



(RESEARCH ARTICLE)



## Knowledge of pregnant women on danger signs related to pregnancy and child birth

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International Journal of Biological and Pharmaceutical Sciences Archive, 2021, 01(02), 116–122

Publication history: Received on 16 March 2021; revised on 18 April 2021; accepted on 20 April 2021

Article DOI: <https://doi.org/10.30574/ijbpsa.2021.1.2.0033>

### Abstract

Adequate knowledge regarding danger signs during pregnancy, child birth and postpartum period plays a vital role in safeguarding mothers as well as child health. This cross sectional study was conducted by purposively selected 262 pregnant women in two hospitals in Bogura district from 1<sup>st</sup> January to 31<sup>st</sup> December, 2018 with the aim to assess the knowledge of pregnant women on danger signs related to pregnancy and child birth. Data were collected with a semi-structured questionnaire through face-to-face interview. The mean age of the respondent's was  $SD = 23.37 \pm 4.47$  years. Most of the respondents 61.4%, (n=161) knew about danger signs during pregnancy from health workers and 65.6 % (n=172) had poor knowledge regarding danger signs during pregnancy whereas 34.4% (n=90) respondents had good knowledge. Most of the respondents 61.5%, (n=161) understood danger signs during child birth and 68.7 % (n=180) had poor knowledge regarding danger signs during child birth. Among the respondents 40.5% (n=106) understood danger signs after child birth and only 12.2% (n=32) respondents had good knowledge regarding danger signs after child birth. Significant association was found between age of the respondents and level of knowledge regarding danger signs during pregnancy ( $p=0.0001$ ). Health education on danger signs related to pregnancy and child birth should be imparted to all pregnant women to increase their knowledge regarding this issue.

**Keywords:** Knowledge of women about obstetric danger signs; Knowledgeable on key danger signs of pregnancy; Knowledgeable on key danger signs of labor/childbirth; Knowledgeable on key danger signs of post-partum; Health seeking action.

### 1. Introduction

Pregnancy is a normal process that results in a series of both physiological and psychological changes in expectant mothers. However, normal pregnancy may be accompanied by some problems and complications which are potentially life threatening to the mother and / or the fetus [1]

While most pregnancies and births are uneventful, all pregnancies are at risk. Around 15% of all pregnant women will develop a potentially life-threatening complication that calls for skilled care, and some will require a major obstetrical intervention to survive [2]. Women worldwide get pregnant and about 10% of them will potentially develop complications that will demand experienced/skilled obstetric care to avert death or life threatening problems. It has also been attested that every day about 14,000 women lose their lives as a result of complications from pregnancy and childbirth [3].

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Danger signs of pregnancies are a warning signs that women encounter during pregnancy, child birth and postpartum [4]. The danger signs are not the literal obstetric complications, merely symptoms that are well named by nonclinical personnel. The most frequently occurring danger signs during pregnancy include severe vaginal bleeding, swollen hands/face and blurred vision. The fundamental danger signs during labor and childbirth include severe vaginal bleeding, pro-longed labor, convulsions, and retained placenta. Danger signs during the postpartum period include severe bleeding following childbirth, loss of consciousness after childbirth, and fever [3].

The most common danger signs during pregnancy that can increase the risk of maternal deaths are: vaginal bleeding, convulsions/fits, high fever, abdominal pain, severe headaches, blurred vision, absence of fetal movements, gush of fluid from vagina, foul smelling vaginal discharge [5].

Complications during pregnancy, childbirth, and the postnatal period are the leading causes of death and disability among women of reproductive age worldwide. Direct causes such as hypertensive disorders, hemorrhage, and obstructive labor continue to be the leading causes of maternal mortality [6].

In many developing nations, maternal mortality yet remains a significant burden and therefore change towards Millennium Development Goal (MDG) five has been particularly disregarded. In developing countries, maternal mortality ratio (MMR) is 15 times higher compared to developed countries [3].

In Bangladesh various interventions are imparted to address the target of MDG 5. One of the key demand side interventions is to impart BCC using pictorial cards to enhance their knowledge about 5 pregnancy danger signs to improve use of maternity care services. However, evidence is rare whether focused BCC improves knowledge, and improved knowledge enhances use of services [7].

All pregnant women, their partners and families should be aware of the signs of complications and emergencies and know when to seek care from the skilled attendant. The identification of these danger signs and its relation with complications during pregnancy would increase the capacity of women, their partners and families to seek for timely health care, following the appropriate steps to insure a safe birth and post-partum.

Knowledge of danger signs of obstetric complications is the first step in the appropriate and timely referral to the basic and essential obstetric care [8]. The present study will assess the knowledge of pregnant women regarding danger sign during pregnancy and child birth.

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## 2. Material and methods

A cross sectional study was conducted for a period of 12 months from 1<sup>st</sup> January to 31<sup>st</sup> December, 2018. The study was conducted in two public health facilities. These were Shaheed Ziaur Rahman Medical College Hospital, Bogura and it is a tertiary level hospital with 500 bed facilities. Mother & Child Welfare Centre (MCWC), Bogura Sadar is a public health facility with 20 bed facilities. These health facilities provide several maternal health services such as ANC, normal delivery, cesarean section, other assisted delivery, PNC etc. Women from both urban and rural area visited these health facilities. The study population was pregnant women who visited the out-patient department (OPD) of selected Centre and Hospital. Inclusion criteria were pregnant women more than 18 years old and pregnant women having at least 3 months pregnancy. Purposive sampling technique was used to select 262 samples. Face-to-face interview was conducted by a semi-structured questionnaire. The statistical analysis was conducted using SPSS (statistical package for social science) version 20 statistical software.

### 2.1. Purpose of the study

To assess the knowledge of pregnant women on danger signs related to pregnancy and child birth.

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## 3. Results and discussion

This cross-sectional study was carried out among 262 respondents to assess the level of knowledge on danger signs related to pregnancy and child birth. This chapter presents findings of those data. The analyzed data were presented under followings:

Table 1 shows the most frequent age group of the respondents was 19-23 years which was 160 (61.1%) and followed by the age group 24-28 years which was 64 (24.4%), age group 29-33 years which was 26 (9.9%) and remaining 12(4.6%) was >33 years age group. The mean age of the respondent's  $23.37 \pm 4.47$  years ranged from 19 to 38 years.

Among the respondents, 6.9% (n=18) were illiterate, 22.9% (n=60) had educational status up to primary, 50.4% (n=132) respondents had educational status up to secondary and 19.8% (n=52) respondents had educational status up to higher secondary level and above. Among the respondents 58.4% (n=153) were from rural areas and rests 41.6 % (n=109) were from urban areas. Most of the respondents 98.9 % (n=259) were home makers and 1.1% (n=3) were service holders. The mean monthly family income was 13832.06±13894.05 taka. Among the respondents 58.8% (n=154) had monthly family income up to 10000 taka, 28.2% (n=74) had monthly family income from 10001-20000 taka and 13.0% (n=34) had monthly family income >20000 taka.

**Table 1** Socio-demographic characteristics of the respondents (n=262).

Age (in years)	Frequency (f)	Percent
19-23	160	61.1
24-28	64	24.4
29-33	26	9.9
>33	12	4.6
Mean ±SD = 23.37± 4.47		
Educational status of the respondents		
Illiterate	18	6.9
Up to primary	60	22.9
Up to secondary	132	50.4
Higher secondary and above	52	19.8
Residence of the respondents		
Rural	153	58.4
Urban	109	41.6
Occupational status of the respondents		
Home maker	259	98.9
Service holder	3	1.1
Monthly family income (in taka)		
Up to 10000	154	58.8
10001-20000	74	28.2
>20000	34	13.0
Total	262	100.0
Mean ±SD13832.06±13894.05		

Table 2 shows that majority of the respondents 55.0%, (n=144) reached in second trimester whereas 45.0% (n=118) respondents reached in third trimester. Half of the respondents 50.0% (n=131) were pregnant for once whereas 32.8% (n=86) were pregnant for twice and 14.9% (n=39) were pregnant for thrice. Majority of the respondents 64.9% (n=74) gave child birth for one whereas 31.6% (n=36) gave child birth for twice and 3.5% (n=4) gave child birth for thrice. Quarter part of the respondents 24.4 % (n=32) had history of risky pregnancy whereas 75.6% (n=99) did not have any history of risky pregnancy. One third of the respondents 31.3% (n=10) had history of prolong labour whereas others had history of water breakage and labour does not induced within 6 hours 28.1% (n=9), convulsion 12.5% (n=4), heavy bleeding from vagina 12.5% (n=4), still birth 9.4% (n=3) and placenta not expelled within one hour after birth 6.3% (n=2). Majority of the respondents 61.4%, (n=161) knew about danger signs during pregnancy from health workers whereas 25.9% (n=68) knew about danger signs during pregnancy from family members and 12.7 % ( 33) knew about danger signs during pregnancy from TV/ Radio.

**Table 2** Distribution of the respondents by pregnancy related information (n=262).

Duration of pregnancy	Frequency (f)	Percent
Second trimester	144	55.0
Third trimester	118	45.0
Number of pregnancy		
One	131	50.0
Two	86	32.8
Three	39	14.9
Four	6	2.3
Number of giving child birth		
One	74	64.9
Two	36	31.6
Three	4	3.5
History of risky pregnancy		
Yes	32	24.4
No	99	75.6
Type of danger sign faced during pregnancy		
Prolong labour (> 12 hours)	10	31.3
Water breaks and labour does not induced within 6 hours	9	28.1
Convulsion	4	12.5
Heavy bleeding from vagina	4	12.5
Still birth	3	9.4
Placenta not expelled within one hour after birth	2	6.3
Source of knowledge regarding danger signs during pregnancy		
Health workers	161	61.4
Family members	68	25.9
TV/ Radio	33	12.7
Total	262	100.0

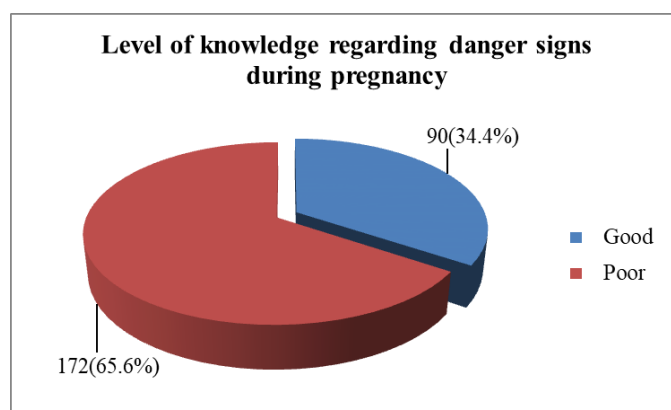
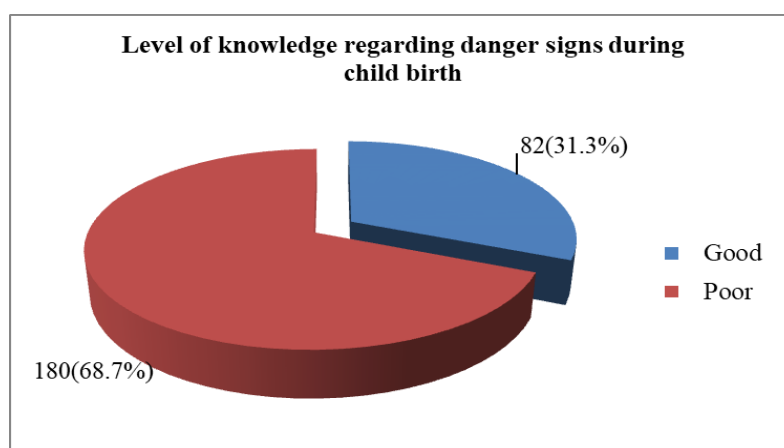
**Figure 1** Distribution of the respondent by level of knowledge regarding danger signs during pregnancy (n=262)

Figure 1 shows that majority of the respondents 65.6 % (n=172) had poor knowledge regarding danger signs during pregnancy whereas 34.4% (n=90) respondents had good knowledge regarding danger signs during pregnancy.

Table 3 shows that majority of the respondents 61.5%, (n=161) understood danger signs during child birth whereas 38.5% (n=101) respondents did not understand danger signs during child birth. From the total respondents, 54.0 % (n=87) knew that water breaks and labour does not induced within 6 hours was a danger signs during child birth. Others knew that heavy bleeding from vagina 32.9% (n=53), prolong labour (> 12 hours) 27.3% (n=44), convulsion 13.0 % (n=21), Placenta not expelled within one hour after birth 18.6% (n=30), high fever 5.6% (n=9), vaginal tearing 5.0% (n=8), Green /brown water coming from vagina 0.6% (n=1) were danger signs during child birth.

**Table 3** Distribution of respondents by knowledge about danger signs during child birth (n=262).

Danger signs during child birth	Frequency (f)	Percent
Known	161	61.5
Not known	101	38.5
Knowledge regarding specific danger signs during child birth		
Water breaks and labour does not induced within 6 hours	87	54.0
Heavy bleeding from vagina	53	32.9
Prolong labour (> 12 hours)	44	27.3
Placenta not expelled within one hour after birth	30	18.6
Convulsion	21	13.0
High fever	9	5.6
Vaginal tearing	8	5.0
Green /brown water coming from vagina	1	0.6
Total	161	100.0



**Figure 2** Level of knowledge regarding danger signs during child birth (n=262)

Figure 2 shows that majority of the respondents 68.7 % (n=180) had poor knowledge regarding danger signs during child birth whereas 31.3% (n=82) respondents had good knowledge regarding danger signs during child birth.

Table 4 shows that among the respondents 40.5% (n=106) understood danger signs after child birth whereas 59.5% (n=156) respondents did not understand danger signs after child birth. Majority of the respondents 71.7% (n=76) knew that severe bleeding from vagina was a danger signs after child birth. Others knew that high fever 39.6%, (n=42), foul smelling vaginal discharge 10.4% (n=11), hot, swollen and painful breast 5.7% (n=6), painful urination 2.8% (n=3) were danger signs after child birth.

**Table 4** Distribution of respondents by knowledge about danger signs after child birth (n=262).

Danger signs after child birth	Frequency (f)	Percent
Known	106	40.5
Not known	156	59.5
Knowledge regarding specific danger signs after child birth		
Severe bleeding from vagina	76	71.7
High fever	42	39.6
Foul smelling vaginal discharge	11	10.4
Hot, swollen and painful breast	6	5.7
Painful urination	3	2.8
Total	106	100.0

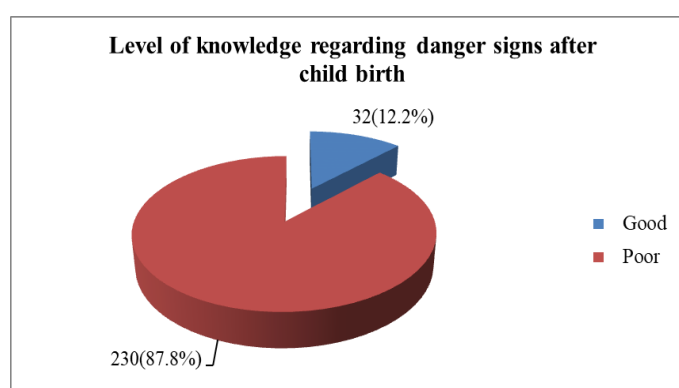
**Figure 3** Distribution of respondents by level of knowledge regarding danger signs after child birth (n=262)

Figure 3 shows that most of the respondents 87.8% (n=230) had poor knowledge regarding danger signs after child birth whereas 12.2% (n=32) respondents had good knowledge regarding danger signs after child birth.

**Table 5** Association between age of the respondents and level of knowledge regarding danger signs during pregnancy.

Socio-demographic status	Level of knowledge regarding danger signs during pregnancy		Test statistics
	Poor n (%)	Good n(%)	
Age (in years)			
19-23	119(69.2)	41(45.6)	$\chi^2=19.855$ df=3 p=0.0001
24-28	31(18.0)	33(36.7)	
29-33	12(7.0)	14(15.6)	
>33	10(5.8)	2(2.2)	

Significant association was found between age of the respondents and level of knowledge regarding danger signs during pregnancy (p=0.0001).

#### 4. Conclusion

Complications during pregnancy, child birth and after child birth are the leading causes of death and disability among women of reproductive age worldwide. Adequate knowledge regarding danger signs related to pregnancy and child birth enable women to recognize the problem and seek prompt care resulting in early detection and prompt treatment.

A cross sectional study was performed among 262 pregnant women to assess the knowledge on danger signs related to pregnancy and child birth. Quarter part of the respondents had history of risky pregnancy. Near about one third of the respondents had good knowledge regarding danger signs during pregnancy and during child birth while near and about one tenth had good knowledge regarding danger signs after child birth. Age of the respondents was significantly associated with knowledge on danger signs related to pregnancy and after child birth. Knowledge of danger signs during pregnancy, childbirth, and postpartum period is crucial for safe motherhood. Health education on danger signs related to pregnancy and child birth should be imparted to all pregnant women to increase their knowledge regarding this issue.

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## Compliance with ethical standards

### *Acknowledgments*

At first, I would like to praise the Almighty God for giving me the strength, opportunity, ability and potency to carry out this thesis within time. With great pleasure, I would like to express my profound gratitude to the Honorable Professor Dr. Baizid Khoorshid Riaz, Director, NIPSOM and all the faculty members of thesis proposal acceptance board for their kind and generous approval of my proposal. I feel utmost proud to express my sincere gratitude and profound regards to my respected teacher and supervisor Dr. Rowshan Ara, Associate Professor, Head of the Department of Population Dynamics, NIPSOM, Mohakhali, Dhaka for her skilled supervision, invaluable supports, valuable suggestions and sustained encouragement throughout the course of research work and thesis writing.

### *Disclosure of conflict of interest*

None to declare.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

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