactory		Satisfactory		P. value
	No.	%	No.	%	
Antenatal health aspects	199	99.5	1	0.5	0.000**
Natal health aspects	196	98.0	4	2.0	0.000**
Postnatal health issues	192	96.0	8	4.0	0.000**

Table (9): shows that there are highly significance differences between Obstetric aspects and knowledge of adolescent pregnant women (P.V. = 0.000).

## VI. Discussion:

Nearly 16 million adolescent girls aged 15-19 years old give births each year, roughly 11% of all births occur in developing countries. In developing countries, pregnancy and childbirth related complications are the leading cause of death among adolescent girls. (WHO, 2012).

This study aimed to assess the prevalence of pregnancy among adolescent women at El Zawya Village, Assiut City, Egypt and to assess the perinatal knowledge of these adolescent pregnant women at the same village.

As regards to sociodemographic data, the study explored that the mean age of adolescent pregnant women is  $18.0 \pm 1.1$  years old and the majority of them (89.5%) had age of marriage from 16-19 years old. Concerning education, nearly two thirds of them (63.5%) had basic education.

These findings are inconsistent with **Rasheed, et. al. 2011** who mentioned in his study about Adolescent pregnancy in Upper Egypt that the mean age at marriage is  $17.8 \pm 0.9$  years old and nearly one third of them (31%) had a basic education.

In the same line, **Mersal, et. al., 2013** who reported in his study about the effect of prenatal counseling on compliance and outcomes of teenage pregnancy in Egypt that the mean age of marriage was  $15.33 \pm 1.19$  years old and more than two thirds of the studied sample (69.8%) had less than secondary school.

The differentiation of sociodemographic characteristics between the present studies and others may refer to the variation in the sample size, type and the places of conducting the studies.

The majority of teenage pregnant women (94%) were primigravida and 50% had previous antenatal complications in a Saudian study. In contrast, other study in Canada revealed that 90% of teenage pregnant women were primigravida.

Consistent with previous findings (**Saba, et.al. 2013 and Kingston, et. al. 2015**), the present study explore that the majority of adolescent pregnant women (95%) were primigravida, and more than half of them (55%) had previous antenatal complications.

The present study revealed that nearly two thirds of adolescent pregnant women (64%) had the 2<sup>nd</sup> trimester. As regards antenatal care, only 28.5% of them had regular antenatal visits while the vast majority of them (97.5%) didn't receive antenatal counseling during these visits.

These findings are inconsistent with **Mersal, et. al., 2013** who reported in his study about the effect of prenatal counseling on compliance and outcomes of teenage pregnancy that more than 70% of participants had made only one visit to the antenatal care clinic.

In contrast, **Edssy, et. al., 2014** who mentioned in his study about teenage pregnancy and fetal outcome in Egypt that there was a high rate of teenagers had adequate antenatal care (93.6%).

In the same line, an Egyptian study about adolescent pregnancy in Upper Egypt done by **Resheed, et. al., 2011** who reported that the majority of the participants (94%) had adequate antenatal care.

**Kingston, et. al., 2015** mentioned in his study about comparison of adolescent, young adult and adult's women's Maternity experiences and practices in Canada that only half of participants (50.5%) had antenatal counseling.

The present findings revealed that the majority of adolescent pregnant women had lack of information about nutritional needs, vaccinations, warning signs and hygienic care during pregnancy (95%, 89%, 95% 86%) respectively.

These findings are inconsistent with **Mersal, et. al. 2011** who reported that only half of adolescent pregnant women (51%) had an information about nutrition while more than one third of them had an information about immunization, danger signs and hygiene (37.2%; 37.2% and 32.6%) respectively.

The researcher found that early initiators of perinatal care possessed positive attitudes towards pregnancy were knowledgeable about pregnancy signs and symptoms and thought perineal care was important (**Tilghman & Lovette, 2008**).

The present study revealed that there are lack of knowledge of adolescent pregnant women about the time of initiation of breast feeding, perineal care and newborn care.

These findings are inconsistent with **Kingston, et. al., 2015** who mentioned in his study that more than two thirds of teenage pregnant women (70%) had knowledge about breast feeding.

In the same line, **Mersal, et.al., 2011** who reported in his study that the majority of teenage pregnant women (80%) had knowledge about breast feeding.

**Sarreria de oliveria and Corderio, 2014** mentioned in their study about nursing care needs in the postpartum period of adolescent's mothers that the participant showed interest in learning about newborn care and self-care.

In contrast, **Devito's study, 2013** about how adolescent mothers feel about becoming a parent was reported that the participant expressed little knowledge about how to care of their newborns.

In the same line, **Oweis, Gharaibeb, and Aishee's study, 2012** who reported that the adolescent's mothers wanted to know more information about care of episiotomy wound, perineal care, family planning and postpartum follow up.

The results of this study explored that the prevalence of teenage pregnancy in this rural village was 33%. These findings are inconsistent with **Saba, et. al., 2013** who mentioned in his study about outcome of Teenage pregnancy that the frequency of teenage pregnancy is only 2%.

Finally, to address effectively the complexity of adolescent pregnancy, the unique issues for teenagers in each community should be understood. Although declining national teenage pregnancy rates are promising, the problem of early marriage and poor fetal outcomes are still persisting.

## VII. Conclusions:

It is concluded that there is a lack of perinatal knowledge about adolescent pregnant women in rural village, Egypt

## VIII. Recommendations:

- Increase teenage pregnant women's awareness through perinatal educational programs to improve their maternal and fetal outcomes.
- More researches should be done to assess the level of knowledge of teenage pregnant women in rural communities to reduce poor maternal and fetal outcomes.

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