

Knowledge and Attitude Towards Birth Preparedness Among Prime Gravid Mothers Attending Antenatal Clinic at Bwindi Community Hospital

Okello Samuel

Bachelor of nursing, Post graduate in medical Education (Makerere University), Tutor Uganda Nursing School-Bwindi, Uganda Christian University affiliate

Akatuhurira Ronnah

Diploma in Nursing (Uganda Nursing School Bwindi), Nurse at Bwindi Community Hospital

Abstract

In Uganda maternal mortality ratio is high at 336 death per 100000 live birth. The purpose of this study was to assess the level of knowledge and attitude towards birth preparedness among prime gravid mothers attending Antenatal Clinic at BCH. A descriptive cross sectional study design was used and purposive convenient sampling method was used to sample 80 participants. An interviewer administered questionnaire was used to collect data. Data collected was analyzed using Microsoft Excel and presented in tables, graphs, pie charts frequencies and percentages. The results showed that more than a half (56%) of the participants had inadequate knowledge on birth preparedness. Although all participants had attended ANC, a significant number (38.8%) had never heard about birth preparedness. Although more than half (59%) had knowledge on things to be done, only (36.8) and (30.6) knew identification of skilled providers and means of transport respectively. Majority (92%) of participants had inadequate knowledge on additional requirements with no (0%) participant knowing identification of money for emergency as a must requirement for birth preparedness. Much as participants had positive attitude on birth preparedness, majority (87.8%) had negative attitude on identification blood donor when preparing to deliver. In conclusion significant number of participants had never heard about BPP and all participants had no knowledge on saving money for emergency and on additional requirements. Therefore there is need for health workers to provide adequate health education regarding BPP and continuously review it with a mother on each visit.

Keywords: Birth preparedness, Antenatal care, Prime Gravid mothers, Knowledge and Attitude

DOI: 10.7176/JHMN/58-02

Introduction

Maternal mortality still remains a big challenge globally and in developing countries particularly. In Uganda maternal mortality ratio is as high as 336/100000 live birth. Knowledge and attitude of mothers towards birth preparedness would enable them to plan for normal birth and anticipate any actions needed in case of an emergency hence reduce mortality. Birth preparedness is one of the elements of focused antenatal care. Birth preparedness is the plan that a pregnant woman makes by identifying place of birth, means or transport, saving money for delivery expenses, identifying birth attendant and home care taker while in hospital. Birth preparedness involves not only the pregnant woman, but also her family, community and health staff, (World Health Organization, 2016). The support and involvement of these people can be critical in ensuring that a woman can adequately prepare for delivery and carry out a birth plan.

A birth preparedness plan includes identification by the pregnant woman the following elements; the desired place of birth, the preferred birth attendant, the location of the appropriate health facility, funds for birth related and emergency expenses, birth companion, support in looking after the home and children while the woman is away for delivery, transport to health facility for the birth, transport in case of an obstetrical emergency. The plan aims to assist women, their partners and families to be adequately ready for child birth, (WHO, 2016).

Birth preparedness is considered by WHO and other agencies to be a useful and practical intervention with several advantages. In particular it contributes to increased use of maternal health services by assisting women and their families to plan for the necessary support, clothing and equipment for the birth and by making women and their partners/families ready for the un expected events. (WHO, 2016)

WHO recommends that pregnant women should have a written plan for birth and should discuss and review this plan with a skilled attendant at each antenatal assessment and at least one month prior to the expected date of birth, (WHO, 2016). Failure to plan in advance for a normal birth and inadequate preparation for urgent action in event of obstetric complications contributes to delays in receiving skilled obstetric care and consequently contribute to maternal and neonatal mortality (Henok, 2015) .

Birth preparedness has been globally endorsed as an essential component of safe motherhood programs to reduce delays to seeking care for obstetric emergencies, delay in recognition of the problem, delay in seeking

care, and delay in receiving care at the health facility. These delays represent barriers that often result in preventable maternal deaths. The presence of a skilled birth attendant at delivery is recognized as essential to preventing maternal mortality, (Dhakal & Shrestha, 2016).

In 2009, the government of Uganda adopted a road map of accelerating the reduction of maternal and neonatal mortality and morbidity. Birth preparedness was identified as a key component in creating a demand for maternal health services and ensuring continuum of care between the household and health facility, (Petterson, Sandberg, Kabakyenga & Agardh, 2014).

Globally, between 1990 to 2015, there was a decrease in maternal mortality ratio by 44%, from 385 deaths to 216 deaths per 100,000 live births. This ratio translates into approximately 830 women dying every single day due to the complications of pregnancy and child birth (UNICEF, 2016). This ratio still remains high compared to the sustainable development goal (SDG) three, which targets to reduce the maternal mortality ratio to 70 per 100,000 live births by 2030. (WHO, 2017). Almost all of these deaths occurred in low resource settings, and most could have been prevented through adequate birth preparedness. African Region bore the highest burden with almost two thirds of global maternal deaths occurring in the region. The probability of a 15 year-old girl in the region eventually dying from maternal cause was as high as 1 in 37- compared to 1 in 3400 in developed countries (WHO, 2016).

While every region in the world experienced declines in levels of maternal mortality between 1990 and 2015, levels in sub-Saharan Africa remained unacceptably high. According to the World Health Organization in 2013, there were an estimated 289,000 maternal deaths globally, of which 62% occurred in sub-Saharan Africa. The region also had the highest maternal mortality ratio of 510 deaths per 100,000 births (WHO, 2014 and Kalipeni, Iwelunmor, & Grigsby-Toussaint, 2015).

According to the Uganda Demographic Health Survey (UDHS), Uganda has maternal mortality ratio of 343 maternal deaths per 100,000 live births. This ratio is very high compared to the SDG three which targets the reduction in maternal mortality ratio by 2030 to 70 maternal deaths per 100,000 live birth (UDHS, 2017 and WHO, 2017).

Globally it has been documented that the level of knowledge of mothers regarding birth preparedness is low especially around the components, the requirements (WHO, 2017). Lack of knowledge on birth preparedness is well documented factors contributing to maternal mortality and morbidity. If mothers had adequate knowledge regarding birth preparedness it would help reduce complications related to birth (WHO, 2017). It is therefore crucial to understand mothers knowledge regarding BPP. In this part of the country where Bwindi community hospital is located little is known about the mothers knowledge regarding birth preparedness, this forms the foundation of this study. Having a positive attitude towards birth preparedness would enable mothers prepare in time and hence break down the cycle of maternal mortality. In sub-Saharan Africa it has been found that mothers have negative attitude towards birth preparedness and this made them to access services late. The same scenario happens in Uganda where mothers have been found to have negative attitude towards BPP few studies have focused on the attitude of mothers towards BPP in this rural part of Uganda where BCH is located, yet according to an ectdetol data from Bwindi Community Hospital annual report, maternal mortality rate was at 0.1% out of the total number of 1636 deliveries (BCH, 2017). There is therefore need to carry out the study to assess the level of knowledge and attitude of pregnant mothers towards birth preparedness.

Problem Statement

In Uganda the maternal mortality is still very high at 336 maternal death per live 100000 births, because of such high statistics Uganda failed to meet the millennium development goal 5 by 2015 and has now embarked on sustainable development goal number 3 which aims at reducing global maternal mortality ratio to less than 70 per 100000 live birth by 2030 (WHO, 2017). There is still an uncertainty if Uganda will meet this as this global maternal mortality target ratio is higher compared to the Ugandan target to reduce the maternal mortality to a ratio of 185 per 100,000 live births. This ratio remains high because of the delays in accessing health care services which could be attributed to mothers knowledge and attitude towards BPP leading to poor birth planning, (WHO, 2017). In 2015 there were 1.5million deliveries in Uganda, of this only 57% were delivered by skilled personnel, (TurinaweBenon Emmanuel et al, 2016, WHO, 2017).

A study done in Wakiso in 2016, indicated that despite of the health facilities being in a radius of five kilometers in many districts of Uganda, women continue to report late for ANC and delay in reaching the facilities for delivery partly because of poor birth plan. The same research also noted that most women deliver outside health facilities, attend ANC once instead of the recommended minimum of four times and never return for delivery in health care facilities (Kariuki & Seruwag, 2016). This signifies knowledge gap, and poor attitude toward birth preparedness plan, which continues the cycle of maternal mortality in Uganda in regard to the delays which results into maternal death which would have been prevented through early birth preparedness. Low knowledge and poor attitude towards birth preparedness also affects patterns of seeking reproductive health services. There is therefore a need to assess the level of knowledge and attitude towards birth preparedness, since

no study has been conducted on knowledge and attitude towards birth preparedness among pregnant mother attending ANC at BCH.

Purpose of the Study

The purpose of the study is to assess knowledge and attitude towards birth preparedness among prime gravid mothers attending antenatal clinic at BCH, so as to identify the gaps, it's upon this that recommendations can be made accordingly so as to improve on birth preparedness.

Specific Objectives

- I. To assess the level of knowledge regarding birth preparedness among prime gravid mothers attending antenatal clinic at BCH
- II. To determine the attitudes towards birth preparedness among prime gravid mothers attending antenatal clinic at BCH.

Research Questions

- I. What level of knowledge do prime gravid mothers attending antenatal clinic at BCH have towards birth preparedness?
- II. What attitudes do prime gravid mothers attending antenatal clinic at BCH have regarding birth preparedness?

Justification of the Study

The maternal mortality ratio is still very high at 336 maternal death per live 100000 births in Uganda, this ratio is far high compared to the target of Sustainable Development Goal number 3 which aims at reducing global maternal mortality ratio to less than 70 per 100000 live birth by 2030 (WHO, 2017), This ratio remains because of the delays in accessing health care services which could be because of poor knowledge and attitude towards birth planning among other factors (WHO, 2017). Despite the interventions by the government of Uganda and other entities, including Bwindi Community Hospital to reduce the maternal mortality rate, many have failed due to poor birth preparedness (Laar Suuk Alexander, Affipunguh Kaba Pius, 2016).

Lack of adequate knowledge and poor attitude towards birth preparedness affects mothers from early seeking of reproductive health services which would reduce the maternal mortality that occurs due to the delays, because of not preparing. It's therefore important to assess the level of knowledge and attitude towards birth preparedness, when to start preparing, how to prepare and what to prepare. If this study is done the level of knowledge of pregnant mothers towards birth preparedness at BCH will be identified hence the problem of delays shall be eliminated. The findings of this study will also add to the available information and help create awareness on how to improve on the level of knowledge and attitudes towards birth preparedness, this study will also be used for the partial fulfillment for the award of diploma in nursing.

Limitations of the Study

The biggest number of the participants had low levels of education and could not read for them. However this was addressed by translating the questionnaires into Runyankole Rukiga for convenience and proper understanding during data collection.

There was limited literature in regard to the study topic. This was overcome by reviewing other literature from other countries, however, some components were only included in Ugandan guidelines not in other countries

Methodology

Study Design and Rationale

This was a hospital based cross sectional descriptive study which involved prime gravid mothers attending ANC at BCH in Kanungu district and it was mainly quantitative in nature. The focus of the study was on the current knowledge and attitude of prime gravid mothers towards birth preparedness. The principle investigator used an interviewer structured questionnaire. This implies that using the design that was cross sectional descriptive in nature, because it was not taking a long period of commitment from participants and was a one point one time study with no need for follow up the study participants.

Study Setting and Rationale

The study was carried out at BCH in the ANC department. BCH is found in Kanungu district, Western Uganda and it is the nearest hospital where the researcher usually goes for practical skills. The hospital is a private not for profit organization which serves approximately 80% of the population of Kanungu District in Western Uganda The district is bordered by Rukungiri District to the North and East, Kabale district to the South-East,

Kisoro district to the South –West and Democratic republic of Congo to the West. The district headquarters are located approximately 60 kilometers, by road, North West of Kabale , the largest Town in the sub region. It is approximately 580 Km from Kampala which is the capital city of Uganda. The hospital offers different services to the community among which are ANC ,maternal health services, child health services to mention a few. The ANC runs on daily basis except Sundays. The staff members of the ANC included, Midwives and a Sonographer.

Study Population

The study population consisted of all prime gravid mothers attending ANC for the second and third visit at BCH in Kanungu district during the month of July which was the period for data collection. These mothers were thought to be having important/ significant information on birth preparedness since they always discuss it during the first visit of ANC.

Sample Size Determination

The sample size was calculated using a standard formula by Kish and Leslie formula (1965) which states that;

$$N = \frac{t^2 p (1-p)}{d^2}$$

Where;

N=sample size

t=confidence interval, which is standard and it is 96%, on the log book, 96% is equal to 1.96

p=proportion of the population with knowledge about the topic. Since there is no available study done on the same or similar topic in Uganda, the researcher will make an assumption that 50% of the population is knowledgeable about the topic, and this is equal to 0.5

d= precision or percentage error permitted and it's also a standard which is equal to 0.5% and this is again equal to 0.005 on the log table.

$$\text{Therefore, } N = \frac{1.96 \times 1.96 \times 0.5 (1-0.5)}{0.005^2}$$

$$N = 384$$

Since the number of mothers attending the ANC in a month is less than 384, the researcher therefore used the modified Kish and Leslie formula.

Using, therefore, the modified Kish and Leslie formula for available sample size, this is

$$nf = \frac{n}{1 + n/N}$$

Where;

nf= desired sample size when the total population is less than 10,000

n=desired sample size when the total population is more than 10,000, which is 384

N=estimated number of prime gravid mothers attending ANC at BCH for the second and third visit within one month on average was 100

$$nf = \frac{384}{1 + (384/100)}$$

$$nf = 79.34$$

Therefore, this figure was increased to 80 for convenience and easy calculations of frequencies and percentages. The researcher used a sample size of 80 participants based on the calculations above.

Sampling Procedure and Rationale

The researcher used a purposive convenient sampling procedure to obtain participants who filled a consent form on every day of the week. Every prime gravid mother the researcher came across on every day was approached to participate in the study. Data collection took one month every day apart from Saturdays and Sundays; the researcher sampled 4 prime gravid mothers every day for 20 days which made a total of 80 participants. Different numbers ranging from one to twenty (1-20) were written on pieces of paper which was then folded and churned in a box. Each of the mothers attending second, third and fourth visit present on that day was allowed to randomly pick a single paper without replacement. Those who picked odd numbers were eligible for the study; this was done on every day of data collection. The researcher used this sampling technique because gave a chance for any mother to participate in the study without bias.

Inclusion Criteria

The study included all prime gravid mothers attending the second, third and fourth antenatal visit at BCH during the period of data collection (July 2018) and have consented to participate in the study.

Exclusion Criteria

This study excluded all the prime gravid mothers attending the first antenatal visit. They were excluded because the questions were not applying to them and they were not exposed to the teachings about birth preparedness during the current pregnancy. Also prime gravid mothers who did not consent were excluded from the study because filling of the questionnaires was voluntary but not forced.

Definition of Variables

Variable, is the characteristic of interest that the researcher would like to handle, observe and manipulate in the research.

Dependent variables

Knowledge on Birth preparedness: The understandings of prime gravid mothers regarding Birth preparedness in line with the definition and components,

Adequate knowledge about Birth preparedness: According to this study adequate knowledge meant scoring 50% and above on the definitions and components of birth preparedness.

Attitude on Birth preparedness: An expression of favor or disfavor towards birth preparedness (WHO, 2013) According to this study it will be defined in different categories as;

Attitude: The beliefs and feelings of the prime gravid mothers about birth preparedness in relation to the definition of birth preparedness, effect of birth preparedness to delivery outcome.

Good attitude on Birth preparedness: Agreeing with the statements that described the definition of Birth preparedness

Independent variable

Birth preparedness: Birth preparedness is the plan that a pregnant woman makes by identifying place of birth, means or transport, saving money for delivery expenses, identifying birth attendant and home care taker while in hospital. Birth preparedness involves not only the pregnant woman, but also her family, community and health staff (WHO. 2016).

Research Instrument and Rationale

The researcher used an interviewer structured questionnaire for data collection from the 80 sampled participants. The structured questionnaires was first designed and pre-tested for effectiveness before the real data collection was commenced. The interviewer structured questionnaires were chosen because they collected standardised data from the participants, and it was easy to collect data from a larger study population of 80 participants in a short period of one month. The questionnaires were interviewer administered because the majority of the study population were unable to read and write, thus they needed assistance in writing and reading. The questionnaire consisted of close ended questions written in English and then translated to Rukiga- Runyankole so as to cater for the population needs. The research questionnaire was structure from the MOH mother's health passport.

Data Collection Procedures

After approval of research proposal by IRB UNSB, introductory letter was obtained from the school, and presented to the IRB of BCH. Then a clearance letter was obtained from BCH, this was then presented to the head of department, ANC seeking for permission for data collection. The purpose of the study was explained to the head of department and other members who work in ANC department. After permission from the head of department, consent was signed by each of the participants then the researcher and the assistant proceeded with the data collection process. This was because of large number of participants and need for interpretation for those who were not able to read and write. The researcher was always present on each day of data collection to do the sampling procedures and emphasise ethical considerations for that matter.

Data Management

The filled questionnaires were collected from the research assistant, checked for completeness, accuracy, then edited, arranged and were stored in files which were only accessible by the principal researcher to ensure confidentiality.

Data Analysis

Data analysis was done using a computer Microsoft excel where data was coded entered into excel spread sheet. Data was then analysed and expressed as frequencies, percentages and then presented using frequency tables, pie charts, and bar graphs as it is shown in the next chapters.

Ethical Considerations

Research Proposal was presented to the institutional research review board (IRB) of Uganda Nursing School Bwindi to ensure protection of human subjects. After acceptance, the proposal was then presented to the IRB of Bwindi Community Hospital. An introductory letter was obtained from the administration, UNSB and then presented to personal assistant (PA) to Executive director (ED) of Bwindi Community Hospital seeking for ethical clearance towards data access and data collection as well. An informed consent was obtained from each participant after explaining the purpose of the study clearly and this was followed by signing of the informed consent form by the participants.

Anonymity was ensured through use of numbers (as explained in the sampling procedure) known only to the participants as opposed to their names. Confidentiality was highly guaranteed through restricting data access to only those who were directly involved in the study, namely the research supervisor, principal researcher and research assistant who participated in the data collection process. In addition, no study subject was coerced or forced while filling the questionnaires and they were all guaranteed freedom to decline participating in the study if they would not be interested to proceed. The participants were informed that their withdrawal from the study would not attract any penalty.

Results of the Study

Responses on Socio-demographic Characteristics of the Participants

Socio-demographic Responses	Frequency (N)	Percentage (%)
Age Bracket		
18-22	58	72.5
23-27	19	23.8
28 and Above	3	3.7
Marital Status		
Married	57	71.3
Single	20	25
Separated	3	3.7
Widowed	0	0
Level of Education		
Primary	43	53.7
Secondary	28	35
Tertiary	7	8.8
Never Attended	2	2.5
Occupation		
House Wife	13	16.3
Peasant	51	63.7
Civil Servant	10	12.5
Others	6	7.5
Religion		
Anglican	49	61.2
Catholic	23	28.8
Muslim	5	6.3
Others	3	3.7

Table 1: Distribution of responses on socio-demographic characteristics (N= 80)

According to the table above, a majority (72.5%) of the participants were within the age bracket of 18-22 years, with only (23.8%) within the age of 23-27 and the minority (3.7%) of them in the age bracket of 28 years and above. Table 1 also shows that majority (71.3%) of the participants were married, only (25%) of the participants were single and a significant low portion (3.7%) of the participants had separated. More than half of the participants (53.7%) had at least attended primary and a very low proportion (2.5%) had never attended school.

More than half (63.7%) of participants were peasants and very few (7.5%) of participants were in other occupational status such as business, tailoring among others but not necessarily civil servants. More still, more than half (61.2%) of the participants belonged to Anglican religion, this was followed by Catholic who accounted (28.8%) of the total participants, very few (6.3%) of the participants belonged to the Moslem denomination with a very low percentage (3.7%) belonging to other religions like full gospel, born again among others.

Responses on Antenatal History of the Participants

Statements of Responses on Antenatal History	Frequency (N)	Percentage (%)
Whether Has Ever Attended Antenatal Clinic		
Yes	80	100
No	0	0
Number of Antenatal Visit Including the Current Visit		
Two	14	17.5
Three	20	25
Four	32	40
Above Four	14	17.5

Table 2: Distribution of responses on antenatal history (N= 80)

According to Table 2 above, All (100%) of the participants had ever attended ANC, among these less than half (40%) of the participants had attended antenatal four times, only (25%) attended three times and an equal percentage (17.5%) of participants had attended two and above four times.

Responses on Knowledge about Birth Preparedness of the Participants

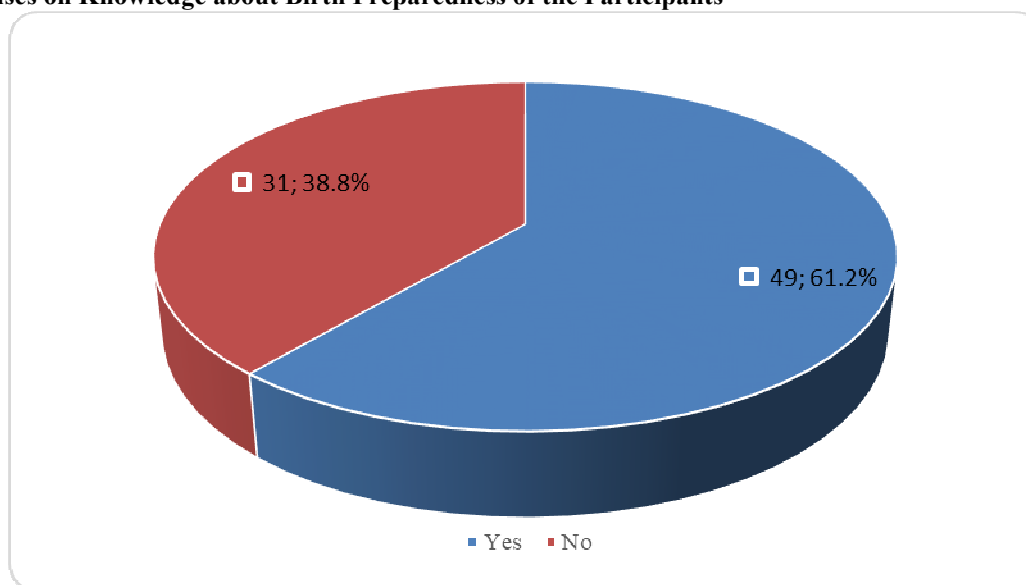


Figure 1: Distribution of responses on whether participants have ever heard about birth preparedness. (N=80)

Figure 1 above shows that majority 49 (61.2%) had heard about birth preparedness; however a significant number 31(38.8%) of participants had never heard about birth preparedness.

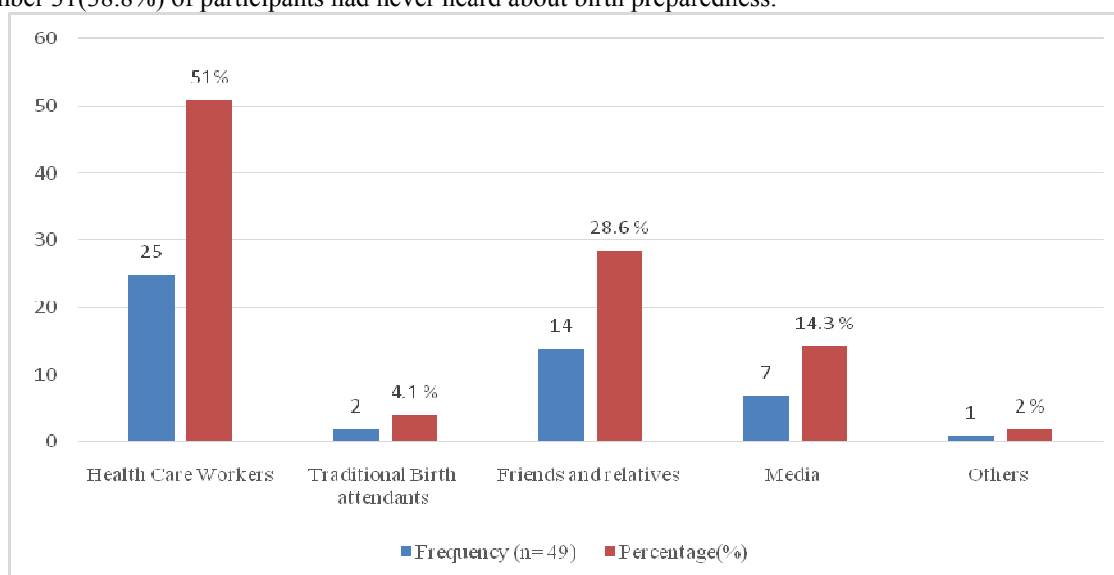


Figure 2: Distribution of responses for the source of information (n=49).

According to Figure 2; majority (51%) heard about birth preparedness from the health care workers,

minority (28.6%) from friends and relatives, a significant minority (14.3%) of the participants got information from the media with, very small number (4.1%) of participants got information about birth preparedness from traditional birth attendants and a least number of (2%) heard about birth preparedness from other sources apart from those above.

Variable for components of birth preparedness	Frequency (n= 49)	Percentage (%)
Things that a pregnant woman should do in preparation for birth		
Identify the health facility	48	97.9
Identify skilled provider	18	36.8
Save money for delivery	35	71.4
Identify the means of transport	15	30.6
Save money for transport	24	49
Prepare clean items for delivery	41	83.7
Requirements that a mother must carry to the hospital for delivery		
Sanitary pads	39	79.5
Baby clothing	47	95.9
Money for emergencies	0	0
Basin	30	61.2
Soap	18	36.8
Sugar and tea leaves	15	30.6
Clean clothing for a mother	40	81.6
Statement for Additional Requirements		
4 pairs of gloves	2	4.1
3 pieces of string	3	6.1
Gauze	9	18.4
Plastic sheet	44	89.8
Cotton wool	18	36.7
Needles and Syringes	1	2
Surgical blade	23	47

Table 3: Distribution for responses on components of birth preparedness (n=49).

From table 3 above a majority (97.9%) of the participants knew identification of a health facility as a requirement of birth preparedness, (83.7%) knew preparing clean items for delivery, while (71.4%) knew saving money for delivery as things to be prepared for birth. Less than half (49%) of the participants knew saving money for transport, a significant low percentage (36.8%) of participants knew identification of a skilled provider, while a minority (30.6%) knew identification of the means of transport as things to be done by pregnant mothers in preparation for birth.

From table 3 above majority (95.9%) of the participants mentioned baby's clothes as one of the "MUST" requirements that a pregnant mother must go with during delivery, majority (81.6%) of the participants knew that it is a must for a pregnant mother to carry her clean clothing during delivery, majority (79.5%) mentioned sanitary pads while most (61.2%) mentioned that it is a must for the pregnant mother to carry a basin. Most (36.8%) of participants mentioned soap as one of the must to carry requirements, minority (30.6%) of the participants knew that a pregnant mother must go with sugar and tea leaves during delivery while none (0%) of the participants mentioned money for emergency as a requirement that a pregnant mother must take to the hospital for delivery.

More still from table 3 above majority (89.8%) of the participants mentioned that in addition to other requirements a mother should also carry a plastic sheet when during labour. Less than half (47%) mentioned surgical blade, only (36.4%) mentioned that it was important to carry cotton. A significantly low (18.4%) mentioned gauze as an additional requirement. Only (6.1%) mentioned 3 pieces of string as additional requirement and very few (4.1%) of the participants mentioned 4 pairs of gloves as additional requirement to be carried by a pregnant mother during labor.

Variable for components of birth preparedness	Frequency (n= 49)	Percentage (%)
Knowledge level on birth preparedness		
Adequate Knowledge (score of 50% and above)	22	44
Inadequate knowledge (score of less than 50%)	27	56

Table 4: Overall level of knowledge of respondents towards birth preparedness

Overall level of knowledge on birth preparedness was assessed on whether respondents had adequate knowledge if they scored 10 and above (50% and above) on all the components of birth preparedness. Inadequate knowledge if they scored less than 10 (less than 50%) on all the components of birth preparedness.

Therefore according to table 4 above more than half (56%) of respondents had inadequate knowledge on birth preparedness while less than half (44%) of respondents had adequate knowledge on birth preparedness.

Variable for components of birth preparedness	Frequency (n= 49)	Percentage (%)
Knowledge level on things to be done in preparation for birth		
Adequate Knowledge (score of 50% and above)	29	59
Inadequate knowledge (score of less than 50%)	20	41
Knowledge level on requirements that a mother MUST go with to the hospital for delivery		
Adequate Knowledge (score of 50% and above)	32	65
Inadequate knowledge (score of less than 50%)	17	35
Knowledge level on additional supplies that a mother should carry to the health facility during labor		
Adequate Knowledge (score of 50% and above)	4	8
Inadequate knowledge (score of less than 50%)	45	92

Table 5: Knowledge on components of birth preparedness

From table 5 above more than half (59%) of participants had adequate knowledge while less than half (41%) of the participants had inadequate knowledge on things to be done by a pregnant mother in preparation for birth. On the other hand most (65%) of the respondents had adequate knowledge for the must to carry requirements by the pregnant mother going for delivery while only (35%) had inadequate knowledge for the must to carry requirements by the pregnant mother going for delivery.

In relation to additional requirements, very few (8%) of respondents had adequate knowledge on the additional requirement to be carried by a pregnant mother to the health facility during labor with a majority (92%) of respondents having inadequate knowledge on additional requirements to be carried by a pregnant mother to the health facility during labor.

Attitude of Respondents toward Birth Preparedness

Statement on Birth Preparedness	Frequency (n=49)	Percentage (%)
A pregnant mother preparing to deliver should know their blood group(n=49)		
Agree	37	75.5
Disagree	12	24.5
A pregnant mother preparing to deliver should know her Expected Date of Delivery (n=49)		
Agree	44	89.7
Disagree	5	10.2
A pregnant mother preparing to deliver should test for HIV(n=49)		
Agree	48	98
Disagree	1	2
A pregnant mother preparing to deliver should deliver in a hospital(n=49)		
Agree	48	98
Disagree	1	2
A pregnant mother preparing to deliver should identify a family planning method to be used after delivery(n=49)		
Agree	16	32.7
Disagree	33	67.3
A pregnant mother preparing to deliver should know how labour starts(n=49)		
Agree	39	79.6
Disagree	10	20.4
A pregnant mother preparing to deliver should identify a blood donor (n=49)		
Agree	6	12.2
Disagree	43	87.8
A pregnant mother preparing to deliver should identify a care taker to remain at home(n=49)		
Agree	43	87.8
Disagree	6	12.2
A pregnant mother preparing to deliver should identify a person who will escort to skilled care(n=49)		
Agree	49	100
Disagree	0	0

Table 6: Distribution of responses on the attitude towards birth preparedness

According to Table 6 majority (75.5%) agreed that a pregnant mother preparing to deliver should know her blood group while minority (24.5%) disagreed with the statement that a pregnant mother should know her blood group. Also the same Table shows that majority (89.7%) agreed that a pregnant mother should know her Expected date of delivery with the less (10.2%) participants disagreed with the statement.

More still in the same Table 6 majority (98%) agreed that a pregnant mother should test for HIV and should deliver in a hospital

According to the same table, more than half (67.3%) of respondents disagreed that a mother should choose a family planning method and less than half (32.7%) agreed that a pregnant mother should choose a family planning method to use after delivery.

The same table also showed that a majority (79.6%) of participants agreed that a pregnant mother should know how labor starts while (20.6%) disagreed.

Majority (87.8%) of the participants disagreed that a pregnant mother should identify a blood donor while minority (12.2%) agreed with the same statement. The study also showed that significant majority (87.8%) of participants agreed that a pregnant mother should identify a care taker to leave at home and very few (12.2%) disagreed.

According to the same table all (100%) participants agreed that a pregnant mother should identify a care taker to escort her to skilled care during labor. The findings show that generally a majority of the respondents had positive attitude towards birth preparedness. However the research also noticed that there were two components of birth preparedness where participants had negative attitude. These components include identifying a family planning method to be used after delivery in which a majority (67.3%) disagreed with the statement and identifying blood donor in which a majority (87.8%) disagreed with the statement.

It can therefore be concluded that participants have negative attitude towards identification of the family planning method to be used after delivery and identification of blood donor.

Discussion, Conclusion and Recommendations

Introduction

The chapter presents the discussion, conclusion, recommendations. Discussion has been presented under subheadings such as, demographic characteristics of the study, knowledge about birth preparedness and attitude towards birth preparedness among prime gravid mothers attending antenatal clinic at BCH.

Discussion of Study Findings

Knowledge of prime gravid mothers towards birth preparedness.

According this study more than half (61.2%) of the prime gravid mothers had ever heard about birth preparedness this is in agreement with a community based cross sectional study done in North west Ethiopia where majority (72%) of the participants had ever heard about birth preparedness (Bitew.Y,Awoke.W,Chekoli.S,2016) . The above findings are in contradiction with a descriptive study done to assess the knowledge towards birth preparedness among prime gravid mothers attending ANC in three different hospitals of Mangalore which found out that only(15%) heard about birth preparedness(Bangera N.L,2013). The majority of the participants had ever heard about birth preparedness because they had ever attended ANC, and because the hospital has community health nurses who go to educate mothers in their communities about birth preparedness.

Pregnant mothers heard about birth preparedness from various sources among which include, family members, media, friends and health care worker. In the current study findings only a half(51%) of the participants got to know about birth preparedness from health workers and only(49%) from other sources this is contrary to a co-relational descriptive study done on knowledge and practice towards birth preparedness among prime gravid mothers in selected urban hospitals of Ambala ,Haryana in India which showed that a majority (85%) of prime gravid mother got the information regarding birth preparedness from health care workers while only (14.3%) heard about birth preparedness from other sources (Chetna & Sheoran, 2016). The study finding is also in contradiction with study done in north west Ethiopia which shows that a majority (82.9%) of the participants heard about birth preparedness from health workers (Bitew.Y ,Awoke ,Chekoli.S,2016). The results from this current study on the source of information is significant since all mothers had ever attended ANC and this study being a hospital based study, where pregnant mothers interviewed were attending second visit and above, these mothers are expected to have been educated about birth preparedness during the first and subsequent visits. The results therefore put into doubt the reliability of health education services mothers get from ANC in relation to birth preparedness.

The study findings also shows that majority (97.9%) of the participants had knowledge about identification of the health facility as a component of birth preparedness. This study is in line with the study conducted by Meheta &Sheoran, (2016) on assessment of knowledge and practice towards birth preparedness in India which showed that (95%) of responses had knowledge on identifying health facility. However the study findings are not

in line with the study done by Chekoli, Awoke & Bite (2016) on assessment of birth preparedness and complication readiness practice and associated factors among pregnant women in Ethiopia which showed that only (44%) of the participants had knowledge about identification of health facility. This research finding of (97.9%) could be because the research was conducted in a health facility among mothers attending their second, third and fourth visits, they could have heard health education on identification of health facility for delivery as one of the components of birth preparedness in their previous visits.

From this study findings only (36.8%) of participants knew identification of a skilled provider as a component of birth preparedness. This is in line with the study findings done on assessment of magnitude and factors associated with birth preparedness in Adama town Ethiopia which revealed that only (20.1%) of the participants knew identification of skilled provider as one of the components of birth preparedness (Mekuaninte, Worku & Tesfaye 2016). However this study finding is in contradiction with a community based study findings done on factors associated with birth preparedness and complication readiness in Ethiopia which showed that a majority (97.2%) of the participants knew identification of a skilled provider as one of the components of birth preparedness (Andarge, Nigussie & Wondafrash, 2017). The minority (36.8%) of the participants on identifying a skilled provider could be due to lack of education about the subject during the first Antenatal visits.

More so according to this current study a majority (71.4%) had knowledge on identification of money for delivery as one of the components of birth preparedness. This study findings is in line with a community based study findings on factors associated with birth preparedness and complication readiness in E Ethiopia, which indicated that only a half (54.2%) had knowledge about saving money for delivery (Andarge, Nigussie & Wondafrash, 2017). This could be because pregnancy is always valued and people save money for its maintenance and in preparation for any complication. However it could also be because they were educated about preparing money for hospital delivery.

According to this study (30.6%) of the participants had knowledge on identification of means of transport as one of the things to be done by a pregnant mother in preparation for birth. This is in line with a cross sectional quantitative study done to assess birth preparedness complication readiness, knowledge and practice among pregnant mothers in Nigeria which revealed that only (30.4%) of participants knew identification of transport as a component of birth preparedness (Nkwocha, Maduka & Diogu, 2017). However in a cross sectional facility based study on assessment of birth preparedness and skilled attendance at birth in Nepal, only (2.3%) of the participants had knowledge on identifying means of transport as a component of birth preparedness (Karkee, Lee & Binns, 2013). The difference in the results could be due to inadequate education on this component to pregnant mothers and also low levels of education.

More so in this study majority (83.7%) of the participants had knowledge on preparing clean items for delivery as a must thing to do by a mother in preparation for birth. This is in line with the study done to assess birth preparedness complication readiness, knowledge and practice among pregnant mothers in Nigeria which concluded that majority (89.9%) of the mothers had knowledge about preparing clean items for delivery (Nkwocha, Maduka & Diogu, 2017). The majority of participants had knowledge on this component because labor is considered as an emergency and so a mother must prepare in advance with all the necessary items like clothes, cups, flask among others which will be used in hospital. However it could also be because of the prior education about preparation of clean items for delivery.

In the current study all (0%) had no knowledge on identifying emergency money for delivery. This is in contradiction with the study done by Affipunguh & Laar (2016) which revealed that more than half (57.5%) of the participants had knowledge on identification of money for emergency as one of the requirements that a pregnant mother must go with to the hospital during delivery. The current study finding is also in contradiction with a community based study among pregnant mothers which revealed that half (54.2%) of the participants knew saving money for emergency as one of the things a pregnant mother should do during pregnancy in preparation for birth (Andarge, Nigussie & Wondafrash, 2017). This showed inadequacy in education to pregnant mothers. Also because majority of the participants had only completed primary and their level of literacy was very low.

WHO together with the Ministry of health Uganda (MOH) launched the mamma kit programme which had most of the requirements, including (sanitary pads, soap, sugar and tea leaves, baby clothing, basin, gloves, gauze, plastic sheet, cotton wool, needles and syringes and surgical blade) in addition to other birth preparedness components a mamma kit would be included (WHO 2011 and MOH, 2011). Generally there is limited research done on other requirements, including sanitary pads, soap, sugar and tea leaves, baby clothing, basin, gloves, gauze, plastic sheet, cotton wool, needles and syringes and surgical blade, this is because basically the above requirements are for Uganda birth preparedness guideline. However this differs with the guideline in other countries which does not include the above requirements these components are not included in their guidelines.

Attitude towards Birth Preparedness

The study findings shows that majority (98%) of the participants agreed that every pregnant mother preparing to deliver should test for HIV. This study findings are not in line with a study findings done in a descriptive facility based study among pregnant women attending antenatal at tertiary care hospital in India which showed that, only (27%) agreed that HIV testing is very important thing that a mother should do during pregnancy in preparation for birth (Sagili , Kumar, Lakshminarayanan , Papa & Abi , 2015). The current study finding is also not in line with a cross sectional study done on assessment of birth preparedness among pregnant women maternity in Fortaleza state of Ceará North Eastern Brazil which showed that majority (80.5%) of the participants did not support testing for HIV as one of the components of birth preparedness (Enferm & Paulos, 2014). The difference in the above results could be because these mothers had attended previous antenatal visit and they could have received the first antenatal package of which HIV testing is among also because the study was hospital based.

The study findings also revealed that majority (75.5%) of the participants had a good perception on knowing the blood group during pregnancy as key during birth preparation. However this is contrary to a hospital based cross sectional study done on examination of the knowledge, attitude and behaviors of pregnant women on screening tests made during pregnancy in Van Turkey, which showed that only(39.3%) of the participants differed with the statement about knowing the blood group as key during birth preparation (Avci & Oner,2018). The majority (75.5%) of the participants had good perception because they were exposed to the information about the importance of knowing their blood group during the first visit.

The study findings showed that only (12.2%) of the participants agreed that a pregnant mother should identify a blood donor this is in line with the study done on knowledge towards birth preparedness and complication readiness among pregnant mothers attending ANC at Mizan Aman hospital in south western Ethiopia which showed that only (7%) agreed that it is important for a pregnant mother to identify a blood donor during pregnancy (Andualem, 2015). This majority could be because mothers were not aware about this component.

All (100%) of the participants agreed that identifying a care taker is very key during birth preparedness, these findings are not in line with a descriptive cross sectional survey both qualitative and quantitative survey done on birth preparedness among pregnant women in Tharaka Nithi count Kenya, a majority (57%) had a good perception in regard to having care taker and agree that indeed it is important to have a caretaker during delivery (Makanyi & Gitonga , 2014) the above findings could be because of the good ANC services offered in this study facility.

This study findings also showed that majority (89.7%) of the participants agreed that every pregnant mother should know their expected date of delivery. This is in contradiction with a facility based study done on assessment of birth preparedness in Urban Tanzania which showed that only (7%) of the participants agreed that every mother should know their expected date of delivery. The above findings could be due to the continuous education on components of birth preparedness.

Conclusion

In conclusion majority had never had about birth preparedness, also the study finding revealed that majority of participants had adequate knowledge on birth preparedness components, however participants still lacked knowledge on the Must to carry requirements which included money for emergency (0%),sugar and tea leaves (30.6%), soap(36.8%) and on additional requirements of birth preparedness including 4 pairs of gloves(4.1%),3 pieces of string(6.1%), and needles and syringes (2%) . Attitude of participants was good .however participants had poor attitude towards identification of family planning method to be used after delivery and identification of blood donor. Therefore much emphasis should be put on health education about birth preparedness during the first ANC visits and to continue reviewing the birth preparedness plan.

Recommendations

Basing on the study findings recommendations so as to create awareness about birth preparedness and its components as a recommendation by WHO and MOH, have been drawn as follows:

All health care workers should always educate and keep reviewing the birth plan during every ANC visit.

There is the need to equip mothers with the correct information regarding BPP and more emphasis on the components of birth preparedness especially identifying blood donor, and family planning method to use after delivery as well as money for emergency.

Prime gravid mothers should also be focused on, mothers with low level of education, teenage mothers, those who failed to fully attend the recommended ANC visits and those who did not receive any information on birth preparedness during pregnancy and after delivery should ensure that updated guidelines on birth preparedness are available in all areas more especially in the antenatal clinic where mothers are reviewed from and mothers waiting hostel.

There is a need to focus on community-based interventions. Ensure that there is follow up of mothers in their homes by community Nurses.

More VHTs and/or TBAs should be trained and included into the existing local health systems to bridge knowledge gaps where necessary since, a small proportion of mothers still of home deliveries despite the existence of the health insurance scheme. Similar studies in the community need to be carried out to determine knowledge, attitude and practices regarding birth preparedness to generate more supportive evidence.

References

- WHO., (2016). World health Statistics 2016: Monitoring Health for the SDGs, Sustainable Development goals. *World Health Organization*.
- Henok A., (2015) Knowledge towards Birth Preparedness and Complication Readiness among Mothers Who Attend Antenatal Care at Mizan-Aman General Hospital, South West Ethiopia.
- Asp G., et al. (2014). Associations between Mass Media Exposure and Birth Preparedness among Women in Southwestern Uganda: a Community-Based Survey. *Global health action*, 7(1), 22904.
- Kabachenga J.K., (2011) of Obstetric Danger Signs and Birth Preparedness Practices among Women in Rural Uganda. *Reproductive health*, DOI:10.1186/1742-4755-8-33.
- Kalipeni E., Iwelunmor. J & Grigsby-Toussaint D., (2017). Maternal and Child Health in Africa for Sustainable Development Goals Beyond 2015, *Global Public Health*,12:6, 643-647, DOI: 10.1080/17441692.2017.1304622.
- Turinawe E. B., et al., (2016). Traditional birth attendants (TBAs) as potential agents in Promoting Male Involvement in Maternity Preparedness: Insights from a Rural Community in Uganda. *Reproductive Health*, 13, [24]. DOI: 10.1186/s12978-016-0147-7
- Kariuki, F.W., & Seruwagi, G.K. (2016). Determinants of Male Partner Involvement in Antenatal Care in Wakiso District , Uganda Kinuthia. DOI: 10.9734/BJMMR/2016/2805
- Ifeanyichukwu O. A., Obehi O. H., & Richard K., (2016). Birth Preparedness and Complication Readiness Attitude and Level of Preparedness among Pregnant Women of Benin city, Edo state , Nigeria. *British journal of medicine and medical research*. DOI:10.9734/BJMMR/2016/25127
- Mbonnu,Ogunna.E (2018), Knowledge, Attitude and Practice of Birth Preparedness and Complication Readiness Amongst Pregnant Women in Eti-osa Lga, Lagos *Universal Journal of Public Health* 6(4): 220-230, <http://www.hrpub.org> DOI:10.13189/ujph.2018.060408
- Maroof S., et al., (2017). Birth Preparedness and Complication Readiness: A Cross Sectional Survey from Expectant Mothers Visiting a Rural Health Center. *Pakistan Armed Forces Medical Journal*, (6), 952-957.
- Bitew, Y., Awoke, W., & Chekol, S. (2016). Birth preparedness and complication readiness practice and associated factors among pregnant women, Northwest Ethiopia. *International scholarly research notices*, 2016.
- Mehta C., Sheoran P., (2016). Assessment of birth preparedness in terms of knowledge and practices among prime gravid mothers in selected hospitals of Ambala, Haryana. *Int J Health Sci Res*. 2016; 6(4):288-291.
- Nkwosa C. R., Maduka O., & Diorgu F., C., (2017). Birth Preparedness and Complication Readiness Knowledge and Practice by Pregnant Women in a Cottage Hospital Nigeria. *J Gynec Obstet*, 1, 014.
- Affipunguh PK, Laar AS.(2016) Assessment of Knowledge and Practice towards Birth Preparedness and Complication Readiness among Women in Northern Ghana: a cross-sectional study. *Int J Sci Rep* DOI: <http://dx.doi.org/10.18203/issn.2454-2156.IntJSciRep20161878>
- Mbonu, Ogonna E., (2018) Knowledge, Attitude and Practice of Birth Preparedness and Complication Readiness amongst Pregnant Women in Eti-osa Lga, Lagos *Universal Journal of Public Health* 6(4): 220-230, <http://www.hrpub.org> DOI: 10.13189/ujph.2018.060408
- Andarge E., Nigussie A., & Wondafrash M., (2017) Factors associated with birth preparedness and complication readiness in Southern Ethiopia: a community based cross-sectional study Andarge et al. *BMC Pregnancy and Childbirth* 17:412 DOI 10.1186/s12884-017-1582-3
- Sagili, H., Kumar, S., Lakshminarayanan, S., Papa, D., & Abi, C. (2014). Knowledge of HIV/AIDS and Attitude Toward Voluntary Counselling and Testing Among Antenatal Clinic Attendees at a Tertiary Care Hospital in India. *Journal of obstetrics and gynaecology of India*, 65(2), 104-110: DOI 10.1007/s13224-014-0606-4
- Brasil, R. F. G., Moreira, M. M. C., Teles, L. M. R., Damasceno, A. K. D. C., & Moura, E. R. F. (2014). Level of Knowledge, Attitudes and Practices of Puerperal Women on HIV Infection and its Prevention. *Acta Paulista de Enfermagem*, 27(2), 133-137: doi.org/10.1590/1982-0194201400024
- Avci D. K., & Oner E., (2018). Examination of the knowledge, attitude and behaviors of pregnant women on screening tests made during pregnancy DOI: 10.5505/ejm.2018.
- Mekuaninte, A. G., Worku, A., & Tesfaye, D. J. (2016). Assessment of magnitude and factors associated with birth preparedness and complication readiness among pregnant women attending antenatal clinic of Adama town health facilities, Central Ethiopia. *European Journal of Preventive Medicine*, DOI:

10.11648/j.ejpm.20160402.12.

- Hailemariam, A., & Nahusenay, H. (2016). Assessment of Magnitude and Factors Associated with Birth Preparedness and Complication Readiness among Pregnant Women Attending Antenatal Care Services at Public Health Facilities In Debrebirhan Town, Amhara, Ethiopia, 2015. *Global Journal of Medical Research*. Available at :<https://medicalresearchjournal.org/index.php/GJMR/article/view/1131>
- Begashaw, B., Tesfaye, Y., Zelalem, E., Ubong, U., & Kumalo, A. (2017). Assessment of Birth Preparedness and Complication Readiness among Pregnant Mothers Attending Ante Natal Care Service in Mizan-Tepi University Teaching Hospital, South West Ethiopia DOI: 10.4172/2090-7214.1000257
- Ndeto, J. K., Barasa, S. O., Murigi, M. W., Keraka, M. N., & Osero, J. O. (2017). Utilization of individual birth plan during pregnancy and its determinants in Makueni County Kenya. *International Journal Of Community Medicine And Public Health*, 5(1), 30-37. DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20175759>
- Ekabua, J. E., Ekabua, K. J., Odusolu, P., Agan, T. U., Iklaki, C. U., & Etokidem, A. J. (2011). A wareness of birth preparedness and complication readiness in south eastern Nigeria. *ISRN obstetrics and gynecology*, 2011. DOI: 10.5402/2011/560641
- World health statistics 2017: monitoring health for the SDGs, Sustainable Development Goals ISBN 978-92-4-156548-6 *World Health Organization 2017*
- Patel, N. A., Mehta, J. P., Unadkat, S. V., & Yadav, S. B. (2017). Birth preparedness: studying its effectiveness in improving maternal health in urban slums of Jamnagar, Gujarat. *International Journal Of Community Medicine And Public Health*, 4(12), 4569-4576.