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Descriptive Cross-Sectional Study on Knowledge and Practices on Birth Preparedness and Complication Readiness among Primigravida Women Attending Uasin Gishu Sub County Hospitals.

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Abstract

Background:
Birth preparedness refers to the actions taken by pregnant women and their families to ensure a safe childbirth and prepare for potential emergencies. The goal is to reduce global maternal mortality to less than 70 per 100,000 live births. In Kenya, the maternal mortality ratio is 362 per 100,000. Many pregnant women, including primigravidae, lack knowledge about birth preparedness and complication readiness (BP/CR).

Objectives:
This study aimed to determine knowledge and practices regarding BP/CR among primigravida women attending Uasin Gishu sub-county hospitals. Specific objectives included assessing knowledge and practices of BP/CR and identifying factors associated with BP/CR among primigravidae.

Methods:
A descriptive cross-sectional study using quantitative methods was conducted. The target population consisted of primigravida women aged 15-49 years who attended antenatal clinics in Uasin Gishu. A sample of 264 women was selected using systematic sampling. Data were analyzed using descriptive statistics and Chi-square tests to assess associations between variables at a 95% confidence interval.

Results:
Notably, 72.7% had not received BP/CR information from midwives. However, 70.8% knew labor could start before the due date, and 66.3% were aware of the potential need for blood transfusion. Preparations included saving for transport (73.5%), identifying delivery locations (76.1%), and birth companions (71.6%). Factors such as age, level of education, income, and trimester values were statistically significant, showing an effect on the BPCR.

Conclusion:
Gaps in preconception clinic attendance and BP/CR information from midwives were noted. Nevertheless, awareness of EDD and preparation for emergencies were high. Statistical analyses highlighted the need for targeted education for younger primigravidae.

Recommendations:
Enhance BP/CR education during antenatal visits, promote preconception clinics, increase antenatal visit attendance, facilitate access to blood donors, and ensure financial and transportation support for low-income women.

***Keywords**: knowledge, practices, birth preparedness, complication readiness, primigravida women*
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Introduction

Based on the "Three Delays Model" by Thaddeus and Maine, which identifies delays in seeking, reaching, and receiving care as key contributors to maternal deaths. [1] Birth Preparedness and Complication Readiness (BPCR) is a globally endorsed strategy aimed at reducing maternal mortality by ensuring timely access to skilled maternal and neonatal care.[2] BPCR entails creating a birth plan that includes identifying a healthcare facility, skilled birth attendants, emergency transportation, funds for expenses, and a blood donor if needed. [1]

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In Kenya, the 2020 KDHS survey found that while 98% of women received ANC, only 66% attended four or more visits, falling short of WHO's recommended eight visits. [3]Despite the fact BPCR being integrated into antenatal care (ANC) in countries like Kenya and Tanzania, its adoption remains low in East Africa. Studies show that only 22.3% of women in Rwanda,[4] 28% in Kenya's West Pokot,[5] and 28.3% in Uganda are well-prepared for birth. [6]Community-based studies in Ethiopia and Tanzania report slightly higher preparedness (25.7%–58.4%).[7,8]

Low education levels, inadequate counseling during ANC, and chronic maternal mortality (362 per 100,000 live births in Kenya) are also barriers to BPCR. Research in Addis Ababa discovered that while 84.1% of women identified pregnancy danger signs,[6] just 26.8% were aware of them. Financial preparation, such as putting aside funds for delivery, was common in some regions (e.g., 92.4% in Nigeria) but lower in Kenya and Tanzania (65% and 73%, respectively).[5, 8,9]

Sustainable Development Goals (SDGs) provides a radical new agenda for maternal health aimed at eliminating preventable maternal mortality; aim 3.1 of SDG 3 is to reduce the global Maternal Mortality Rate (MMR) to less than 70 per 100,000 live births by 2030. To achieve this global objective, countries must reduce their MMR by at least 7.5% each year between 2016 and 2030, more than tripling the 2.3% annual rate of decline observed worldwide between 1990 and 2015. The SDG also includes a supplementary national target that no country should have an MMR shall exceed 140 per 100,000 live births.[10,11]

Male involvement, community health workers, mobile messaging, and pregnant mothers' conferences should all be considered when improving BPCR. Knowledge of abnormal occurrences is a key predictor of preparedness, highlighting the importance of increased education and counseling during ANC to ensure that women and their families are prepared for childbirth and emergencies.

Purpose of the study

- This study aims to assess the knowledge, practices, and factors influencing Birth Preparedness and Complication Readiness (BPCR) among primigravida women attending antenatal clinics in Uasin Gishu Sub-County hospitals. By identifying gaps in awareness, preparedness, and emergency planning, the study seeks to provide insights into the effectiveness of current antenatal education and BPCR interventions. The findings will contribute to improving maternal healthcare strategies, enhancing BPCR education, and ultimately reducing maternal and neonatal complications in the region.

Methods

Study Design

This study employed a descriptive cross-sectional design using a quantitative approach to assess knowledge, practices, and factors influencing birth preparedness and complication readiness (BPCR) among primigravida women.

Study Setting

The study was conducted in Uasin Gishu Sub-County hospitals, specifically at Kapsoya Health Centre, West Maternity, and Uasin Gishu County Hospital. These facilities were selected because they provide antenatal care (ANC) services to a large population of pregnant women.

Study Population

The target population consisted of primigravida women aged 15-49 years attending antenatal clinics at the selected healthcare facilities.

Sample Size

A total of 264 primigravida women were selected for the study. Consecutive sampling was used to select participants attending ANC, and proportionate sampling was applied to distribute the sample size among the facilities.

Bias

To minimize bias, systematic sampling was used to ensure a representative selection of participants. Additionally, standardized questionnaires and structured interviews were administered to ensure consistency in data collection.

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Data Measurement/ Collection

Data were collected using a self-designed structured questionnaire, which included:

- Part 1: Sociodemographic characteristics
- Part 2: Obstetric information
- Part 3: Birth preparedness knowledge
- Part 4: Complication readiness
- Part 5: Family support

The questionnaire was administered by trained research assistants through face-to-face interviews to ensure clarity and completeness.

Statistical Methods

Data were analyzed using SPSS Statistics 27. Descriptive statistics (percentages, means, and frequencies) were used to summarize data. A Chi-square test (at a 95% confidence interval) was used to assess associations between BPCR knowledge, practices, and influencing factors. Since the data were not normally distributed, a nonparametric Kruskal-Wall is test was performed for further analysis. Variables with a p-value <0.05 were considered statistically significant.

Ethical Consideration

Ethical approval was obtained from the relevant institutional review board. Permission was sought from the County Government of Uasin Gishu and hospital administrations. Informed consent was obtained from all participants before data collection, ensuring voluntary participation, confidentiality, and anonymity throughout the study.

Results

Participants

A total of 300 primigravida women attending antenatal clinics at Uasin Gishu Sub-County hospitals were assessed for eligibility. Of these, 280 were eligible based on inclusion criteria (age 15–49 years, first pregnancy, attending ANC). .16 declined participations due to time constraints or personal reasons.264 participants consented and were included in the study. All 264 participants completed the questionnaire and were included in the final analysis.

Flow Diagram for Study Participants

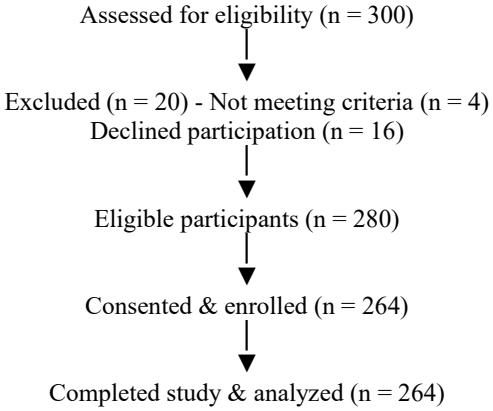

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Table 1: Socio-Demographic Characteristics of Participants

Characteristic	Frequency (n = 264)	Percentage (%)
Age (years)		
15–19	31	11.7
20–24	143	54.2
25–29	82	31.1
30–34	8	3.0
Education Level	**Frequency (n = 264)**	**Percentage (%)**
Primary	6	2.3
Secondary	90	34.1
College/TVET	126	47.7
University	42	15.9
Marital Status	**Frequency (n = 264)**	**Percentage (%)**
Married	146	55.3
Single	118	44.7

Descriptive Data

Table 1: majority of respondents 154 (5402%) were between 20 and 24 years old while the least number of respondents 8 (3%) were between 30 and 34 years. Significant proportion 126 (47.7%) had gone to college or TVET while 6(2.3%) had primary school level of education. 146(55.3%) were married.

From table 2, 96(36.4%) had between 2 and 3 antenatal clinics. Majority 244(92.4%) had not attended preconception clinics. 192(72.7%) respondents reported they had not been taught about BPCR during visits to antenatal clinics while 72(27.3%) were taught on BPCR.

Table 3: majority of respondents 70.5% were aware that labor may start before due date. 66.3% were aware of the need for blood transfusion and 76.1% had identified place of delivery with all preferring hospital for delivery. Majority 71.6% were aware of expected date of delivery (EDD) and 76.1% were aware about abnormal occurrences in pregnancy.

Table 4: Majority 73.5% had saved funds for transport, 68.2% had chosen a means of transport with taxi 63.9% being the most preferred mode. Significant proportion 71.6% had identified birth companion and 54.2% had packed bag in preparation for delivery. Majority 73.9% had emergency contacts that they would call in case of any abnormal occurrence during pregnancy.

Table 2: Clinical Characteristics of Participants

Clinical Characteristic	Frequency (n = 264)	Percentage (%)
ANC Visits Attended		
1 visit	84	31.8
2–3 visits	96	36.4
4+ visits	84	31.8
Attended Preconception Clinic		
Yes	20	7.6
No	244	92.4
Taught About BPCR During ANC		
Yes	72	27.3
No	192	72.7

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Table 3: Knowledge on BPCR Among Participants

Knowledge BPCR	Yes (%)	No (%)
Awareness that labor may start before due date	70.5	29.5
Aware of need for blood transfusion	66.3	33.7
Identified place of delivery	76.1	23.9
Awareness on expected date of delivery	71.6	28.4
Awareness about abnormal occurrences in pregnancy	76.1	23.9

Table 4: Practices on BPCR Among Participants

Practices on BPCR	Yes (%)	No (%)
Saved funds for transport	73.5	26.5
Chose mode of transport	68.2	31.8
Identified birth companion	71.6	28.4
Packed bag in preparation for delivery	54.2	45.8
Having emergency contact	73.9	26.1

Factors associated with BPCR

From table 5, showed factors such as age, level of education, income, ANC visits, marital status that affected knowledge and practices on BPCR

From table 6, showed factors such as age, level of education, income, ANC visits, marital status that affected knowledge and practices on BPCR

Statistically significant associations ($p < 0.05$) were found for age, education level, marital status, ANC visits, preconception clinic attendance, midwife education, income level, transport funds, awareness of blood transfusion, and knowledge of labor timing.

Women with higher education were significantly more prepared for childbirth and emergencies. More ANC visits resulted in better preparedness, supporting WHO's recommendation for at least 8 visits. Women who received BPCR education from midwives had significantly better birth preparedness. Women with higher income levels and transport funds set aside were more prepared for delivery. Married women showed higher preparedness, likely due to partner support in financial planning and emergency arrangements. Recognizing the need for blood transfusion and understanding that labor could start before the due date were linked to better preparation.

Table 5: Results for Factors Influencing BPCR- Chi square

Factor	p-value	Significance
Age Group	0.044	Significant
Education Level	0.011	Significant
Marital Status	0.032	Significant
Number of ANC Visits	0.004	Significant
Preconception Clinic Attendance	0.005	Significant
Midwife Education on BPCR	0.017	Significant
Income Level	0.028	Significant

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Table 6: Results for Factors Influencing BPCR-Kruskal Wallis

Factor	Kruskal-Wallis H	df	p-value	Significance
Age Group	9.314	3	0.025	Significant
Education Level	13.542	3	0.009	Significant
Marital Status	8.210	1	0.041	Significant
Number of ANC Visits	18.654	2	0.001	Significant
Preconception Clinic Attendance	11.324	1	0.005	Significant
Midwife Education on BPCR	12.748	1	0.007	Significant
Income Level	10.894	2	0.018	Significant

Discussion

Understanding the warning indicators of obstetric problems during pregnancy, labor, postnatal and neonatal period is the first critical step for proper and prompt referral.[1]70.8% of primigravids were aware that labor might begin before the due date, with 38.8% believing it could begin a week earlier, and 25.5% correctly identifying a two-week window surrounding the due date.66.3% of primigravids were aware of the necessity for prospective blood transfusions, with 41.7% having made arrangements with a donor. This was higher compared to studies in Ethiopia (8.2%)[7] Uganda (15%),[6] and Tanzania (17.5%),[8] but lower than in South West Nigeria (60.8%).[9]76.1% knew about abnormal occurrences in pregnancy. This was lower than Addis Ababa governmental facilities (84.1%)[2] The most recognized danger sign was per vaginal bleeding (65.9%), followed by severe abdominal pains (61.0%) and vaginal discharge with foul smell (59.1%). In a study from Uganda, only 38% of women had saved money for childbirth, and 50% had identified transport means.[6] Majority of the respondents were aware of the expected date of delivery71.6% which is essential during planning for delivery. Our study found that there was higher savings (73.5%) and mode of transport identification (68.2%) suggest better financial and logistical preparation among the respondents though this was lower compared to 84.1% of women who set aside funds in central Tanzania.[2] A study from Ethiopia found that 63% of women identified a place for delivery.[7] The 76.1% in our study indicates higher awareness and planning among the respondents. Consistently choosing hospitals aligns with findings from various settings where institutional deliveries are promoted. In rural India, according to Smith P. K only 40% of women had identified a birth companion, whereas in this study it shows a significantly higher rate (71.6%).[3] This could reflect cultural differences or effective health education programs in Uasin Gishu hospitals. In Nepal, 65% of women had prepared delivery kits, compared to 54.2% in this study.[4] This might indicate variations in the perceived urgency or timing of preparation or cultural beliefs. Similar studies often report lower rates of emergency contact identification and transport planning. For instance, in Kenya, only 45% had identified emergency contacts and 55% had transport plans.[5] This study higher figures (73.9% and 71.6%, respectively) suggest better emergency readiness. This study indicates high levels of BPCR among primigravida in several areas compared to other settings, particularly in savings, transport planning, and birth companion identification. These differences could be attributed to varying health education efforts, accessibility of resources, and cultural practices across regions. These findings emphasize the importance of continued support and education to maintain and improve BPCR practices. Kruskal-Wallis tests and chi square revealed significant relationships between variables: age, level of education, marital status, number of ANC visits, and preconception care with BPCR knowledge and practices. In our study, Antenatal visits for instance had a significant value of (p=0.04) showing that antenatal follow ups were key in the BPCR. The follow up support at ANC visits enables healthcare personnel to counsel pregnant women regarding birth preparedness, complication readiness and obstetric danger signs. Multiple research studies in Chamwimo district of Tanzania,[13] Duguna Fango district of Ethiopia [6] and Makueni County, Kenya [7] indicated that women who visited ANC at least four times had significantly improved BPCR with majority 36.4% having attended ANC clinics 2-3 times.

Generalizability

The findings of this study provide valuable insights into birth preparedness and complication readiness (BPCR) among primigravida women attending Uasin Gishu Sub-County hospitals. However, generalizability to other populations may be limited due to the study's geographical focus on a single county in Kenya. The results may not fully represent rural areas with lower

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healthcare accessibility or different socio-economic conditions. Additionally, cultural and healthcare system variations in other regions may influence BPCR differently. Despite these limitations, the study's findings can inform maternal health programs in similar settings within Kenya and other low-resource settings.

Conclusions

This study on birth preparedness and complication readiness among primigravida women in Uasin Gishu sub-county hospitals highlights the importance of ensuring safe maternal and neonatal outcomes, while most primigravida women demonstrated key aspects of BPCR, variations existed in their understanding of labor timing, recognition of danger signs, and financial and logistical preparation for delivery. Although many respondents acknowledged the need for medical interventions such as blood transfusions, only a smaller proportion had taken concrete steps to prepare for emergencies.

The majority of women had identified a delivery place and a birth companion, indicating some level of preparedness. However, gaps in antenatal care engagement and preconception planning remain, pointing to the need for strengthened maternal health education and awareness. These findings highlight disparities in BPCR knowledge and practices, underscoring the need for further improvements in maternal health preparedness to enhance outcomes of both mothers and newborns.

Study limitation

The most significant limitation of this study was the Study Population & Setting, since the study was conducted in three hospitals within one county, which may limit generalizability to other regions due to cultural and socioeconomic differences in different regions and different hospital policies.

Recommendation

Focus on comprehensive educational programs about BPCR during antenatal visits to improve knowledge about early labor signs, the importance of blood transfusions, and identifying danger signs.

Promote and facilitate the attendance of preconception clinics to ensure women are well-prepared even before conception.

Implement strategies to increase the number of antenatal visits by educating women on the benefits of frequent monitoring and providing incentives for regular attendance.

Develop programs that educate and support birth companions, ensuring that women have reliable and knowledgeable support during labor and delivery.

Increase awareness and create support systems that facilitate easy access to blood donors during emergencies, perhaps through community drives or partnerships with blood banks.

Acknowledgement

We would like to acknowledge and thank our supervisors, Milimo Benson and Getanda Amos for their insightful contributions, guidance, and advice that carried us through all the stages in writing this project.

List of abbreviations

ANC- Antenatal clinics

BPCR- Birth Preparedness and Complication Readiness

EDD- Expected Date of Delivery

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Conflict of interest: none

Author contribution: Odongo Philip (PI), Erick Ambale (CI), Edwin Kipngetich (CI), Milton Ryan (CI), and Marion Jemurgor (CI) conducted the study and drafted the manuscript. Milimo Benson and Amos Getanda supervised the study and guided the writing of the manuscript.

Data availability: datasets generated and analyzed during the study are available from the corresponding author on reasonable request.

Authors' biography: student authors (Odongo Philip, Erick Ambale, Edwin Kipngetich, Milton Ryan,

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and Marion Jemurgor) conducted the study in partial fulfillment of the Bachelor of Science in nursing and midwifery at Moi University.

Informed consent: Written informed consent was obtained from all participants after explaining the study's purpose, procedures, potential risks, and benefits. Minors were treated as emancipated minors and provided independent consent, in line with ethical guidelines for research involving adolescent participants.

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References

[1] Thaddeus, S., & Maine, D. (1994). Too far to walk: maternal mortality in context. Soc Sci Med, 38. https://doi.org/10.1016/0277-9536(94)90226-7

[2] Mulugeta, A. K., Giru, B. W., Berhanu, B., & Demelew, T. M. (2020). Knowledge about birth preparedness and complication readiness and associated factors among primigravida women in Addis Ababa governmental health facilities, Addis Ababa, Ethiopia, 2015. Reproductive Health, 17, 1–13. https://doi.org/10.1186/s12978-020-0861-z

[3] KNBS and ICF. (2023). Kenya Demographic and Health Survey 2022. Key Indicators Report. Nairobi, Kenya, and Rockville, Maryland, USA: KNBS and ICF.

[4] Smeele, P., Kalisa, R., Van Elteren, M. , Van Roosmalen. J, Van den Akker T.(2018). Birth preparedness and complication readiness among pregnant women admitted in a rural hospital in Rwanda. BMC Pregnancy Childbirth. 2018; 18(1):190

[5] Kasmai KE, Akpa OM, Olayemi O. Birth preparedness and complication readiness among Pokot nomadic pastoralists' pregnant women in east Pokot District, Midwest-Kenya. Am J Biomedical Life Sci. 2018;6(1):17–23.

[6] Clement, M. , Mirembe, M. E , Deus, T. , Archbald, B. (2019) Socio-demographic and maternal determinants of birth preparedness among pregnant women seeking skilled birth Services at a Rural General Hospital, mid Western Uganda. Open J Nurs. 2019;09(01):68–77

[7] Azeze, G. A. , Mokonnon, T.M. Kercho, M. W.(2019). Birth preparedness and complication readiness practice and influencing factors among women in Sodo town, Wolaita zone, southern Ethiopia, 2018; community based cross-sectional study. Reproductive Health. 2019;16(1):39.

[8] Orwa J, Mantel M, Mugerwa M, Brownie S, Pallangyo ES, Mwasha L, Isangula K, Subi L, Mrema S, Edwards G, et al. Maternal healthcare services use in Mwanza region, Tanzania: a cross-sectional baseline survey. BMC Pregnancy Childbirth. 2019;19(1):474

[9] Sabageh AO, et al. Birth preparedness and complication readiness among pregnant women in Osogbo Metropolis. Southwest Nigeria Pan African Medical Journal. 2017;27(74). https://doi.org/10.11604/pamj.2017.27.74.7266.

[10] Trends in maternal mortality:1990–2015 estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations population division.

[11] Momina A, et al. Magnitude and associated factors for home delivery among women who gave birth in last 12 months in Ayssaita, Afar, Ethiopia 2016. A community based cross sectional study. Global Journal of Fertility and Research. 2017;2(1):030–9

[1] Kaso M, Addisse M. Birth preparedness and complication readiness in Robe Woreda, Arsi Zone, Oromia Region, Central Ethiopia: a cross-sectional study. Reprod Health. 2014:1–12. https://doi.org/10.1186/1742-4755-11-55.

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[2] Bintabara D, Mohamed MA, Mghamba J, Wasswa P, Mpembeni RN. Birth preparedness and complication readiness among recently delivered women in chamwino district, Central Tanzania: a cross sectional study. Reprod Health. 2015;12:44.

[3] Smith PK. Birth preparedness and complication readiness of aredetedsoial health activities under national health mission in Rural Karanataka, India; 2012. p. 13.

[4] Silwal, K., Poudyal, J. K., Shah, R., Parajuli, S., Basaula, Y., Munikar, S., & Thapa, K. (2020). Factors influencing birth preparedness in Rapti Municipality of Chitwan, Nepal. International Journal of Pediatrics, 2020. https://doi.org/10.1186%2Fs12913-021-06853-y

[5] Ihomba PK, Nyamari JM, Were T. Birth preparedness and complication readiness among women with pregnancy and childbirth related complications at Kenyatta National Teaching and referral hospital, Kenya. EA Health Res J. 2020;4(1):26–32

[6] Gebre M, Gebremariam A, Abebe TA. Birth preparedness and complication readiness among pregnant women in Duguna Fango District, Wolayta zone, Ethiopia. PLoS One. 2015;10(9):e0137570.

[7] Ndeto JK, Barasa SO, Murigi MW, Keraka MN, Osero JO. Utilization of individual birth plan during pregnancy and its determinants in Makueni County, Kenya. Int J Community Med Public Health. 2017;5(1):

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