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RESEARCH ARTICLE

AWARENESS AND ATTITUDE REGARDING BIRTH PREPAREDNESS AND COMPLICATION READINESS AMONG PREGNANT WOMEN

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Abstract

This study examines the different aspects of awareness and attitude regarding birth preparedness and complication readiness among the pregnant women attending PHCs of Kathmandu. A descriptive cross-sectional research design was used for the study. The total sample of 115 respondents were used by using non–probability purposive sampling technique. Semi-structured interview schedule and Likert's scale tool was used for collection of information. Data were analyzed by using IBM SPSS Version 20.0 and Descriptive statistics, Chi-square and Pearson's correlation coefficient (r) test was applied.The study revealed that, the mean age of pregnant women was 26.22 year and 80% of respondents were employed. More than half of the respondents were aware about the needs of the BP/CR. Ninety three percent of the respondents were aware by radio. Cent percent of the respondents believed on necessity of arrangement of transportation to go health facility, arrangement of money, identify the health facility for childbirth and identifying skill birth attendant respectively. More than three quarter (83.5%) of respondents have the good level of awareness and 68% of the respondents have the positive attitude level of regarding BP/CR. There was significant association between level of awareness with age (p=0.006) and religion (p=0.047), positive level of attitude and level of education (p=0.056), religion (p=0.031) and employment status (p=0.025). There was positive correlation (r=0.186) between awareness and attitude regarding BP/CR.

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Introduction:-

Every pregnant woman is at risk of pregnancy complication which is unpredictable and can lead to morbidity or mortality of herself or her baby. Hence, the concept of birth preparedness and complication readiness in which the family and community should have an advanced planning and preparation to ensure safety and well-being of the women and newborn throughout pregnancy, delivery and after delivery. Good plans and preparation will increase utilization of skill care and delays in accessing care in care of pregnancy and delivery complication {Johns Hopkins Program for International Education in Gynecology and Obstetrics, (JHPIEGO, 2004) 2004)}.

In spite of important achievement of the millennium development goals (MDGs), maternal and neonatal mortality continue to figure as major public health problems in developing countries. Improvements in maternal health and

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reductions in maternal mortality have been slower than anticipated and–despite isolated successes–remain far from the MDGs5 target of a 75% reduction in the maternal mortality ratio (MMR) from 1990 to 2015.Moreover, over the period 2000–2010 decreases in mortality have been more rapid in the age group 1–59 months, such that the neonatal fraction of deaths has increased from 38.2% to 40.3%. To achieve MDGs 5, the global community will need to focus attention and resources on effective strategies to reduce maternal deaths, particularly in poor and underserved communities. (Ministry of Health and Population, (MoHP) 2015).

In order to fight against the global maternal morbidity, in 2015-2030, as sustainable development goal 3 According to SDG-3 targets for Nepal 2030 are to reduce maternal mortality ratio (MMR) to less than 70 per 1,00,000 live births (MoHP, 2015). About 2,89,000 women died worldwide in 2003 due to complication during pregnancy and childbirth. Less than 1%of maternal deaths occur in high–income countries. The maternal mortality ratio in developing countries is 230 per 1,00,000birth versus 16 per 1,00,000 in developed countries. Of the 800 women who die every day, 500 in sub Saharan Africa,190 in southern Asia and 6 in high–income countries. Most of these deaths can be prevented through skilled care at childbirth and access to emergency obstetric care {World Health Organization, (WHO, 2014)}.

In Nepal, BP/CR messages were initiated in 2002, along with education and communication materials for safe motherhood, as part of the government initiative called 'SUMATA'. This term was coined using three initial Nepali letters to indicate three messages: (i) to care for women during pregnancy, (ii) to share their work and (iii) to prepare for birth soon.

These messages targeted family members because pregnant women often continue to work until delivery, lacking preparation, care and support from the family. Messages were propagated into the community via a variety of sources such as radio and television, print materials and street theatre performances. After initial success to raise awareness on obstetric knowledge and danger signs, BP/CR was launched in a number of districts in partnership with non-governmental organizations. Various cadres of health personnel, both facility-based health workers who are the government employees and receive regular salary (maternal and child health workers, auxiliary nurses and midwives), as well as community-based volunteers (female community health volunteers and traditional birth attendants), were trained in counseling techniques and use of BP/CR tools (flipcharts and key chains) to disseminate danger signs and preparation activities.

In a remote region of Nepal, the Birth Preparedness Package (BPP) covered four area of birth planning. Antenatal Care (ANC), care of mother and newborn, danger signs and financial and transport preparations. The package included a flip chart used to systematically work through these areas with women. In addition, pregnant women were provided with a key chain made up of laminated cards containing similar messages and illustrations for use by both literate and illiterate women. There was improvement in knowledge and newborn care practices but no significant change in the use of EM OC, suggesting that other barriers also need to be addressed (McPherson, 2006). Since the launching of the Nepal safe motherhood literate in 1993, Nepal Government has developed the Birth Preparedness Program (BPP) is a tool or package known as "Jeven Suraksha" to assist the women their families and communities to plan for normal pregnancies and deliveries and for emergencies if they occur and to reach women to appropriate services.

The WHO and Ghana Health Service (GHS) now recommends that every pregnant woman should receive focused antenatal care in which birth preparedness and complication readiness (BPCR) is a key component {WHO, (2002), as cited in Agbodohu, 2013}.In contrast, most of the empirical studies confirmed that maternal and neonatal deaths are high around the world especially in the developing countries. Only the 16.5% of the pregnant women were prepared for birth and its complications taking into account place of delivery identification, means of transportation, skilled attendant identification and saving money. However, preparation for birth and its complication was higher among educated mothers (Kaso & Addisse, 2014).

Although Nepal has made commendable progress in a number of health indicators, a global estimation in 2001 indicated that maternal mortality ratio in Nepal was highest (170 per 100,000 live birth) among the South Asian Countries (WHO, 2015). Not only in Nepal, high levels of perinatal, neonatal and maternal mortality remain major public health challenges in the world. About one third of neonatal deaths occur on the first day of life and the majority of maternal deaths occur during labour, delivery and within 24 hours postpartum (Ronsmans &Yinger, 2006, as cited in Agbodohu, 2013). Thaddeus and Maine (1994) argued that apart from medical causes, there are

numerous interrelated socio-cultural factors which delay care-seeking and contribute to these deaths. Care seeking is delayed because of the delay in the delay in (i) identifying the complication, (ii) deciding to seek care, (iii) identifying and reaching a health facility and (iv)receiving adequate and appropriate treatment.

Birth prepared and complication readiness is ‘strategy which promotes timely use of skilled maternal and neonatal care specially during child birth, based on theory that preparing for child birth and bearing ready for any complication reduces delay in obtaining this care (JHPIEGO, 2004).

In the light of above discussion, it is confirmed that, every pregnancy is a joyful moment for all mothers who dream of a safe pregnancy and a healthy baby. However, every pregnant woman faces the risk of sudden, unpredictable complications that could end in death or injury to herself or to her infant. Birth preparedness and complication readiness (BPACR) is a strategy that encourages pregnant women, their families and communities to effectively plan for births and deal with emergencies, if they occur. It is a key component of globally accepted safe motherhood programs. Thus, it is important to examine how far the Nepali pregnant women have the knowledge regarding birth preparedness and complication readiness plan in the context of Nepal. Nepal has the high Est maternal mortality ratio among the countries in the South East Asian Region. Reduction in the maternal mortality ratio from the current 281/1,00,000live births to 134/1,00,000 by 2017.Reduction in the neonatal mortality ratio from the current33/1,000 to 15/1,000 by 2017(MoHP, 2002). The study of BPCR is relevant as maternal mortality became an issue of global burden. It became 170 per 1, 00,000 livebirth globally (WHO, 2014).

Birth-preparedness and complication readiness (BP/CR), developed to promote timely utilization of skilled maternal and neonatal care, refers to a process of planning for normal birth and anticipating actions needed in case of emergency. BP/CR planning often includes identifying place of delivery, identifying mode of transportation to place of delivery, making arrangements for blood donors, and saving money for the delivery. The concept of BP/CR which is one of the key components of Focused Antenatal Care (FANC) encourages sharing the burden of childbirth between mothers, their families, and the community at large. It is a pragmatic approach designed to overcome the three delays causing most maternal deaths worldwide. These delays are: delay in deciding to seek care, delay in getting to health facilities, and delay in obtaining care at the health facility.

In spite of important achievement of the millennium development goals (MDGs), maternal and neonatal mortality continue to figure as major public health problems in developing countries. Improvements in maternal health and reductions in maternal mortality ratio have been slower than anticipated and – despite isolated successes – remain far from the MDGs5 target of a 75% reduction in the maternal mortality ratio (MMR) from 1990 to 2015.Moreover, over the period 2000–2010 decreases in mortality have been more rapid in the age group 1–59 months, such that the neonatal fraction of deaths has increased from 38.2% to 40.3%. To achieve MDGs 5, the global community will need to focus attention and resources on effective strategies to reduce maternal deaths, particularly in poor and underserved communities (MoHP, 2015). All these discussions mainly raised the two major issues. Firstly, what are the present level of awareness regarding birth preparedness and complication readiness among pregnant women? Secondly, what are the attitude regarding birth preparedness and complication readiness among pregnant women?
Therefore, this study aims to find out the different aspects of awareness and attitude regarding birth preparedness and complication readiness among the pregnant women. The result reveals that a higher number of respondents had good awareness and positive attitude towards the BP/CR.

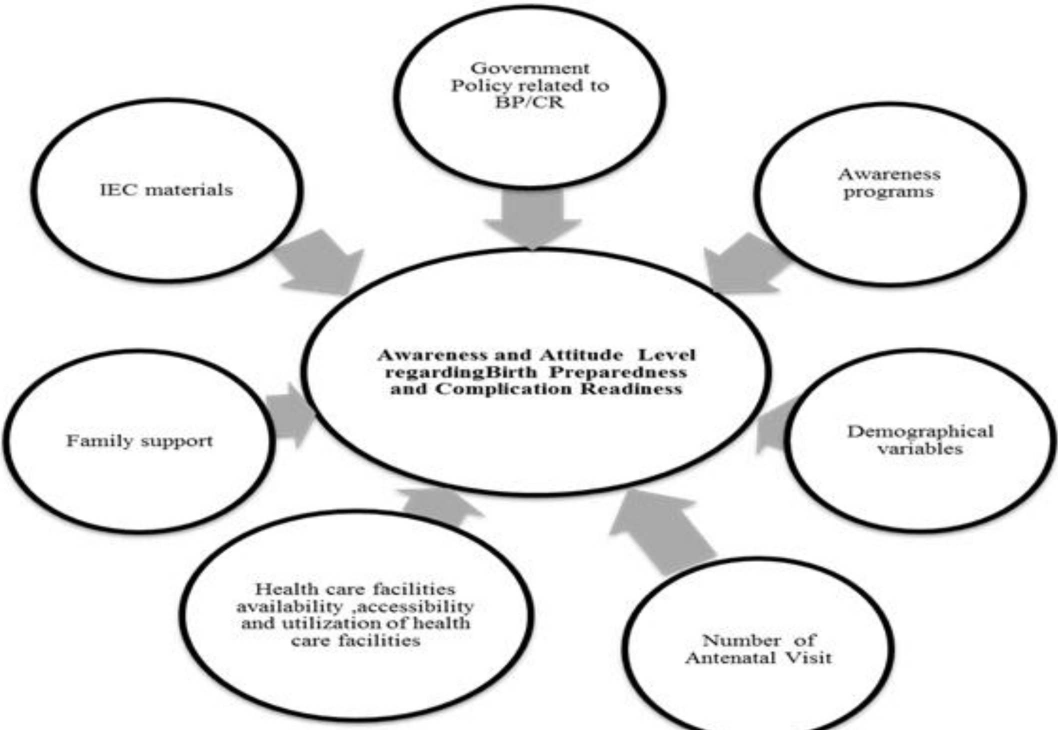

Figure 1:- shows the conceptual framework of awareness and attitude regarding birth preparedness and complication readiness among pregnant women. The conceptual framework is developed by the investigator to describe the relationship among the phenomena under study and its outcome. Pregnant women awareness and attitude regarding birth preparedness and complication readiness is directly determined by respondent's personal factors (age, occupation, educational level, family support, health services availability and accessibility) and other factors.

Research Methods:-

Research methodology refers to the sequential arrangement of all the steps involve during the research work. This section describes the research design, study population, sample size, sampling technique, sampling procedure, tool for data collection, validation of the tool, data collection procedure and methods of data analysis and interpretation.
Research Design

Descriptive cross-sectional research design was used to find out the awareness and attitude among the birth preparedness and complication readiness among the pregnant women. This study was conducted at Primary Health Care centers (Bishnudevi and Chalnakhel PHCs) of Kathmandu district. These PHCs situated at central development region of Nepal. Total population (N) of this study were pregnant women who receiving ANC service in selective PHCs who came to receive Antenatal Care (ANC) service at PHCCs of Kathmandu district. Out of the total population, non-probability purposive sampling technique was followed for the study by using the model of Ifeanyichukwu, Obehi and Richard (2016). The sample size will be calculated by using Cochran's formula as follows;

$n= Z^2pq/d^2$

$= (1.96)^2 \text{ x } (0.160) \text{ x } (0.840) /(0.07)^2$

=105

Adjusting 10% non-response rate, the calculated sample size is 115.

So, assuming the p-value as 0.160, confidence level 93%, absolute precision 7%, the sample size of 115 is calculated by using Cochran's formula.

Researcher purposively selected two PHCs from the Kathmandu district of the study setting. Researcher calculated the number of pregnant women visit in those PHCs then researcher estimated the number of days in each PHCs. Researcher visited 4 days in Chalnakhel PHC and rest of the 2 days in a week Bushinadevi PHC. At first visited to

both PHCs and those respondents were selected who agreed to participant, provided they meet inclusive criteria, until the number of desired samples has not met. The non-probability, purposive sampling technique was used to select the desired sample.

A set of semi structured interview schedule was conducted to the pregnant women. In the meantime, some other relevant data also obtained from the semi-structured interview was helped to collect the information on socio-demographic characteristics and awareness. A Likert's scale research instrument also was used to collect information about the attitude of pregnant women towards the birth preparedness and complication readiness plan. The different types of the questionnaire were as follows;
Part 1 - Questions related to socio- demographic characteristics of the pregnant women
Part 2 - Questions related to the awareness regarding the BP/CR
Part 3- Questions attitude towards the BP/CR

The content validity of the instrument was ensured by seeking the opinion of the subject matter specialist, research advisor and the research teacher. The instrument was translated into Nepali language and opinion of the language expert was obtained for comprehensibility and simplicity of the language. The content validity of the instrument was ensured by seeking the opinion of the subject matter specialist, research advisor and the research teacher. The instrument was translated into Nepali language and opinion of the language expert was obtained for comprehensibility and simplicity of the language. The instrument internal consistency was maintained by pre-tested for awareness questioner in Bagrabarahi PHC and necessary modifications were done similarly attitude questioner also used Cronbach alpha test. The result of Cronbach alpha was 0.72. The researcher herself asked the questions to the subjects.

The verbal informed consent was obtained from each respondent. Respondents' anonymity was maintained by coding respondent. Confidentiality of the information of the respondents was maintained by not disclosing the information and by using only for the study purpose. Respondents dignity was maintained by giving right to reject or discontinue from the research study at any time. Data were collected from 2073/07 /17 to 2073/08/15. One by one face to face schedule interview were taken from the pregnant women and some of the structured questionnaires also distributed to the respondents. During the data collection, the privacy was maintained by taking interview in a corner of the room. Each patient was interviewed on Nepali language.

Definitions of Variables:
The dependent and independent variables used in the study are described as follows;

Dependent Variables:
This study uses two major dependent variables viz; Awareness Regarding Birth Preparedness and Complication Readiness and Attitude Regarding Birth Preparedness and Complication Readiness.

Awareness regarding BP/CR:
The first dependent variable of the study is awareness regarding BP/CR which refers to the information regarding BP/CR on meaning possession of information about, saving of money, the blood donor person, birth location, person of care provider and arranging the transportation to go health facilities and danger signs of pregnancy. The level of awareness was measured by counting all scores of awareness questions and was classified into 2 categories.
Good awareness ≥ mean of the total awareness score
Poor awareness <mean of the total awareness score

Attitude regarding BP/CR:
The second dependent variable of the study is attitude regarding BP/CR which refers to opinion and attitude of the verbal statement of beliefs, values and feeling about saving of money, identify the blood donor person, birth location, person of care provider and arranging the transportation to go health facilities and danger signs of pregnancy. The level of attitude was measured by calculating all total score obtained by respondent's response to items related to BP/CR in Likert's scale and classified into 2 categories,
1. Positive attitude ≥ mean of the total attitude score of respondents.
2. Negative attitude < mean of the total attitude score of respondents.

Independent Variables/Research Variables:
Demographical variables
The demographical variables include the following characteristics within the respondents such as; Age, Ethnicity, Educational status, Occupation, Economic status, Parity, Family support, Antenatal Visit status, Health care facility availability and accessibility.

Results:-

This study deals with the analysis and interpretation of data concerning Birth preparedness and complication readiness among pregnant women, with 115 pregnant women samples attending a PHCs of Kathmamdu District. All the collected data were reviewed and checked daily for its completeness, consistency and accuracy. The data was coded and entered in SPSS version 20 for analysis. Data were summarized using descriptive statistics and inferential such as frequency, percentage, mean and standard deviation to identify the patient's demographic variables and awareness and attitude towards the BP/CR. Chi- square test was used to determine association between demographic variables and other variables. Pearson's correlation coefficient (r) test was used to determine whether there is relationship between awareness and attitude among the study population.

Table 1:- Socio - Demographic Characteristics of Respondents.

Variable	Frequency	Percentage
Age group (in Years), n=115		
Below 21	14	12.2
21-25	41	35.7
26-30	37	32.2
31 -35	15	13
Above 35	8	7
Mean ± SD 26.22±5.1(Min-16, Max 40)		
Religion (n=115)		
Hindu	109	94.8
Buddhist	3	2.6
Ethnic group (n=115)		
Disadvantaged Janajati	62	53.9
Relatively advantaged Janajaties	13	11.3
Ungrouped caste/ethnicity	21	18.3
Dalit	19	11.3
Education status (n=115)		
Illiterate	37	32.2
Literate	78	67.8
Educational level (n=78)		
General Education	23	29.5
Basic Education	3	3.8
Secondary Education	26	33.3
Higher secondary and above	26	33.3
Occupation status (n=115)		
Unemployed	92	80
Employed	23	20
Type of occupation (n=23)		
Business	3	13
Service	15	65.2
Others	5	21.7
Type of family (n=115)		
Nuclear	96	83.5
Joint	19	16.5
Status of health personal in family (n=115)		
Yes	14	12.2
No	101	87.8

Sufficient of income for livelihood of family (n=115)		
Sufficient	87	75.7
Insufficient	28	24.3

Table 1:- shows that out of 115 respondents, 36% were between 21-25 years of the age while, 12% of the respondents were aged below 20 years. The results further demonstrated that the age of respondents ranges from minimum of 16 years to maximum of 40 years with the mean age of 26.22 years having standard deviation 5.1 years. Similarly, around 54% of the respondents were from Janjati Ethnical group, followed by 18% were from the ungrouped castes (barman, chhetri), and 11% were from disadvantage janajati ethnical group. The results further demonstrated that 95% of the respondents were from Hindu religion. Out of total only 78 respondents are literate. Among the literate more than half of the respondents 80% were unemployed. Nearly 65.2% respondents were presently working in service sector followed by others (wages labour and waiter) 21.7% and business 13%. Out of the 115 respondents, around 88% have no any health personal in their family, whereas, 12% respondents are having health personal in their family. Two third of the respondents 83.5% were living in single family.

Table 2:- Obstetric Characteristics of Respondents.

Variables	Frequency	Percentage
No. of pregnancy times (n=115)		
First	72	62.6
Second or more	43	37.4
No. of children (n=43)		
One	16	37.2
Two	18	41.9
Three	8	18.6
Four or plus	1	2.3
BP/CR for previous last childbirth (n=43)		
Yes	24	55.8
No	19	44.2
No. of ANC visit (n=115)		
1 to 2 times	52	45.2
3 to 4 times	58	50.4
More than 4 times	5	4.3

Table 2:- shows that out of 115 respondents 62.6% of the respondents are in first pregnancy. Around 37% respondents were in two or more pregnancy period. The number of children of the respondents who were attending more than one pregnancy 42% of the respondents were found having two children followed by around 2% were having four plus children. Regarding the status of preparation at birth for previous childbirth for the 43% respondents who were attending for more than one pregnancy. The study reveals that nearly 56% of the respondents had done some preparation for their previous child birth whereas 44% of the respondents hadn't done any preparation for their previous child birth. The result confirms that around 50% of the respondents have visited 3-5 times of Antenatal visit during the present pregnancy followed by 45% of the respondents one to two times and only around 4.3% respondents have visited ANC more than 5 times during current pregnancy.

Table 3:- Respondents Awareness in Meaning and Need of Birth Preparedness and Complication n=115.

Variables Meaning	Frequency	Percentage
To prepare the transportation, blood donor, health care provider, institute, money and danger signs*	64	55.7
To prepare transportation, blood donor, health care provider, money and food	43	37.4
To prepare transportation, blood donor, health care provider, danger signs and heavy exercise	2	1.7
To prepare transportation, blood donor, health care provider, danger signs and hospitalization	6	5.2
Need		
To reduce maternal and child health danger signs during childbirth *	64	55.7
To make aware to pregnant women about the healthy child birth	42	36.5
To make ready hospitalization	4	1.7

To counseling the mother for family planning birth	5	2.6

Correct response *

Table 3:-shows the status of awareness regarding birth preparedness and complication readiness. The results revealed that more than half (56%) of the respondents agreed with the concept of BP/CR is to prepare the transportation, blood donor, health care provider, institute, money and danger signs followed by around 37% with the concept of prepare transportation, blood donor, health care provider, money and food. In contrast, only 5% respondents agreed with the concept of preparing for transportation, blood donor, health care provider, danger signs and hospitalization. Around 52% think that BP/CR is needed to reduce maternal and child health danger signs followed by around 37% think BP/CR is needed to make aware to pregnant women about the healthy child birth. Around 2% of respondents aware to make ready for hospitalization.

Table 4:- Respondents Sources of BP/CR n=115.

Sources	Frequency	Percentage
Radio	108	93.9
Television	75	65.2
Printed Materials (pamphlet, leaflet)	50	43.5
Newspaper, Magazines	48	41.7
FCHVs	5	4.3
Awareness Programs	8	7.0

** Multiple responses

Table 4:- shows the sources of awareness regarding the term birth preparedness and complicated readiness among the pregnant women. The results confirm that nearly total of the respondents around 94% have heard the information regarding BP/CR from the Radio followed by 65% from television, nearly 44% from printed media, nearly 42% from Newspaper, magazines, 7% from Awareness Programs and 4% from FCHVs.

Table 5:- Respondents' Awareness regarding BP/CR Components.

Variables	Frequency	Percentage
Necessity of arrangement of transportation to go health facility (n=115) Yes No	 115 -	 100.0 -
Types of transportation **(n=115)		
Ambulance	115	100.0
Stretcher	-	-
Doko	-	-
Others (taxi, car)	-	-
Necessity of arrangement of Money (n=115)		
Yes	115	100.0
No	-	-
Necessity of preparing blood donors (n=115)		
Yes	112	97.4
No	3	2.6
Number of blood donor (n=112)		
One	30	26.8
Two *	82	73.2
Necessity of the health facility for childbirth (n=115)		
Yes	115	100.0
No	-	-
Necessity for skill birth attendant (n=115)		
Yes	115	100.0
No	-	-

Correct response * Multiple Responses**

Table 5:- shows the result confirms that cent percent (115) of the respondents were aware on necessity of arrangement of transportation to go health facility. The study confirms that cent percent (115) respondents aware

that ambulance is the best transportation to go health facility during the pregnancy. This table also shows the awareness on necessity of money arrangement for child birth cent percent of the respondents were aware on arranging the money for child birth and necessity of preparing blood donors for child birth. The results confirm that around 98% of the respondents assume that preparing blood donors is most necessary for the child birth. Only around 3% of the respondents think that arrangement of blood donors is not necessary for child birth. Among the 115 respondents, two third 73% respondents think that at least 2 blood donors should be prepared for childbirth whereas around 27% respondents believe that only one blood donor will be sufficient for the child birth. Cent percent of respondents believe that identification of health facility and well-trained person (SBA) for child birth is necessary.

Table 6:- Respondent's Awareness regarding Danger Signs during Pregnancy, Childbirth and after Childbirth.

Variables	Frequency	Percentage
Heard about danger signs during pregnancy (n=115)		
Yes	100	87.0
No	15	13
Danger signs during pregnancy ** (n=100)		
Sever bleeding*	100	100
Swollen hand/face*	96	96.0
Blurred vision *	86	86.0
Diarrhea	5	5.0
Difficulty in breathing*	71	71.0
Severe abdominal pain*	82	82.0
Immediate medical help if danger signs arise during pregnancy (n=100)		
Yes	100	100
No	0	0
Heard about danger signs during child birth (n=115)		
Yes	102	88.7
No	13	11.3
Danger signs during child birth** (n=102)		
Severe vaginal bleeding*	102	100.0
Retained placenta*	100	98.0
Prolonged labour more than 12 hours*	99	87.0
Convulsion/Fits*	63	54.0
Diarrhea	0	0.0
Immediate medical help if danger signs arise during child birth (n=102)		
Yes	100	98.2
No	2	1.98
Heard about danger signs after the child birth** (n=115)		
Yes	101	98.8
No	14	12.2
Danger signs after child birth (n=101)		
Sever vaginal bleeding*	100	98.0
High fever*	94	93.0
Foul smelling vaginal discharge*	91	90.0
Abdominal pain *	52	51.4
Nausea	6	5.94
Immediate medical help if danger signs arise after child birth (n=101)		
Yes	101	100
No	0	0

Correct response * Multiple response **

Table 6:- shows the awareness regarding danger signs that can be arise during pregnancy, during child birth and after child birth. The result confirmed that 87% respondents have heard about the danger signs that arise during

pregnancy. Among the heard respondents 100% of the respondent believed that sever vaginal bleeding is the most danger signs only 5% of the respondents give wrong response. Out of the 100 respondents who heard about the danger signs believe to seek immediate medical help if danger sign arises during pregnancy. Among all 115 respondents, 89% are heard about the danger signs that may arise during child birth. Regarding the respondent who heard about the danger signs that may arise during child birth around 89% respondents are aware on danger signs that may arise during child birth.

Table 7:- Respondents Level of Awareness on BP/CR.

Level	Frequency	Percent	Mean	Std. Dev.
Good Awareness (≥ mean)	96	83.5	1.065	0.159
Poor Awareness (< mean)	19	16.5		
Total	115	100.0		

Table 7:- shows the respondents overall level of awareness regarding birth preparedness and complication readiness. The study revealed that 83.5% of the respondents have the good awareness regarding BP/CR.

Table 8:- Respondents' Attitude regarding Birth Preparedness . n=115

Statements	Responses (%)					Mean
	SA	A	N	D	SD	
Birth preparedness is very important component for pregnant women.	6.96	90.43	1.74	0.87	-	1.97
Birth preparedness should begin after conception for pregnancy.	5.22	91.30	1.74	1.74	-	2.00
Birth preparedness does not make any differences for mother and baby's health outcome.	0.87	12.17	12.17	67.83	6.96	3.68
Every pregnant woman should be aware that BP/CR is highly essential for healthy childbirth.	7.83	83.48	7.83	0.87	-	2.02
Pregnant women should complete four antenatal visits.	13.91	80.00	6.09	-	-	1.92
Antenatal visit is necessary to identify the danger signs related to pregnancy timely.	17.39	78.26	4.35	-	-	1.87
Women should plan ahead of time in which health facility she will deliver her baby.	11.30	82.61	6.09	-	-	1.95
Women should be aware about her blood group before she makes arrangement of blood donor for childbirth.	6.96	81.74	11.30	-	-	2.04
Women should keep two blood donors ready to manage bleeding during childbirth and after childbirth.	5.22	80.00	13.04	1.74	-	2.11
Preparing the child cloths before childbirth is considered to be unlucky.	0.87	5.22	19.13	56.52	18.26	3.86
Delivery should be conducted by SBA.	16.52	77.39	6.09	-	-	1.90
Women should make prior arrangement of money for childbirth.	7.83	92.17	-	-	-	1.92
Women should make prior arrangement of transportation for childbirth.	6.96	93.04	-	-	-	1.93
Giving birth is mostly of concern women's, husband have little to contribute.	-	-	7.83	68.70	23.48	4.16
It is not necessary for husband to accompany his wife when she is giving childbirth.	-	-	6.96	68.70	24.35	4.17
It is not necessary for family to accompany pregnant women when she is giving childbirth.	-	-	6.09	76.52	17.39	4.11

SA-Strongly agree, A-Agree, U- Undecided, D-Disagree, SD-Strongly disagree

Table 8:- shows the mean and standard deviation of respondent's scale of attitude regarding birth preparedness and complication readiness. The table reveals that the highest level of agreement is with the statement that "Women should seek health facilities if any danger signs arise" with mean score 1.84 and std. deviation 0.41 followed by the statement "antenatal visit is necessary to identify the danger signs related to pregnancy timely" (mean score of 1.87)

Table 9:- Respondents' Attitude regarding Complication Readiness n=115.

Statements	Responses (%)					Mean
	SA	A	N	D	SD	
Problems that occur during pregnancy, during child birth and after childbirth endangers the life of women as well as baby.	11.30	86.96	1.74	-	-	1.90
Women should seek health facilities if any danger signs arise.	17.39	80.87	1.74	-	-	1.84
Women do not go to health facilities to give birth because it is too difficult to get health facility.	-	-	2.61	70.43	26.96	4.24
Women do not go to health facilities to give birth because the SBAs do not treat women respectfully.	-	-	3.48	71.30	25.22	4.22
Women should not go to health facilities to give girth, because it is too expensive.	-	-	2.61	73.04	24.35	4.22
Intuitional delivery does not reduce the danger signs related to child birth.	-	-	6.96	79.13	13.91	4.07

SA-Strongly agree, A-Agree, U- Undecided, D-Disagree, SD-Strongly disagree

Table 9:- shows the statement regarding "Problems that occur during pregnancy, during child birth and after childbirth endangers the life of women as well as baby" (mean score = 1.90), delivery should be conducted by SBA (mean score= 1.90).In contrast, the highest level of disagreement is with the statement "women do not go to the health facilities to give birth because it is too difficult to get health facility" with mean score of 4.22 followed by the statement "women should not go to the health facilities to give birth, because it is too expensive" (mean score= 4.22) and "women do not go to health facilities to give birth because the SBAs do not treat women respectfully" (Mean score=4.2).

Table 10:- Respondents' Attitude Level regarding BP/CR.

Level	Frequency	Percent			Mean	SD
Positive Attitude (≥ mean)	79	68.7			2.823	0.134
Negative Attitude (< mean)	36	31.3				
Total	115	100				

Table 10:- Shows the respondents overall level of attitude regarding birth preparedness and complication readiness. The results confirmed that nearly 68% respondents have the positive attitude towards the BP/CR.

Table 11:- Association between Respondents' Level of Awareness regarding BP/CR and Socio-demographic variables. n=115

Variables	Level of Awareness		λ2	p-value
	Good No. (%)	Poor No. (%)		
Age (Years)				
Below 21	7 (50)	7(50)	13.173	0.006*
Between 21 to 30	68(87.18)	10(12.82)		
Above 30	21(91.30)	2(8.7)		
Ethnicity				
Ungrouped cast /ethnicity	19(90.48)	2(9.52)	2.869	0.397**
Relatively advanced	12(92.31)	1(7.69)		
Disadvantaged Janajeti	51(82.26)	11(17.74)		
Dalit	14(73.68)	5(26.32)		
Education status				
Illiterate	31(83.78)	6(16.22)	0.004	0.952**
Literate	65(83.33)	13(16.67)		
Educational level (n=78)				
General and Basic Education	20(76.92)	6(23.08)		
Secondary Education	22(84.62)	4(15.36)	2.13	0.546**
Bachelor level	15(93.73)	1(6.25)		
Master and above	8(80.0)	2(20.0)		

Religion				
Hindu	92(84.4)	17(15.60)	6.131	0.047*
Buddhist	1(33.33)	2(66.67)		
Christian	3(100)	-		
Employment status				
Unemployed	78(84.78)	14(15.22)	0.567	0.451**
Employed	18(78.26)	5(21.74)		

Significance Level at 0.05 * Pearson Chi-square **Likelihood

Table 11:- shows the association between levels of awareness regarding BP/CR with socio-demographic variables of respondents. The results confirmed that there is the significant association between levels of awareness with age variable of the respondents with p=0.006. Furthermore 93.73% of the respondents having higher secondary education level followed by 84.62% secondary education level have high awareness level. However, the statistics (p=0.546) suggested that there is no any significant association between level of education and level of awareness. Similarly, awareness on BP/CR also significantly associated with the religion of the respondents (p=0.47).

Table 12:- Association between Respondents' level of Attitude regarding BP/CR and Socio- demographic variables n=115.

Variables	Level of Attitude		$\chi 2$	p-value
	Positive No (%)	Negative No (%)		
Age (Years)				
Below 21	12 (87.71)	2(14.29)	0.65	0.723**
Between 21 to 30	72(92.31)	6(7,69)		
Above 30	21(91.30)	2(8.70)		
Ethnicity				
Ungrouped cast /ethnicity	20(95.24)	1(4.76)	3.477	0.324**
Relatively advanced	11(84.62)	2(15.38)		
Disadvantaged Janajeti	55(88.71)	7(11.29)		
Dalit	19(100)	-		
Education Status				
Illiterate	34(91.89)	3(8.11)	0.024	0.878**
Literate	71(91.03)	7(8.97)		
Level of Education(n=78)				
General and Basic Education	26(100)	-		
Secondary Education	24 (92.31)	2(7.69)		
Bachelor level	13(81.25)	3(18.75)	5.976	0.056*
master and above	8(80.0)	2(20.0)		
Religion				
Hindu	101(92.66)	8(7.34)	13.237	0.031*
Buddhist	3(100)	-		
Christian	1(33.33(	2(66.67)		
Employment Status				
Unemployed	87(94.57)	5(5.43)	6.161	0.025*
Employed	18(78.26)	5(21.74)		

Significance Level at 0.05 * Pearson Chi-square ** likelihood

Table 12:- Shows the association between the demographic variables and level of attitude of the respondents. The results confirm that respondents age in between 21-30 years have the highest level of positive attitude (92.31%) on BP/CR followed by age study confirmed that the association between the demographic variables and level of attitude of the respondents. The results confirm that respondents age in between 21-30 years have the highest level of positive attitude (92.31%) on BP/CR followed by age group above 31 years (91.30%). Regarding the Ethnical group, ungrouped cast/ethnicity has the highest level of attitude (95.24). Moreover, 91.89% of respondents were observed with positive level of attitude even though they are illiterate. Regarding the religion, 100% of the Buddhist were observed with positive level of attitude followed by 92.66% of Hindus and 92.57% of the unemployed respondents have the positive attitude regarding the BP/CR. The analysis also confirmed that 100% of the respondents having general and basic education level followed by 92.31% having secondary education level have

the positive level of attitude. The statistics (p=0.056) further confirmed that there is significant association between level of education and level of attitude regarding BP/CR.

The results further confirmed that there is the significant association between religion and positive attitude (p=0.031) and employee status and positive attitude (p=0.025).

Table 13:- Relationship between Awareness and Attitude regarding BP/CR.

Variables	Correlation (r)	p-value
Awareness vs. Attitude	0.186*	0.046

* Correlation is significant Level at 0.05

Table 13:- shows the correlations between the awareness and attitude regarding birth preparedness and complication readiness among the pregnant women. The result confirmed that there is the significant (p-value=0.46) positive relationship (r=0.186) exists between awareness and attitude. The positive relationship further confirms that higher the awareness, higher will be the attitude regarding the BP/CR.

Discussion And Conclusion:-

Based on the conclusions derived from the study, following discussions can be carried out with the existing research findings. Ifeanyichukwu, Obehi & Richard (2016) revealed that overall respondent mean age was 28.9±4.9 years, similarly in recent study finding that the mean age of the pregnant women was 26.22 years. This study confirmed that more than two third of the pregnant women (83.5%) lived in joint family. similarly, the study conducted by Kaphle, Neupane,Kunwar & Acharya (2015) 81.9% of pregnant women lived in nuclear family.

This study concluded that 55.7% of the pregnant women answered that BP/CR is to prepare the transportation, blood donor, health care provider, institute, money and danger signs. Similarly, the study conducted by the Markos, & Bogale (2014) revealed that 60.2% of the pregnant women were aware on this issue. Whereas, Acharya, Kaur, Prasuna, & Rasheed (2015) confirmed that nearly 49% of pregnant women were aware of saving money for delivery and 44.1% women were aware on finding the mode of transportation for the delivery. In the recent study it was confirmed that cent percent of pregnant women were aware on necessity of transportation and money for childbirth. Similarly another study conducted by Kaphle, Neupane, Kunwar, & Acharya (2015) revealed that 98.0% respondents had knowledge on arrangement of around 52% of respondents had knowledge on identify blood donor, 91.3% of respondent had arrangement of transportation, two third (69.7%) on identifying SBA, and 98%of respondent had knowledge of place of delivery The recent findings further confirmed that, Most 93.9% of the respondents were made aware by radio. Similarly, cent percent of the respondents ensured on necessity of arrangement of transportation to go health facility by ambulance and arrangement of money, identify the health facility for childbirth and identifying skill birth attendant. The result confirmed that 87% respondents have heard about the danger signs that arise during pregnancy.

More than eighty-nine present pregnant women were aware on danger signs that may arise during child birth. Cent percent of the pregnant women ensured that severe vaginal bleeding is the most danger sign. However, the prior study conducted by Markos & Bogale (2014) confirmed that only 29.9% of the respondents in were aware to prepare for birth and its complications. Wherever Acharya, Kaur, Prasuna, & Rasheed, (2015) revealed that the BPACR index was very low (41%). Around 81% had aware on identifying a skilled attendant at birth for delivery. Only one quarter (27.8%) women knew about any one danger sign of pregnancy. However, in recent study 83.5% of the respondents had good awareness on BP/CR. Based on the findings it is confirmed that pregnant women are more aware on their birth preparedness and complication readiness.

Around 97% of pregnant women believed that pregnant women should be prepared for BP/CR after conception for pregnancy. However, in the study of Ifeanyichukwu, Obehi, & Richard (2016) confirmed that 94.4% respondents had positive attitude towards BP/CR. In the recent study 68.7% of the respondents were found to have positive attitude towards the BP/CR. Furthermore, (78.2%) of respondents were well prepared with regard to intended and actual birth plans respectively. Approximately 93% of pregnant women aware of requirement of 4 focused visit during pregnancy. Whereas, the study conducted by Agbodohu (2013) revealed that 77.3% of respondents believed that they need blood during labour 31.6% of pregnant women were believed regarding the necessity of preparing blood donor for childbirth. However, in recent study More than two-third (88.6%) of the respondents believed that one should know about her blood group before she makes arrangement of blood donor for childbirth and 85.22% of responded believe at list two blood donor should be managed for outcome of bleeding after child birth.

The study finding showed that there was positive correlation between level of awareness and age (r=13.173, p=0.0060) respondents age between 21-30 had more awareness about BP/CR, summarily, another association with level of awareness and religion (r=6.131, p=0.047) of the respondents. In recent study finding Buddhist religion had more awareness level about the BP/CR. The similar and contradict study was not found.

Furthermore, finding showed that there was positive correlation between level of attitude and level of education (r=5976, p=0.056). Among the literate respondent's bachelor level respondents had positive attitude toward the BP/CR, similarly the study conducted by Agbodohu (2013), revealed that there was a significant relationship between level of awareness and level of education. Ifeanyichukwu, Obehi, & Richard (2016) reveled that (94.4%) respondents had positive attitude towards BP/CR.

The conclusions are drawn based on the finding of the study. More than three forth of respondents had good awareness level regarding BP/CR. More than half of respondents had positive attitude regarding BP/CR. There was significant association between level of awareness regarding BP/CR and age and religion, which shows that pregnant women of age between 21-30 seems to be highly aware about BP/CR Similarly, there was significant association between level of education, religion and employment status of the respondents. Higher number of respondents had good awareness and positive attitude towards the BP/CR. Antenatal care clinics should give due emphasis to preparation for birth and its complication and provide education and information to all pregnant women. Awareness and attitude regarding BP/CR both are crucial to maternal and child health.

The finding of this study that there were correlations between the awareness and attitude regarding birth preparedness and complication readiness among the pregnant women there is positive relationship between them which means the positive relationship that higher the awareness, higher the attitude regarding the BPCR among pregnant women.

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