

## Effect of Antenatal Educational Guidelines on Mother's Knowledge

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**Abstract: Background;** Adequate utilization of antenatal health care services is associated with improved maternal and neonatal health outcomes. **Aim of the study:** to examine the effect of antenatal educational guidelines on mother's knowledge. **Research design:** descriptive cross section –study design. **Setting:** obstetrics and gynecology clinic of women's health hospital, Assiut University. **Sample:** a sample of sixty pregnant women attending the obstetrics and gynecology clinic for antenatal care were enrolled in this study and are willing to participate in the study. **Tools:** three tools were used for this study: **Tool I:** A structured interview questionnaire sheet, **tool II:** socioeconomic condition scale **Tool III:** The education guidelines.

**Results:** there was a significant improvement in knowledge level of the study group than those of the control group regarding level of antenatal knowledge. **Conclusion:** Provision of antenatal educational guidelines was beneficial in improving mother's knowledge regarding different aspects of antenatal period that could have a positive impact on their mother's and child's health. **Recommendations:** A large probability sample is needed for generalizability of the study results; Provision of the educational guidelines of the antenatal care to the clinic to be distributed to all the women attending to the clinic is of great value which is prepared in simple Arabic language.

**Key words;** Antenatal, Educational guidelines, mother's knowledge

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### I. Introduction

Antenatal education has an effect on the health of pregnant women as well as on the health and wellbeing of upcoming generations in any country. They provide expecting mothers with information that enable them to identify potential warning signs of malfunction or abnormalities during pregnancy and strategies to adhere to the prescribed treatments and referrals (USAID, 2007).

Since 1990, a private University Hospital introduced antenatal classes for pregnant women visiting obstetric clinics. With the aim of education about care required during pregnancy and its management. Initially only one session was conducted; but with time different modules were developed (Serçekuş & Mete, 2010)

Nowadays, a total of four parts are covered over the period of three trimesters; 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> trimester. In these sessions the presence of woman's husband is also allowed to attend these sessions, so they can be prepared for their role as well as extend their support to their wives (Ewers, 2011). The following topics are being covered; part (I) includes information about the first three months of pregnancy, the minor disorders that may occur during pregnancy and exercise during pregnancy. Part (II) includes information about the second three months of pregnancy, breast feeding, related complications and its prevention, and nutrition during pregnancy. (Craig & Dietsch, 2010 and Fikree et al., 2005)

Part (III) includes information about the last three months of pregnancy, signs of labor, labor exercises, physical and mental preparation, episiotomy care, and family planning. Part (IV) includes information about normal delivery and care before and after the delivery. Couple session includes revision of all the classes, father's role discussion, and doctor session includes painless delivery, tour of labor room and ward area (Craig & Dietsch, 2010 and Fikree et al., 2005)

In many parts of the world, antenatal education plays an important role in preparing couples for pregnancy, childbirth and parenthood. Although there are standard educational programs in many developed countries, in most of the other countries, antenatal preparation is still less of a formality, and knowledge of the birth is passed from mothers to daughters (Gagnon & Sandall 2007). There are many studies on the effects of antenatal education; (Tighe, 2010) noted that women who received the education believed that such training was beneficial in preparing them for childbirth. Another study indicated that women who received education were less prone to experiencing anxiety during childbirth (Ip et al., 2009; Okumus et al., 2002). Nichols, 1995

found that classroom attendance had no impact on feeling of competence in parenthood or in facilitating the transition to parenthood. **Fabian et al., 2005** in two different studies have found that antenatal education has no effect on parental skills

**Aims of the study:** To examine the effect of antenatal educational guidelines on mother's knowledge.

**Population and methods:**

**Research design:** quasi experimental design was utilized for this study.

**Setting:** obstetrics and gynecology clinic of women's health hospital, Assiut University.

**Sample: convenience sampling** of sixty pregnant women attending the obstetrics and gynecology clinic for antenatal care were enrolled in this study and are willing to participate in the study. This sample was divided into two equal groups (30 clients for each):

1. Group one consisted of women who attended the antenatal sessions with whom the education guidelines was applied and the effect of these guidelines was measured.
2. Group two consisted of women who did not attend the sessions. Only those participants who provided informed written consent were enrolled in the study

**Tools: three tools were used in this study:**

**Tool I: A structured interview questionnaire sheet:**

This tool was constructed by the researcher after reviewing current national and international literature and it consisted of two parts:

**Part 1:** Data related to assessment of the participants demographic profile as age and level of education.

**Part 2:** Information regarding knowledge of antenatal care.

**Scoring system:**

Each correct answer scored as 1 and zero was given for the incorrect or don't know answer, a total of less than 60% was considered as unsatisfactory level of knowledge while a score of 60% or more was awarded as satisfactory level of knowledge.

**Tool II: socioeconomic condition scale:** it was assessed using (Abd El-Twaab, 1998). It included four items; parents' educational level (8 items), family income (6 items), Parents' occupation, and life styles (3 items). One score is given to each item. Three levels of socioeconomic conditions were reached which are low, moderate and high. Family income was modified by the researchers according to the rate of inflation by calculating the value of the golden pound at 1998 and that at 2017 and this increase was multiplied to each category in the income item.

**Tool III: The educational guidelines:**

It was developed by the researcher and constituted of knowledge regarding antenatal care as the ideal body weight, safe exercise practice, importance and examples of the healthy, balanced diet, medication supplements needed during pregnancy as iron, importance of breast feeding for both the mother and the newborn.

**Procedure:**

Pregnant women in the study group were met 3 times during their visits, each session took from 20-30 minutes:

The first time for assessment of their knowledge pre application of the guidelines and explaining to them the importance of ideal body weight and exercises practice.

The second meeting included explanation on the ideal diet planning, and the iron supplementation.

The third meeting included instructions on the importance of breast feeding for both the mother and her newborn, and then evaluation of their knowledge level was done.

The instruction guidelines was given to them from the first meeting with them which was in simple image illustrated Arabic format.

**II. Methods**

**1. Administrative approval:**

Official approval and administration permission was obtained from the director of outpatient clinics at women's health hospital, Assiut University.

**2. Ethical considerations:**

The study was approved by the Faculty ethics committee; a written approval was obtained from the enrolled participants after explaining the nature and purpose of the study.

**III. Results**

To fulfill the aim of the current study the results are presented in the following:

Table 1 shows that the highest percent in both the study and control group subjects their age ranged from 25-30 years of age (53.3% and 43.3%) respectively, secondarily educated (56.6% and 43.3%) respectively, occupying the middle class in the socioeconomic status

(80% and 76.6%) respectively, while as regard the occupation status 46.6 % in the study group were working compared to 56.7% in the control group and 53.4% Vs. 83.3 % of the study and control groups were housewives, respectively. As regards their obstetrical history a little more than half of the study group and half of the control group were multi gravida. Table 2, and 3 shows that there was a significant improvement in knowledge level of the women attended the sessions than those of the women who did not attend the sessions regarding level of antenatal knowledge

**Table 1: Demographic Characteristics of the Participants**

Demographic Characteristics	Percentages		X <sup>2</sup>	p- value
	study(n=30)	control(n=30)		
Age				
<18-20	10	10	10	0.44
20-25	26.6	33.3	75	0.76
25-30	53.3	43.3	53	0.14
30-35	10	13.3	10	0.69
Educational Status				
Illiterate	0	6.66	0	1.00
Read and write	6.66	10	7	0.73
Primary education	16.6	20	17	0.65
Secondary education	56.6	43.3	57	0.07
High education	20	23.3	20	0.64
Socio Economic Status				
Upper Class	20	20	20	0.46
Middle Class	80	76.6	80	0.39
Lower Class	00	3.33	0	1.00
Occupational Status				
Working Women	46.6	56.7	47	0.83
House Wife	53.4	43.3	53	0.14
Obstetrical History				
Primi Gravida (1 <sup>st</sup> Child)	46.6	50	47	0.59
Multi Gravida (2 <sup>nd</sup> Child)	53.3	50	53	0.36

**Table (2): Comparison of knowledge level about Antenatal care between two groups**

information about knowledge of antenatal care Questions	Study group (Attend the sessions) (n=30)		Control group (Didn't attend the sessions) (n=30)		P- value
	Adequate knowledge	Inadequate knowledge	Adequate knowledge	Adequate knowledge	
1. Have you had any idea about antenatal care?	100%	0%	90%	100%	0.22
2. What are the some foods which can prevent from constipation	76.66%	23.33%	56.66%	76.66%	0.038*
3. Have you prepared yourself for breast feeding?	93.33%	6.66%	40%	93.33%	0.000**
4. When you have felt your child movement during pregnancy?	96.66%	3.33%	73.33%	96.66%	0.03*
5. What you should do when you do not feel the baby movement	96.66%	3.33%	56.66%	96.66%	0.0008**
6. How you would prevent yourself from urine infection during pregnancy?	86.66%	13.33%	43.33%	86.66%	0.0008**
7. When you should start exercises in pregnancy?	83.33%	16.66%	50%	83.33%	0.002**
8. Cow's milk would be a cause of an allergy to the infants	96.66%	3.33%	50%	96.66%	0.000**
9. Why to maintain well balanced diet in pregnancy	93.33%	6.66%	83.33%	93.33%	0.212
10. How much weight should increase in the pregnancy?	90%	10%	60%	90%	0.007**

11. How you would maintain good hygiene during pregnancy?	90%	10%	66.66%	90%	0.03*
12. When you should approach to health care provider during pregnancy?	96.66%	3.33%	73.33%	96.66%	0.03*
13. Why should pregnant women take Multivitamins and Iron supplements during pregnancy?	86.66%	13.33%	76.66%	86.66%	0.204
14. How antenatal sessions are beneficial in terms of delivery?	90%	10%	33.33%	90%	0.000** *

**Table (3):** Comparison of Antenatal care guidelines information between two groups`

Information about antenatal sessions questions	attend the antenatal sessions (n=30)		Didn't attend the antenatal sessions (n=30)		p- value#
	yes	no	yes	no	
1. Antenatal care mean to provide and detect early problems during pregnancy	96.66%	3.33%	76.66%	23.33%	0.06
2. Do you know that nausea and vomiting are very common in the early pregnancy	100%	0%	90%	10%	0.22
3. It is good to prevent nausea and vomiting in empty stomach	76.66%	23.33%	33.33%	66.66%	0.000***
4. Intra uterine talk is talking with your baby when he is inside of your uterus	90%	10%	33.33%	66.66%	0.000***
5. Increase intake of milk will prevent you from constipation and urinary tract infection	90%	10%	83.33%	16.66%	0.28
6. During pregnancy doing excessive and heavy exercises are safe	26.66%	73.33%	23.33%	76.66%	0.26
7. Antenatal exercises are helpful in promoting muscles tone and relaxation	93.33%	6.66%	73.33%	26.66%	0.05*
8. One of the cause of low birth weight in the babies is smoked and alcoholic mothers	96.66%	3.33%	66.66%	33.33%	0.06
9. Cow's milk would be a cause of an allergies to the infants	96.66%	3.33%	50%	50%	0.0000***
10. Incorrect position during breast feeding can cause sore and crack nipple	93.33%	6.66%	76.66%	23.33%	0.103
11. Breast milk contains 85% of water	100%	0%	83.33%	16.66%	0.09
12. Breast milk benefits are: prevent from PPH, stimulate expulsion of placenta and helps mother to regain her previous weight	93.33%	6.66%	60%	40%	0.004**
13. When baby get satisfied after fed breast milk is the indicator of sufficient milk	100%	0%	90%	10%	0.22
14. Bottle feed should encourage to the babies	13.33%	86.66%	16.66%	83.33%	0.74
15. Three sings of labor are: labor pains, water bag rupture, and bloody show	93.33%	6.66%	83.66%	13.33%	0.24
16. Normal weight gain in pregnancy is 10-12kg	96.66%	3.33%	83.33%	16.66%	0.155
17. Presence of your husband during antenatal session is a source of psychological and emotional support for you	100%	0%	83.33%	16.66%	0.09

# P- value is between study group who answered yes and control group who answered yes

#### IV. Discussion

This work aimed to assess the knowledge of women who received the antenatal educational guidelines and those who didn't received the guidelines. World statistics have proven that the maternal mortality is one of the serious public health problems, especially in the third world. In 2005, there were an estimated 536 000 maternal deaths worldwide, total of 99% of all maternal deaths occur in developing countries. However, most of these deaths were preventable (**World Health Organization, 2005**)

Perinatal education is one of the essential components of antenatal care that protect mothers and their children from complications and risks. In many parts of the world, antenatal education plays an important role in preparing couples for pregnancy, childbirth and parenthood (**Turan & Say, 2003**). The findings of the present study clearly proved that the antenatal education is one of the effective strategies during childbirth process as it helps in improving mother's knowledge regarding antenatal care.

This was proven from the findings that the study group who received the educational guidelines were more knowledgeable and aware about the concept of the antenatal aspects as; diet during pregnancy, food that could prevent constipation, preparation for breast feeding, weight increment during pregnancy, taking multi-vitamins and iron supplements and time to approach health care provider during pregnancy, care of minor problems, and care of their newborn. Adequate knowledge about nutrition would have a positive impact on maternal and new born health (**Nisar & White, 2003**).

A significant higher increase in mothers' knowledge regarding food that prevents constipation among study group compared to those in the control group. This finding is in accordance with Saadia, 2014 who found a positive effect of antenatal health education on improving dietary habits of women included. Moreover,

Kharamabadi et al., 2015 reported that educational intervention based on health promotion pattern improve mothers' knowledge about nutrition and improve nutritional performance during pregnancy.

A significant increase in mother's knowledge about weight excess in pregnancy in the study group after the educational sessions. This is in agreement with Mbada et al., 2014 who assessed knowledge of antenatal exercises and found that 69.1% of women had knowledge about prevention of excess weight gain during pregnancy.

This also goes on the same line with (Pallavi et al., 2015) in their study entitled "Effect of Educational Program on Knowledge of Antenatal and Post Natal Women on Breast Feeding" which revealed that a well-planned educational program brings a significant change in knowledge.

Urinary tract infection is the second common side effect of pregnancy after anemia and if not controlled properly, it can have a major impact on pregnancy. (James et al., 1992). This study found a significant increase in mothers' knowledge after the educational sessions regarding urinary tract infection in pregnancy. This finding goes in the same line with that of Jalali et al., 2014 who conducted an educational program for pregnant women and reported that mean knowledge about urinary tract infection after intervention was higher in the study group than that in the control group.

Looking at the demographic characteristics of the studied samples; a little more than half of the study group and nearly half of the control group their age ranges from 25-30 years of age, secondarily educated (56.6% and 43.3%) respectively, occupying the middle class in the socioeconomic status (80% and 76.6%) respectively, while as regard the occupation status 46.6 % in the study group were working compared to 56.7% in the control group and 53.4% Vs. 83.3 % of the study and control groups were housewives, respectively. As regard their obstetrical history a little more than half of the study group and half of the control group were multi gravida.

Differing a little from these results have come the results of a study which was conducted by Al Otaiby et al., 2013 in their study which constituted 468 women; their mean age was  $28.5 \pm 6.7$  years. Educational level; 7.7% of them had no more than a primary school education and 49.5% had a college degree or more. And regarding occupation; housewives constituted 61.8% of the sample, while others were either employed (25.2%) or students (13%). And most of the sample (62.4%) has given birth to more than one child.

Understanding of regular iron intake would decrease the chance of neural tube defects among the newborn (Dwyer, 2009). Most of the study participants were able to give the rational for their answers. They were aware of the importance of the antenatal educations in their transitional process of parenthood. This means the antenatal guidelines were effective throughout the pregnancy, during the labor, and in post natal period.

Participant's better understanding regarding breast feeding practices has been depicted in the study findings, which could have a better effect on child's physical and emotional wellbeing. This was in agreement with a study conducted in Istanbul Turkey which found the importance of antenatal education in relation to pregnancy, childbirth, breastfeeding, motherhood, and infants' care (Turan & Say, 2003)

It has also been evident that early recognition of the danger signs in pregnancy and subsequently getting medical help can significantly affect maternal and newborn morbidity and mortality (Alam et al., 2005). Data also revealed that there were participants who didn't have adequate knowledge about the increase in weight during pregnancy could increase the chance of a child to be low birth weight. And so, these children are at high risk for physical and mental development.

## V. Conclusion

Provision of antenatal educational guidelines was beneficial in improving mother's knowledge regarding different aspects of antenatal period that could have a positive impact on their mother's and child's health.

## Recommendations

- A large probability sample is needed for generalizability of the study results.
- Provision of the educational guidelines of the antenatal care to the clinic to be distributed to all the women attending to the clinic is of great value which is prepared in simple Arabic language.

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