

## Pregnant Woman's Knowledge, Reaction to Danger Signs of Pregnancy and Utilization of Antenatal Services

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### Abstract

**Background:** Antenatal care is an important determinant of high maternal mortality rate and one of the basic components of maternal care on which the life of mothers and babies depend.

**Aim of The Study:** was to assess the woman's knowledge, reaction to danger signs of pregnancy and utilization of the antenatal services.

**Subject and Methods:** *Research Design:* A descriptive research design was used. *Sample:* a convenient sample of 200 pregnant women were included in this study. *Setting:* The study conducted at MCH centers in Shebien El kom city, Menoufiya Governorate, Egypt.

**Tools:** An interviewing questionnaire was to assess general characteristics of the sample, as well as women knowledge about warning signs of pregnancy and action taken to relieve these signs, it also assess women utilization of health services.

**Results:** The majority of the sample's age (36.5%) was ranged from 29-35 years, more than three quarters of the sample was utilized from antenatal services, the majority of sample (80.5%) was had unsatisfied knowledge regarding warning signs of pregnancy. More than three quarters of the sample (81.2%) react to danger signs of pregnancy by asking help medical help compared to (18.8%) who used home remedy. There was a statistical significant difference regarding woman reaction to danger signs ( $p= 0.01$ ). additionally There is a statistical significant difference regarding level of education, occupation and residence of sample and reaction to warning signs ( $p=0.03, 0.01 \&0.02$ ).

**Conclusion:** There was a statistical significant difference regarding Knowledge of warning signs during pregnancy and the women's level of education, occupation and residence The current study showed a statistical significant difference regarding woman reaction to danger signs.

**Recommendations:** Establishing program to teach women how to deal with danger signs of pregnancy. Future research need to consider the use of a qualitative approach to explore how woman feel about their danger signs. Increasing knowledge of obstetric danger signs is necessary to overcome cultural preferences for traditional treatments for pregnancy danger signs.

**Key words:** pregnancy, danger signs, antenatal services, knowledge, utilization

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## Introduction

Awareness of the danger signs of obstetric complications is the essential first step in accepting appropriate and timely referral to obstetric and newborn care<sup>(1)</sup>. World Health Organization (WHO) defines antenatal care as a dichotomous variable, having had one or more visits to a trained health care person during the pregnancy. It includes routine follow up directed to all pregnant women at primary care level from screening to intensive life support during period of pregnancy and up to delivery. The most common indicators of health and reproductive behavior include utilization rates of antenatal care, age when women give birth, pregnancy order and birth spacing<sup>(2)</sup>.

WHO estimates that about 300 million women in the developing countries suffer from short and long-term illnesses due to complications related to pregnancy and childbirth. About 529,000 mothers die each year from maternal causes, out of which 99% of deaths being from the developing world. As literatures indicates about 75% of maternal deaths are due to direct obstetric complications such as hemorrhage, sepsis, hypertensive disorders of pregnancy, obstructed and prolonged labor, and unsafe abortion. Moreover pregnancy related complications are the greatest killers of women of reproductive age in the developing countries. Many pregnant women may face the risk of sudden complications that could end in death or injury to mother or to her baby<sup>(3-8)</sup>. Additionally maternal mortality is unacceptably high. About 800 women die from pregnancy or childbirth related complications around the world every day. In 2013, 289 000 women died during and

following pregnancy and childbirth. Almost all of these deaths occurred in low resources settings and most could have been prevented<sup>(9)</sup> .

Maternal morbidity and mortality could be prevented significantly when women and their families recognize obstetric danger signs and promptly seek health care. The commonest danger signs during pregnancy include severe vaginal bleeding, swollen hands/face and blurred vision. Key danger signs during labor and childbirth include severe vaginal bleeding, prolonged labor, convulsions, and retained placenta. Danger signs during the postpartum period include severe bleeding following childbirth, loss of consciousness after childbirth, and fever. Raising awareness of pregnant women on the danger signs would improve early detection of problems and reduces the delay in deciding to seek obstetric care<sup>(10)</sup> .

One of the most important goal of antenatal care is the provision of adequate information which is essential for maintaining and improving pregnancy outcomes<sup>(11)</sup> . Moreover quality of antenatal care is an important determinant of pregnancy outcome and has been designated one of the four Pillars/support of Safe Motherhood, along with clean and safe delivery, essential obstetric care and family planning which could contribute to reduction of maternal mortality. Also poor antenatal care is the second most important preventable factor in maternal mortality<sup>(12-14)</sup> .

Increasing knowledge of pregnancy danger signs considered strategy which encourage the utilization of skilled care during pregnancy and the puerperium. Up till now many pregnant women and their families in developing country settings have limited understanding of pregnancy danger signs causing delays in reaching a facility with trained health care providers when complications occur<sup>(15-18)</sup>

The current Egyptian researches were poorly assessed women's knowledge and their action toward danger signs of pregnancy so the researcher want to perform comprehensive assessment of the pregnant woman knowledge about danger signs of pregnancy, their reaction to this danger signs and utilization of antenatal services provided in Menoufiya governorate as a rural area in Egypt.

### **Aim of the study:**

The aim of this study was to assess the woman's knowledge and reaction to danger signs of pregnancy and utilization of the antenatal services.

**Research Questions:**

1. What is the women's knowledge about the danger signs of pregnancy?
2. What is the woman reaction regarding antenatal danger sings?
3. Are women utilize from antenatal services?

**Subjects and Methods****Research Design:**

A cross sectional descriptive research design was used in this study

**Setting:**

The study was conducted in maternal and child health centers (MCH) and antenatal clinics in Shebien El kom , Menoufiya Governorate, Egypt.

**Sample:**

A convenient sample was used in this. About 200 pregnant women of different stages of pregnancy were recruited in the current study. The sample taken from MCH centers and antenatal clinics.

**Data Collection Tools:**

The tools used for data collection were designed by the researcher in simple Arabic language via a structured questionnaire derived from the literature it contained two parts as the following: interviewing questionnaire including; socio-demographic characteristics of the sample as; age, level of education, menstrual history, past and present obstetric history. Part two ;assessment sheet, which include utilization of antenatal service and restriction to services, women knowledge about warning and danger signs during pregnancy, reaction of women to this signs and their life saving action toward this signs.

**Validity and Reliability**

Validity refers to the degree to which an instrument measures what it is supposed to be measuring (Polit & Hungler, 1997) <sup>(19)</sup>. In this study, the following procedures were followed to ensure validity:

- The researcher conducted an extensive literature review and developed the questionnaire from previously used tools and reviewing pertinent review. The questionnaire was formulated and cross-checked by the expertise in the field of study and have experience in research process.
- The questionnaire was pre-tested to assess its feasibility and applicability. finally reviewed and corrections made, where necessary

**Pilot study:**

The questionnaire applied to 5% of the sample (10 pregnant women). pilot study was conducted to assess applicability clarity and simplicity of the tools and to estimate the time needed. Based on its results, the final versions of the tools were prepared. It also helped in planning the schedule for field work. the sample of the pilot study was not included in the main study sample.

**procedure:**

The data collected from the women who gave oral consent about sharing in the study and they informed that; participation in the study was voluntary and any data they give was confidential. The data collection take from February to April 2016. data collection was carried out two days/ week (Monday and Wednesday). The researcher explain to each woman the purpose of the study and fill the questionnaire which take about 10 minutes the woman asked about her personal data (age, education, occupation, past history, present history,.....etc) then she was asked about her knowledge of danger signs of pregnancy, they asked about their utilization to antenatal services, and their reaction and lifesaving action taken to handle the danger signs of pregnancy.

**Ethical Consideration**

Permission to conduct the study was obtained. Verbal consent was obtained from each participant. The researchers were offered adequate information about the study purposes and its significance. Participation was voluntary. Participants were assured that their responses

would be confidential and information that might reveal their identity would not be recorded, and only aggregated data would be communicated.

### Data Analysis:

Data were revised, coded, tabulated and analyzed in a PC computer SPSS software package version 20. The following statistical techniques were used; descriptive statistics in the form of frequencies and percentage. Quantitative variables were presented in the form of means and standard deviation, and tested by student t-test. Qualitative variables were compared using chi-square test . Statistical significance was considered at p- value <0.05.

### Results

**Table (1): Socio Demographic Characteristics Of The Studied Sample (n=200).**

Socio-Demographic characteristics	No.	%
<b>Age(years):</b>		
17- 20 years	11	5.5
21- 24 years	43	21.5
25-28 years	69	34.5
29-35 years	73	36.5
36-40 years	4	2.0
<b>Level of education:</b>		
Illiterate	3	1.5
Read and write	26	13.0
Secondary	87	43.5
University	84	42.0
<b>Occupation:</b>		
Housewife	87	43.5
Employee	113	56.5
<b>Residence:</b>		
Rural	82	41.0

Urban	118	59.0
<b>Total</b>	200	100

Table 1 demonstrates the socio demographic characteristics of the samples. The age of the sample was range from 17 to 40 years, the highly percent of the sample's age (36,5%) was between 29-35 years. Regarding to the sample education; the highly percent of sample (34.5%, 42%) was secondary level and university. More than half of the sample (56.5%) was employee and near two thirds of the sample (59%) was living in urban community.

**Table (2): Medical History Among The Studied Sample (n=200)**

Medical history	No.	%
<b>History of chronic diseases:</b>		
Positive	15	7.5
Negative	185	92.5
<b>Total</b>	200	100
<b>Positive history of chronic diseases:</b>		
Hypertension	6	40.0
Diabetes	5	33.3
Heart disease	4	26.7
<b>Total</b>	15	100
<b>Family history:</b>		
Positive	30	15.0
Negative	170	85.0
<b>Total</b>	200	100
<b>Positive family history :(n=30)</b>		
Hypertension	12	40.1
Diabetes	10	33.3
Epilepsy	4	13.3
Heart disease	4	13.3
<b>Total</b>	30	100

As shown in the table two (92.5%, 85%) of the sample have negative history regarding history of chronic diseases and family history. Also the sample who have positive history to chronic disease was complain from hypertension (40%).

**Table (3): Obstetric History Among The Studied Sample (n=200).**

Obstetric history	No.	%
<b>Gravidity:</b>		
*PG	9	4.5
G2	73	36.5
G3	49	24.5
G4	62	31
≥G5	7	3.5
<b>Parity:</b>		
P0	9	4.5
P1	73	36.5
P2	49	24.5
P3	62	31.0
P4	2	1.0
≥P5	5	2.5
<b>Previous dangerous signs of pregnancy:</b>		
Yes	9	4.5
No	191	95.5
<b>Name of danger signs for answering; yes :(n=9)</b>		
Vaginal spotting	2	22.2
Absence of fetal movement	3	33.4
Excessive fetal movement	2	22.2
Early uterine contraction	2	22.2

\*PG= primigravida

Table 3 represents the obstetric history among the studied sample; the majority of the sample (36.5%,) was in the second of pregnancy. A highly percent of the sample (95.5%) have no previous history of danger signs during pregnancy while (4.5%) have previous history of danger signs during pregnancy and most of this danger signs (33.4%) was Absence of fetal



movement followed by Vaginal spotting, excessive fetal movement and early uterine contraction (22.2% , 22.2% &22.2%).

**Table (4): Distribution Of Sample Regarding Utilization Of Antenatal Health Services (n=200)**

<b>Antenatal health services utilization</b>	<b>No.</b>	<b>%</b>
<b>Antenatal health services utilization:</b>		
Yes	168	84.0
No	32	16.0
<b>Total</b>	<b>200</b>	<b>100</b>
<b>Place of utilization (who answering yes): n=168</b>		
Private clinic	54	32.1
MCH	102	60.8
General hospital	12	7.1
<b>Total</b>	<b>168</b>	<b>100</b>

Table 4 shows that; the majority of the sample (84%) was utilized from antenatal health services and about sixty percent received this services from maternal and child centers (MCH).

**Table (5): Reasons For Poor Utilization Of Antenatal Health Services Among The Studied Sample Who Not Utilized From Antenatal services (N=32)**

<b>Reasons for poor utilization of health services:</b>	<b>No.</b>	<b>%</b>
Being busy	12	37.5
The services not sufficient	0	0.0
Being examined by male physicians	2	6.3
No privacy during examination	0	0.0
Husband discourse care	10	31.2
Inherited trust of midwife	0	0.0

Financial reasons.	8	25.0
<b>Total</b>	32	100

Regarding to reasons for poor utilization of antenatal health services among the pregnant woman who not utilized from antenatal services, table five shows that; more than one third of sample (37.5%) not utilized from antenatal services because they were busy followed by (31.2%) who their husbands were discourse the care.

**Table (6): Pregnant Women's Knowledge Regarding Warning Signs Of Pregnancy (N=200)**

Warning signs of pregnancy	No.	%
<b>Edema:</b>		
Yes	40	20.0
No	160	80.0
<b>Persistent vomiting:</b>		
Yes	36	18.0
No	164	82.0
<b>Persistent headache:</b>		
Yes	13	6.5
No	187	93.5
<b>Visual disturbance:</b>		
Yes	15	7.5
No	185	92.5
<b>Epigastric pain:</b>		
Yes	5	7.5
No	195	92.5
<b>Vaginal spotting:</b>		
Yes	200	100
No	0	0.0
<b>Absence of fetal movement:</b>		
Yes	198	99.0
No	2	1.0

<b>Excessive fetal movement:</b>		
Yes	182	91.0
No	18	9.0
<b>Offensive vaginal discharge:</b>		
Yes	43	21.5
No	157	78.5
<b>Escape of fluid from vagina:</b>		
Yes	200	100
No	0	0.0
<b>Early uterine contraction:</b>		
Yes	160	80.0
No	40	20.0
<b>Anuria:</b>		
Yes	2	1.0
No	198	99.0
<b>Dysuria:</b>		
Yes	0	0.0
No	200	100
<b>Fever and chills:</b>		
Yes	33	16.5
No	167	83.5
<b>Knowledge score: (total score=14)</b>		
Mean±SD	5.87±1.47	
Range	4.00–10.00	
<b>Knowledge</b>		
Satisfied (≥60 %)	39	19.5
Unsatisfied (<60 %)	161	80.5

**N.B:** For calculation of scores of knowledge: - Correct answer score =1 - Incorrect answer score=0 Satisfied (≥

60 %) = if score ≥ 9 Unsatisfied (< 60 %) = if score < 9

Table 6 represents pregnant women's knowledge regarding danger\warning signs of pregnancy, the table shows that; the majority of sample (80.5%) have unsatisfied knowledge regarding the danger signs. As shown in the table about 13 danger signs were assessed which named; edema, persistent vomiting, persistent headache, visual disturbance, epigastric pain, vaginal spotting, absence of fetal movement, excessive fetal movement, offensive vaginal discharge, escape of fluid from vagina, early uterine contraction, anuria, dysuria ,fever and chills. Almost majority of sample consider most of this signs not a danger signs during pregnancy as edema, persistent headache, visual disturbance, epigastric pain, offensive

vaginal discharge, anuria, dysuria, fever and chills, (80%, 82%, 93.5%, 92.5%, 78.5%, 99.0%, 100%, 83.5%) respectively.

**Table (7): Relation Between Sample's Knowledge and Their Sociodemographic Characteristics**

Socio-Demographic characteristics	Knowledge				$\chi^2$ test	P value
	Satisfied ( $\geq 60$ %) (n=39)		Unsatisfied (<60 %) (n=161)			
	No.	%	No.	%		
<b>Age(years):</b>					3.48	0.48 *NS
17- 20 years	2	5.1	9	5.6		
21- 24 years	12	30.8	31	19.3		
25-28 years	11	28.2	58	36.0		
29-35 years	14	35.9	59	36.6		
36-40 years	0	0.0	4	2.5		
<b>Level of education:</b>					8.02	0.04 *S
Illiterate	0	0.0	3	1.8		
Read and write	4	10.3	22	13.7		
Secondary	11	28.2	76	47.2		
University	24	61.5	60	37.3		
<b>Occupation:</b>					6.29	0.01 S
Housewife	10	25.6	77	47.8		
Employee	29	74.4	84	52.2		
<b>Residence:</b>					8.41	0.003 S
Rural	8	20.5	74	46.0		
Urban	31	79.5	87	54.0		

\*P value: NS= non-significant (P-value > 0.05), S = significant (P-value  $\leq$  0.05, HS= highly significant (P-value  $\leq$  0.001).

Table 7 display relation between knowledge of the participants regarding warning signs of pregnancy their sociodemographic characteristics. As shown there is a statistical significant difference regarding knowledge of warning signs during pregnancy and the women's level of

education, occupation and residence ( $p=0.04, 0.01$  &  $0.003$  ) respectively.

**Table (8): Women's Current Danger Signs and their Reaction**

Current complain and reaction:	No.	%
<b>Current complain:</b>		
Present (yes)	16	8.0
Absent (no)	184	92.0
<b>Total</b>	200	100
<b>Current complain: n=16</b>		
Edema	5	31.2
Persistent vomiting	4	25.0
Vaginal spotting	3	18.8
Absence of fetal movement	4	25.0
<b>Reaction to warning signs: n=16</b>		
Home remedy	3	18.8
Immediate asking help from a health center	13	81.2
<b>Source of home remedy related advice: n=3</b>		
Relatives	3	100

Table (8) shows women's current complain and reaction to warning signs. As shown the majority of sample(92%) have no complain in their current pregnancy, and who have complain only eight percent from those about (81.2%) react to this complain by asking immediate help from a health center. And about (18.8%) react to their complain by use of home remedy and their source of knowledge was their relatives.

**Table (9): Distribution of Women's regarding their action to danger signs of pregnancy (n=16)**

Complains	Reaction to warning signs				$\chi^2$ test	P value
	Home remedy		Immediate asking help of health center			
	(n=3)		(n=13)			
	No.	%	No.	%		

Edema	0	0.0	5	38.5	11.07	0.01 S
Persistent vomiting	3	92.3	1	7.7		
Vaginal spotting	0	0.0	3	23.0		
Absence of fetal movement	0	0.0	4	30.8		

\* $\chi^2$  = Chi square test S = significant (P<0.05)

Table 9 shows statistical significant difference regarding woman reaction to danger signs (p= 0.01). the women ask for help for the following danger signs of pregnancy ; edema, persistence vomiting, vaginal spotting and absence of fetal movement which were; (38.5%, 7.7%, 23.0% and 30.8%) respectively.

**Table (10): Relation Between Reaction To Warning Signs Of Pregnancy Among The Studied Sample And Their Socio- Demographic Characteristics**

Socio-Demographic characteristics	Reaction to warning signs				$\chi^2$ test	P value
	Home remedy (n=3)		Immediate asking help from health center (n=13)			
	No.	%	No.	%		
<b>Age(years):</b>					1.70	0.64 NS
17- 20 years	0	0.0	1	7.7		
21- 24 years	0	0.0	4	30.8		
25-28 years	2	66.7	5	38.5		
29-35 years	1	33.3	3	23.1		
36-40 years	0	0.0	0	0.0		
<b>Level of education:</b>					8.34	0.03 S
Illiterate	2	66.7	1	7.7		
Read and write	1	33.3	1	7.7		
Secondary	0	0.0	5	38.5		
University	0	0.0	6	46.1		
<b>Occupation:</b>					6.15 *	0.01
Housewife	3	100	3	23.1		

Employee	0	0.0	10	76.9		S
<b>Residence:</b>						
Rural	2	66.7	1	7.7	5.56*	0.02
Urban	1	33.3	12	92.3		

\* Fisher's exact test

Table 10 displays relation between reaction to warning signs of pregnancy among the studied sample and their socio-demographic characteristics. There is a statistical significant difference regarding level of education, occupation and residence and reaction to warning signs ( $p=0.03, 0.01$  &  $0.02$ ) respectively.

## Discussion

The researcher conducted a quantitative, descriptive cross-sectional study to investigate the respondents' utilization of antenatal services, awareness of danger signs of pregnancy and their reaction to it. The age of sample in current study was ranged from 17 to 40 years, majority of sample was secondary school and more than half of the sample was housewives. The most previous danger sign was absence of fetal movement. In the same line of this study was <sup>(20)</sup> who studied awareness of danger signs of obstetric complications among pregnant women attending antenatal care in East Wollega, Ethiopia found that; the age was ranged from 17 to 35+ and 50% of women were housewife.

Furthermore; <sup>(2)</sup> who studied Factors affecting utilization of Antenatal care among reproductive age group women in an urban squatter settlement of Karachi, estimated that; the age of sample was 15-49 years.

The minority of the sample had positive history of danger signs and more than one third of this complication was absence of fetal movement followed by vaginal bleeding, excessive fetal movement and early uterine contraction. Aborigo et al 2014 estimated in his study which carried out in Ghana that; Pain was listed as an most important danger sign, occurring in the abdomen, waist, chest, pelvis, or elsewhere in the body<sup>(21)</sup>. Furthermore<sup>(22)</sup> who studied; knowledge of danger signs during pregnancy and subsequent health seeking actions among women in Kinondoni municipality, Tanzania; mentioned that danger signs

were vaginal bleeding (81.2%), swelling of fingers, face and legs (46.3%) and severe headache with blurred vision (43.6%).

The present study showed that; more than three quarter of the sample was utilized from antenatal services and received this services from MCH centers in the same line of this study was<sup>(20)</sup> who estimated that; the majority of sample utilize from antenatal and health care services and (42.97%) booked between 5<sup>th</sup> and 6<sup>th</sup> months of pregnancy. Also<sup>(23)</sup> who studied; Use of antenatal services and delivery care among women in rural western Kenya: a community based survey, found that; 90% visited the antenatal clinic. In the opposite of this finding<sup>(24)</sup> found that the majority of women (88%) (CI = 81.8-94.2%) in the study area did not utilize from antenatal care.

The current study demonstrates the reasons of poor utilization of antenatal services were being busy, husband discourse care and financial reasons. In congruence with this study was<sup>(25)</sup> who demonstrated that; the cause of poor utilization of antenatal services were lack of health insurance, high parity and single status. Furthermore husband approval, distance and being busy were the causes of poor antenatal utilization in the study carried out in Ethiopia by<sup>(26)</sup>. Significant proportion of mothers were not knowledgeable about the danger signs of pregnancy and this lead to delay of mothers in deciding to seek care<sup>(10)</sup>. Moreover<sup>(21)</sup> who studied, obstetric danger signs and factors affecting health seeking behaviour among the Kassena-Nankani of Northern Ghana: A Qualitative Study showed that poor utilization was attributed to either women's uncertainty about the severity of symptoms or poor understanding of health messages. First-time mothers and illiterate women were singled out for poor utilization.

The majority of sample in the current study was had unsatisfied knowledge regarding danger signs during pregnancy ( $5.87 \pm 1.47$ ) and there was a statistical significant difference regarding Knowledge women regarding warning signs during pregnancy and the women's level of education, occupation and residence. The sample was asked about 13 danger signs which named; edema, Persistent vomiting, Persistent headache, Visual disturbance, epigastric pain, Vaginal spotting, absence of fetal movement, excessive fetal movement, offensive vaginal discharge, escape of fluid from vagina, early uterine contraction, anuria, dysuria, fever and chills. The majority of sample consider most of signs not a danger signs during pregnancy as Edema, Persistent headache, Visual disturbance, Epigastric pain, Offensive vaginal discharge, Anuria, Dysuria, Fever and chills. In congruence of this study was<sup>(27)</sup> who studied Knowledge of obstetric danger signs and birth preparedness practices among women in rural Uganda found that; the majority of sample had low levels of



knowledge about obstetric danger signs. Also in the same line of this finding was<sup>(28)</sup> who reported significant proportion of mothers were not knowledgeable about the danger signs of pregnancy, severe vaginal bleeding was the most common mentioned danger signs of pregnancy. Other finding revealed by<sup>(21)</sup> who reported that; the majority of community members were able to list a wide range of obstetric danger signs including vaginal bleeding, vomiting, headaches, dizziness, edema of the legs, abdominal pains, waist pains, fever, and prolonged labour. A few respondents also mentioned the absence of fetal movement, loss of appetite, body weakness, looking pale, broken water, and difficulty in breathing. The sample was reported that women with previous births and antenatal history are more likely to be aware of obstetric danger signs than their counterparts.

The current study revealed that, the most occurrence danger signs of pregnancy as reported by the sample was edema followed by persistent vomiting and absence of fetal movement. In contrast of this finding; excessive bleeding, stomach aches, waist pains, vomiting and fever were reported as a most danger signs in a qualitative study of<sup>(21)</sup> which carried out in Ghana.

Regarding to woman reaction to danger signs the current study showed statistical significant difference, the highly percent of the sample react to this complain by asking immediate help of health center and less than one quarter of the sample react to complain by use of home remedy and their source of knowledge was their relatives. This was consistent with the study conducted in India, which showed that women with danger signs during pregnancy were more likely to seek medical care<sup>(29)</sup>. In the opposite of this finding was<sup>(21)</sup> who reported that the majority of sample prefer traditional remedies as herbs and cultural beliefs for treatments of pregnancy danger signs than the use of allopathic medicine or they consult traditional healers. Rural women avoid the hospital because they fear discrimination<sup>(30)</sup>.

There is a statistical significant relation regarding level of education, occupation and residence and reaction to warning signs ( $p=0.03, 0.01$  &  $0.02$ ). there was no a statistical significant difference regarding the age of the sample and reaction to warning signs. This in congruence with<sup>(31)</sup> and<sup>(28)</sup> who stated that women educational level had positive relation with the woman reaction to danger signs. From other face<sup>(32)</sup> found less educated women affect the access of antenatal care.

## Conclusion

The majority of the sample age (36.5%) was ranged from 29-35 years, more than three quarters of the sample was utilized from antenatal services, the majority of sample (80.5%) was had unsatisfied knowledge regarding warning signs of pregnancy. The cause of poor antenatal utilization was being busy (37.5%). More than three quarters of the sample (81.2%) asking help from a health center compared to (18.8%) used home remedy. There is a statistical significant difference regarding knowledge of warning signs during pregnancy and the women's level of education, occupation and residence ( $p=0.04, 0.01$  &  $0.003$ ) respectively. The current study showed a statistical significant difference regarding woman reaction to danger signs ( $p= 0.01$ ). Additionally there was a statistical significant difference regarding level of education, occupation and residence and reaction to warning signs ( $p=0.03, 0.01$  &  $0.02$ ). there was no a statistical significant difference regarding the age of the sample and reaction to warning signs. There was a statistical significant difference regarding knowledge of warning signs during pregnancy and the women's level of education, occupation and residence. The current study showed a statistical significant difference regarding woman reaction to danger signs. There was a statistical significant difference regarding level of education, occupation and residence and reaction to warning signs.

## Recommendations

- Establishing program to teach women how to deal with danger signs of pregnancy.
- Future research need to consider the use of a qualitative approach to explore how woman feel about their danger signs.
- Increasing knowledge of obstetric danger signs is necessary to overcome cultural preferences for traditional treatments for pregnancy danger signs.
- The quality of ANC care particularly health education should be evaluated.
- Further studies are recommended to address the knowledge gap and to understand why knowledge was not positively translated into actions regarding experiencing danger signs during pregnancy.
- Community based projects should be initiated to provide childbearing health education.

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