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Healthcare Providers' Knowledge and Practices of Perinatal Depression in Rural Rwanda

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Abstract:- Perinatal depression, affecting women during pregnancy and up to a year postpartum, is a critical public health concern with significant implications for maternal and child health. This cross-sectional study assessed healthcare providers' knowledge and practices related to perinatal depression in rural Rwanda, focusing on health facilities affiliated with Rwinkwavu, Kirehe, and Butaro District Hospitals. A total of 172 healthcare providers participated, including doctors, midwives, and nurses, who completed a structured questionnaire adapted to the Rwandan context.Results revealed substantial gaps in knowledge and practices. While 89.2% of participants recognized the association between perinatal depression and poor child health outcomes, only 2.9% identified the Edinburgh Postnatal Depression Scale as a standard screening tool. Practices were similarly deficient; for instance, only 13.4% of providers conducted routine screenings for perinatal depression. Training emerged as a crucial determinant, with participants who had received mental health training scoring significantly higher in knowledge and practices.Barriers to effective management included inadequate training, limited use of standardized screening tools, and a lack of mental health personnel and referral systems. Despite the decentralization of mental health services in Rwanda, the absence of formal guidelines for perinatal depression in maternal health protocols limits systematic care.To improve outcomes, the study recommends integrating mental health training into the curricula of healthcare professionals, establishing national guidelines for perinatal depression, and strengthening resources and referral pathways. These measures would address current gaps, ensuring early detection and management of perinatal depression to enhance maternal and child health outcomes in rural Rwanda.This research underscores the urgent need for targeted interventions to bridge knowledge and practice gaps among healthcare providers, thereby addressing the underestimated and underdiagnosed burden of perinatal depression in low-resource settings.

Keywords:- *Mental Health, Perinatal Depression, Healthcare providers, Knowledge, Practices, Pregnancy*.

I. INTRODUCTION

Maternal mental health disorders occurring in pregnancy and postpartum have diverse harmful impact on children's development and are a significant cause of maternal morbidity and mortality (Mitchell & Goodman, 2018). Perinatal depression refers as depression occurring in a woman during pregnancy or within 12 months of delivery (WHO, 2022). Perinatal depression is a life-threatening issue that needs special attention, as it is associated with diverse

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health effects on life of mothers(Sattari, 2013)[1]. Among many other negative effects of MMH illnesses like depression, anxiety, and puerperal psychosis are linked to feelings of self-harm (suicidal ideations) or harm to the unborn child (infanticide), suicide, extreme mood swings, loss of interest (apathy), disturbed sleep, loss of appetite, and increased rate of induction of labor and cesarean section(Rusner et al., 2016). Perinatal anxiety and depression in the perinatal period are common, affecting an estimated 1 in 10 women in high-income countries(Woody et al., 2017) and one in five in low- and middle-income countries (LMICs), indicating the importance of support for PMH globally (Gelaye et al., 2016). In pregnant women in Africa, the prevalence of depressive disorder was 22.8% (Endomba et al., 2021)The pregnant and postpartum women are more likely to suffer from clinical depression compared to the general population (WHO, 2022). Perinatal period is an important period for both mother and child. Psychiatric disorders during this period could induce prematurity, low birthweight and it compromises the secure attachment process, which is crucial for child brain growth (Stein A. 2014). In research conducted in Rwanda, among mothers whose premature babies and child with disabilities, has shown that high number of women had different mental health illness(Abimana et al., 2020). The symptoms include sleeping pattern disturbance, less reduced concentration difficulty in making decisions feelings of guilt or hopelessness feeling, thoughts of self-harm or suicide non-specific body aches and pains and troubled by memories or dreams about bad experiences[2] According to WHO (2022), some protective factors include strong social support, education, opportunity for generating income, high quality MCH services.

In Rwanda, perinatal depression is prevalent at 37.6 % in women in antenatal care and 28.2% are anxious while 63.% of women within the postnatal period are depressive and representing 48.1% of symptoms of anxiety(Umuziga et al., 2022). Symptoms for perinatal depression should be early recognized and handled to prevent complications that arise due to untreated depression (Sarikhani et al., 2021). Perinatal depression is underestimated and underdiagnosed and constitutes a risk of suicide and poor child development outcomes, and some reasons of this situation include limited knowledge of health care providers to detect maternal mental health disorders.

In LMICs, the occurrence of MMH screening, diagnosis, and reporting is still very low (Atuhaire et al., 2020). This may be due to numerous factors such as lack of knowledge and skills by health workers to screen for MMH problems among others. For instance, a number of MMH screening tools such as the Edinburg postnatal depression scale (EPDS), Patient Health Questionnaire (PHQ-9) tool(Vik et al., 2021). Therefore, there is paucity of study assessing how health care providers diagnose and manage perinatal depression in Rwandan rural health settings. This study aims at assessing knowledge and practice of healthcare providers toward perinatal depression in rural health settings in Rwanda.

II. LITERATURE REVIEW

A. The Impact of Perinatal Depression

Perinatal depression, encompassing depressive disorders occurring during pregnancy and up to one year postpartum, is a pressing public health concern due to its profound impact on maternal and child well-being. Globally, perinatal depression affects approximately 10% of women in high-income countries, with prevalence rates as high as 20% in low- and middle-income countries (LMICs) (Gelaye et al., 2016). In Africa, the prevalence of depressive disorders during pregnancy reaches 22.8%, underscoring the need for targeted interventions (Endomba et al., 2021). Untreated perinatal depression can lead to severe outcomes, including premature births, low birth weights, and compromised child development (Stein et al., 2014). Psychiatric disorders during this period disrupt maternal-infant bonding, with lasting effects on the child's cognitive and emotional development (Umuziga et al., 2022).

B. The Aspect of Addressing Knowledge Barriers in Low-Resource Settings

Despite its prevalence, perinatal depression remains underdiagnosed in LMICs due to systemic, provider, and patient-level barriers. Limited knowledge and skills among healthcare providers are significant impediments to early detection and intervention (Byatt et al., 2012). Studies reveal that even when screening tools, such as the Edinburgh Postnatal Depression Scale (EPDS), are available, healthcare workers often lack the training to utilize them effectively (Vik et al., 2021). Additionally, the absence of dedicated maternal mental health guidelines in Rwanda further hampers diagnosis and management efforts (MoH, 2021). This challenge is compounded by a scarcity of mental health professionals, with many facilities relying on general practitioners and nurses who receive minimal training in mental health care (Nakidde et al., 2023). These factors contribute to missed opportunities for timely intervention, increasing risks for mothers and their children. Research conducted in rural Rwanda corroborates global findings, indicating significant gaps in healthcare providers' knowledge and practices regarding perinatal depression (Abimana et al., 2020). Most providers struggle to recognize symptoms, identify risk factors, or implement routine screening protocols. For example, less than 3% of providers in a recent study could identify the EPDS as a standard screening tool (Vik et al., 2021). Training has proven to be a critical determinant of improved knowledge and practices, as demonstrated by higher scores among providers who had received mental health training (Byatt et al., 2012). To address these gaps, capacity-building initiatives, including regular training on perinatal mental health, are essential. Integrating mental health care into existing maternal health services and curricula can improve outcomes. Additionally, the development of national guidelines for perinatal depression, as part of maternal health protocols, would ensure

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standardized care across healthcare facilities. Strengthening referral pathways to mental health specialists and enhancing resource availability at the primary care level are also critical steps (Sarikhani et al., 2021).

III. METHODOLOGY

A. Study Design and Settings

This was a cross-sectional survey conducted between 9th June and 5th July 2022 among health care staff working in antenatal care, maternity and neonatology care services at health facilities in the catchment areas of Rwinkwavu, Kirehe and Butaro District Hospitals. These are public hospitals respectively located in Kayonza, Kirehe and Burera districts, and have been receiving health systems strengthening support from an international non-governmental organization, Partners In Health/Inshuti Mu Buzima (PIH/IMB) since 2005. All the three hospitals together supervise a total of 43 health centers and serve approximately a population of 1,102,360 people (*Fourth Population and Housing census ,2022*). In addition, according to the latest Rwanda Demographic and Health Survey, 97% of pregnant women attend at least one antenatal care (ANC) visit before delivery, while 98% of deliveries occur in health facilities (RDHS 2020).

B. Study Population and Data Collection

We included all health care providers (Doctors, Midwives and Nurses) who were assigned to the ANC, maternity and neonatal care services at all the 3 hospitals and 43 health centers under their supervision on the survey date. Data collection was conducted using a pre-designed questionnaire with closed-ended questions and was adapted from tools which were previously used in a study conducted in Saudi Arabia for the assessment of physician knowledge about perinatal depression (Al-Atram, 2018). The questionnaire was comprised with three parts: (1) questions to collect data on key characteristics of study participants, (2) eleven items for evaluating knowledge of perinatal depression, and (3) five items for evaluating correct practices toward perinatal depression. For the perinatal depression knowledge and practice-related items in the survey tool, study participants were asked to choose from response options that were listed along with each item, including both correct and wrong answers. The questionnaire was then adapted to Rwandan context and translated into French and English languages. The questionnaire was distributed to study participants for self-administration, and thereafter, completed surveys were collected by trained data collectors and directly entered into an electronic online database built using research electronic data capture (REDCap) tools (ref).

C. Statistical Analysis

We described the characteristics of study participants using frequency and percentages for categorical data and median and interquartile range for continuous data. We also reported the number and percentage of study participants with a correct response on each survey tool item, with regard to knowledge and practices towards perinatal depression. For each item, a score of 1 and 0 was given to a correct and wrong answer, respectively. Then, we calculated the total correct knowledge, practice and overall knowledge and practice scores, as a percentage of survey tool items in each group of questions that were correctly answered by each participant. We reported the median and interquartile ranges for total scores. In addition, we investigated the factors associated with the overall total correct score on knowledge and practices towards perinatal depression using a multivariable logistic regression model – built using backward stepwise approaches. We used Wald tests to calculate p-values for each variable in the logistic regression model and only variables statistically significant at alpha=0.05 were retained in the final model. All analyses were conducted using Stata v.15.1 (Stata Corp, College Station, TX, USA).

D. Ethical Approval

This study fell under the mental health umbrella protocols at PIH/IMB that had been reviewed and approved by Rwanda National Ethics Committee (RNEC). The study was also reviewed and received feedback and approval from the internal PIH/IMB research committee.

IV. RESULTS

A. Tables Describing Findings

Table 1: Characteristics of Study Participants, N=172, Unless Otherwise Indicated

Variables	
Gender, n (%)	
Female	108 (62.8)
Male	64 (37.2)
Age, median [IQR]	33 [29-38]
Educational background, n (%)	
Midwife	73 (42.4)
Nurse	88 (51.2)
General Practitioner/Gynaeco-Obstetrician	11 (6.4)
Health facility level, n (%)	
Health Center	145 (84.3)
District Hospital	27 (15.7)
Service of work, n (%)	
Antenatal care	51 (29.7)

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Maternity	114 (66.3)
Neonatology	7 (4.1)
Working experience in healthcare services, n (%)	
<2 years	28 (16.3)
2-5 years	65 (37.8)
6-10 years	39 (22.7)
>10 years	40 (23.3)
Received additional training on mental health care, n (%)	29 (16.9)
Received training on diagnosis of perinatal depression, n (%)	1 (0.6)
Received training on treatment of perinatal depression, n (%)	1 (0.6)

Table 2: Study Participants with Correct Knowledge of Perinatal Depression, N=172, Unless Otherwise Indicated

Knowledge on perinatal depression-related items	**n (% correct)**
Depression among pregnant women can occur in pre-, per and post-partum	122 (70.9)
Prevalence of maternal depression in low-income and developing countries is estimated to be between 15% and 57%	27 (15.7)
Antenatal consultations can expect pregnant women to experience mental health issues, particularly depression and anxiety in Africa and in Rwanda in at least one in four women, N=170	38 (22.4)
Correct symptoms of perinatal depression: -restlessness or irritability, -profound sadness and frequent crying, -withdrawing from loved ones and social isolation, -feelings of hopelessness and powerlessness, -loss of motivation and interest in normal activities, -irregular sleep patterns and constant fatigue, -lack of interest in one's self or children, and -unhappiness	**79 (45.9)**
Perinatal Depression can be diagnosed when symptoms last 14 days	19 (11.1)
Groups of pregnant women at risk of perinatal depression: -women exposed to partner violence; -having unplanned or unwanted pregnancy; -experiencing lack of emotional and practical support from partner and/or others; -having many recent stressful life events [i.e. Low/poor child outcomes, premature babies, etc.]; -poor socio-economic status [e.g. unemployment]; -having previous history of anxiety, depression or mood swings, especially if occurred perinatal; -women without husband; -having antenatal anxiety, depression or mood swings; and -women expecting first child or has many children already	**59 (34.3)**
Existence of an instrument used routinely for perinatal depression screening	23 (13.4)
Edinburgh Postnatal Depression Scale (EPDS) as the common tool for screening perinatal depression	5 (2.9)
Perinatal depression can be treated through both psychotherapy and medications	138 (80.7)
The drug of choice for Perinatal depression treatment is SSRI (amitriptyline, fluoxetine, anafranil, etc.)	52 (30.2)
Perinatal depression could cause child health poor outcomes	149 (89.2)
Overall perinatal depression knowledge score (% correct), median [IQR]	**36.4% [27.3% - 45.5%]**

Table 3: Study Participants with Correct Practices Towards Perinatal Depression, N=172, Unless Otherwise Indicated

Practice	**n (% correct)**
Performing recommended assessment for perinatal depression on a weekly basis	31 (18.0)
Performing systematic screening for all pregnant women at every appointment	23 (13.4)
Transferring suspected cases of perinatal depression for medical and psychological review on a weekly basis	12 (7.1)
Managing maternal depression through counseling in service on a weekly basis	28 (16.3)
Linking a perinatal depression case to the specialized reserve office by a Mental health professional on a weekly basis	14 (8.1)
Overall correct practices towards perinatal depression (% correct), median [IQR]	**0.0% [0.0% - 20.0%]**

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Table 4: Total Correct Knowledge and Practice (KP) on Perinatal Depression

Total KP score on perinatal depression (% correct), median [IQR]	31.3% [18.8% - 37.5%]

Table 5: Association between Different Factors and the Total Score on Correct Knowledge and Practice (KP) for Perinatal Depression

Variables	Full model			Final model		
	Coef.	[95% CI]	p-value	Coef.	[95% CI]	p-value
Gender			0.432			
Male	ref	-				
Female	-1.83	[-6.41, 2.75]				
Educational background			0.206			0.050
Nurse	ref	-		ref	-	
Midwife	1.52	[-3.69, 6.74]		0.41	[-3.56, 4.39]	
General Practitioner/Gynaeco-Obstetrician	10.00	[-1.07, 21.06]		9.77	[1.88, 17.66]	
Health facility level			0.864			
Health Center	ref	-				
District Hospital	0.70	[-7.34, 8.74]				
Service of work			0.931			
Maternity	ref	-				
Antenatal care	0.89	[-4.62, 6.40]				
Neonatology	1.52	[-10.61, 13.64]				
Working experience in healthcare services			0.112			
<2 years	ref	-				
2-5 years	1.87	[-3.84, 7.58]				
6-10 years	7.04	[0.70, 13.38]				
>10 years	5.25	[-1.34, 11.84]				
Received additional training on mental health care			0.001			<0.001
No	ref	-		ref	-	
Yes	9.56	[4.22, 14.91]		9.99	[4.87, 15.12]	

V. SUMMARY OF FINDINGS

A total of 172 health care providers participated in the study, including 108 (62.8%) females, 88 (51.2%) nurses, 73 (42.4%) midwives and 11 (6.4%) general practitioners or Gyneco-Obstetricians (**Table 1**). The majority (n=145, 84.3%) of participants were working at the health center level and the service of work was maternity and antenatal care for 114 (66.3%) and 51 (29.7%) participants, respectively. The working experience in healthcare services ranged between 2 and 5 years for 65 (37.8%) participants, 6 and 10 years for 39 (22.7%) participants and was more than 10 years for 40 (23.3%) participants. Of all study participants, 29 (16.9%) reported to have received additional training on mental health care before the survey date.

The median percentage of items that were correctly answered by study participants on knowledge of perinatal depression was 36.4% (interquartile range [IQR]: 27.3%-45.5%) (**Table 2**). The majority of participants had correct knowledge on the fact that perinatal depression could be associated with child health poor outcomes (n=149, 89.2%), both psychotherapy and medication can be used to treat perinatal depression (n=138, 80.7%), and pregnant women are at risk for depression in pre-, per and post-partum (n=122, 70.9%). However, very few health care providers knew that the Edinburgh Postnatal Depression Scale is the common tool for screening perinatal depression (n=5, 2.9%), the correct duration of symptoms for perinatal depression diagnosis (n=19, 11.1%), the existence of an instrument which is used routinely for perinatal depression screening (n=23, 13.4%), and the prevalence of maternal depression in low-income and developing countries (n=27, 15.7%).

Regarding health care provider's practices towards perinatal depression, more than half of study participants scored zero on correct practices (median: 0.0%; IQR: 0.0%-20.0%) (**Table 3**). Few participants reported that recommended assessment for perinatal depression should be performed on a weekly basis (n=31, 18.0%), counseling for managing maternal depression should be conducted in service on a weekly basis (n=28, 16.3%), and systematic perinatal depression screening for all pregnant women should be conducted at every appointment (n=23, 13.4%). In addition, less than one in ten health care providers reported that perinatal depression cases should be linked to a specialized reserve office by a mental health professional on a weekly basis (n=14, 8.1%), and that suspected cases of perinatal depression should be transferred for medical and psychological review on a weekly basis (n=12, 7.1%).

Overall, the median percentage of items that were correctly answered by participants on knowledge and practices towards perinatal depression was 31.3% (IQR: 18.8%-37.5%) (**Table 4**). In the final logistic regression model, factors associated with improved score on correct knowledge and practices of perinatal depression included receiving training on mental health care and educational background in favor of general practitioners and Gyneco-Obstetricians (**Table 5**).

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The average score on correct knowledge and practice towards perinatal depression was higher by 9.99 (95% confidence interval [CI]: 4.87, 15.12) for participants who reported to receive additional training on mental health care before the survey and 9.77 (95% CI: 1.88, 17.66) for general practitioners and Gyneco-Obstetricians compared to participants who didn't receive mental health care training and nurses, respectively.

VI. DISCUSSION

This study aimed to assess healthcare providers' knowledge and practice of perinatal depression in rural, Rwanda. The findings have indicated that participants had a deep gap in the overall knowledge and practices regarding diagnosis and management of perinatal depression.

- *Knowledge*

The participants in study were lacking awareness on perinatal depression, where few respondents were able to estimate the magnitude of the problem in low-income and developing countries like Rwanda. This might be due to poor consideration of perinatal depression as such, on the national agenda, and less priority given to perinatal depression in curriculums during education. The different studies in developing countries have shown that this disease was given less attention (Sneha Ambwani, Arup Kumar Misra, 2017) and this reflects poor awareness of disease among health care providers in our study. In our study, less than a half of respondents were able to acknowledge the correct symptoms of perinatal depression while more than half of them were not able to identify the risk factors that might lead to perinatal depression. This gap could be due to lack capacity building as such: training on mental health components and this has been also supported by our findings, where those few care providers who reported to have the additional trainings in mental health components scored more in knowledge and practice toward perinatal depression than their counterparts. This study has shown the similar findings with other study conducted in India where care providers demonstrated a poor knowledge toward perinatal depression as they were lacking the training[3]. In study conducted in Malaysian has shown that the care providers, didn't practice toward perinatal screening as they were lacking the interventions to improve to improve knowledge (Kang et al., 2019).

This gap in perinatal depression indicates less priority given by care providers in diagnosis and managing this mental health condition. From our knowledge, there is no formal guidelines of perinatal depression in maternal health protocols as separate guidance to diagnose and manage this mental health disease(MoH, 2021).

- *Practices*

In this study, the overall score for practices toward perinatal depression was very poor. This finding might be due to lack of necessary facilities, skills on diagnosis and management of perinatal mental health including insufficient mental health personnel to prove guidance.

The above points are similar to the research conducted in India, which has shown that the care providers did not practice routine screening for women during perinatal period as they lacked target training of health professionals, and enhanced support and guidance from mental health providers in screening women in perinatal period(Byatt et al., 2012).

Our study has revealed that very few participants performed recommended assessment for perinatal depression. This might be due to lack of protocols on perinatal depression, sufficient time for using screening tool, insufficient skills and knowledge on use of the Edinburgh Postnatal Depression Scale (EPDS) as tool for screening for perinatal depression. This is in line with other study in municipality in Agder county, Norway, Which has shown that the tight time schedule, poor guidance from mental health professional were the barriers to do the routine use of EPDS for screening(Vik et al., 2021). There was poor linkage to specialized mental care for perinatal depressed mothers, where very few respondents were capable to transfer the patients. This might be due to lack of sufficient mental health personnel to refer to for taking of care perinatal depressed clients and pathways of care. The different studies have revealed that, the shortage of mental health personnel and lack of pathways of perinatal mental health care were cited as institutional barrier to care providers to manage depressed women(Smith et al., 2019). In addition, lack of skills should be a barrier to diagnose and manage the mother with perinatal depression. This was supported by other research revealing that lack particular skills in mental health was a barrier to incorporate mental health care into their routine practices(Palareti et al., 2016)

In Rwanda, mental services are newly decentralized into health facilities especially health centers. The research have shown that this lack of dedicated maternal mental health services ,scarcity of mental health personnel affect the care offered to the patient in need (Nakidde et al., 2023).

In healthcare settings, to improve knowledge and practice of care providers toward perinatal depression, it will require to avail all needed facilities such as putting perinatal guidelines/policy in maternal health protocols (pre-natal ,peri- and Postnatal services), ensure regular capacity building activities including training on utilization of screening tool like EPDS. , Integrating screening and management of perinatal mental health in curriculum as separate course for health professionals (midwives, nurses, Obstetrics and gynecologist), and into maternal health services.

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This study employed used non-validated tool to assess the knowledge and practices and was tested with pilot to see if it measures what it was supposed to measure. The sample size was small with heterogeneous population, which could limit the generalizability (external validity). We might probably encountered self-reports information bias as participants could be overestimated. This study could have found different findings if implemented in urban area. Further study is recommend to explore the care providers' perceptions regarding perinatal depression.

VII. CONCLUSION

This study highlighted low knowledge and practices of health care providers toward perinatal depression in rural settings in Rwanda. There is a need to put the perinatal mental health as the national priority as separate public health concerns. The management can benefit with decentralization in maternal health services and building the capacity of care providers at all .

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APPENDICES/ANNEXES

Information sheet _ English Annex 1

PARTICIPANT INFORMATION SHEET AND CONSENT FORM

Date: …….

Study Title: Assessing healthcare providers' knowledge and awareness of perinatal depression in rural Rwanda; a cross sectional study.

Researcher identification
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Dear participant,

You are being invited to participate in a research project because you are a medical doctor, a nurse or midwife who are working in antenatal care, maternity and neonatology care services at one of the sites where this study is being conducted (Kirehe district or Rwinkwavu district or Burera district or respective health centers).

This is a cross sectional study that will assess the healthcare provider's knowledge of perinatal depression, assessment and management among health care staff working in antenatal care, maternity and neonatology care services at PIH/IMB-supported facilities. This study falls under the mental health umbrella protocol that has been reviewed and approved by the Rwanda National Ethics Committee. Permissions have also been obtained from Partners in health / Inshuti Mu Buzima research committee. We have also received permission from the Hospital director to conduct this study.

A. The Procedure for Participation in this Project

If you accept to participate, you will be asked to voluntary participate to an interview that will be addressed to you. We shall collect information on demographic variables of healthcare workers such as education level, gender, age category, and variables such as experience in service provision, additional training in mental health, availability of a psychologist, or service of mental health at the facility. The questionnaire also will assess the knowledge, attitude, and practice about perinatal depression as well as the level of its management by health care providers.

B. The Possible Benefits of Taking Part in this Project

There no direct benefits in participating in this study but we hope that the results of this study could have a positive impact on the Rwandan health system. With the dissemination of our findings, we expect that this will lead to new efforts and innovations to improve the mental status of pregnant women and postpartum women through the capacity building of health care providers who act on maternal health frontline.

C. Possible Risks or Discomforts Related to taking Part in this Project

We do not anticipate any potential harm to study participants and the community. In this study, we use only the analysis of data collected during the study period. The risks of breach of confidentiality will be addressed by careful data management, staff training, and staff management. Consent forms will be kept in locked files accessed only by the research team.

D. Protection of your Privacy

The questionnaire is anonymous, and therefore the risk of invasion of privacy of participants is low. Data from health care professionals will be stored in secure, password-locked databases that can't be reached by anyone except the study team.

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E. Participation is Voluntary

It is your right to decide to participate in this study or not. If you choose to participate, you may change your mind and leave the study at any time. Refusal to participate or stopping your participation will involve no penalty.

If I have any questions, concerns or complaints about this project, who can I talk to?

In case you have questions, concerns, or complaints or you would like to talk to the project team, please contact the study coordinator Abidan Nambajimana on +250788563796. For questions about your rights as a participant or the confidentiality of this study, please call Dr. Jean- Baptiste MAZARATI, Chair, Rwanda National Ethics Committee at 0788309807

F. Statement of consent

➢ *Your Signature Below Indicates you Acknowledge that:*

- You have understood the content of this form.
- You have had the opportunity to ask questions and received answers that were satisfactory.
- If needed, you took time to discuss this information with others to help you decide whether to participate.
- You will receive a dated and signed copy of the form.
- You agree to participate in this project.

Participant name	Signature	Date
Researcher name/person requesting consent	Signature	Date

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CONFIDENTIALITY FORM _ ENGLISH (ANNEX 2)

This is a confidentiality form for your participation in the research project on Assessing healthcare providers' knowledge and awareness of perinatal depression.

As you learned about in the consent process, your participation is voluntary. The study consists of an interview about the healthcare provider's knowledge of perinatal depression, assessment and management among health care staff working in antenatal care, maternity and neonatology care services in your district. Your answers to the questions will not be shared with anyone besides the study team. We will not let anyone else find out who gave a certain answer.

We do not anticipate any potential harm to study participants and the community. In this study, we use only the analysis of data collected during the study period. The risks of breach of confidentiality will be addressed by careful data management, staff training, and staff management.

If I have any questions, concerns or complaints about this project, who can I talk to?

In case you have questions, concerns, or complaints or you would like to talk to the project team, please contact the study coordinator Abidan Nambajimana on +250788563796. For questions about your rights as a participant or the confidentiality of this study, please call Dr. Jean- Baptiste MAZARATI, Chair, Rwanda National Ethics Committee at 0788309807

Do you have any questions? **Yes** (PROCEED) **No** (STOP)

_____	_____
Participant	Date (signature)
_____	_____
Interviewer	Date(signature)