Utilization of Perinatal Depression and Anxiety Assessment Tools in Routine Perinatal Care: a Call for the Integration and Implementation of Maternal Mental Health Services into Perinatal Care in Ghana

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Submitted: 2024, Jan 17; **Accepted:** 2024, Feb 5; **Published:** 2024, Feb 12

Abstract

Background: *This study intends to stimulate critical thinking and generate impactful discussions on the provision of holistic perinatal care. The rationale is to promote the exchange of ideas and collaboration among stakeholders to ensure that the training and practice of midwifery in Ghana become more robust and meet global standards. Additionally, it is meant to inform, prepare competent, resourceful, knowledgeable, and most importantly adaptable midwives who can contribute to and promote the overall health of the women in their care.*

Objective: *To explore midwives' knowledge and understanding on soliciting the requisite information that impacts the psychological health of the perinatal women in their care during the perinatal period using globally validated and reliable assessment tools for depression and anxiety.*

Methods: *A structured questionnaire was used to collect data from the participants (midwives). The study was conducted in selected hospitals across all 16 regions in Ghana. A total of 319 midwives with varying degrees and experience working at different levels (teaching, municipal, regional and district hospitals) of the health care system in Ghana participated in the study. Basic descriptive quantitative analysis was used based on frequency tables, pie chart and graphical illustration to interpret the data.*

Results: *The participants have adequate knowledge on the impact of perinatal anxiety and depression on birth and maternal outcomes. However, the remains a huge deficit in their ability to use the validated and reliable assessment tools in recognizing clinical cues related to anxiety and depression among perinatal women. Surprisingly, over 50% of the midwives were unfamiliar with the commonly used assessment tools for depression and anxiety such as the EPDS and PHQ-9. Additionally, nearly 40% of the participants lack the requisite assessment skills for assessing perinatal anxiety and depression.*

Conclusion: *Perinatal mental health should be made a critical component of perinatal care, with midwives being well situated to recognize the manifestations of deteriorating mental health among the perinatal women in their care and provide the needed support and required level of supervision. It is therefore imperative to train midwives on basic mental health assessment skills and encourage them to incorporate mental health care into the delivery of routine perinatal care and services.*

1. Introduction

Perinatal mental health in recent times has become a significant focus of interest, with some developed countries investing in new specialist mental health services, and inpatient psychiatric mother and baby units in different settings [1]. Life changing moments like pregnancy, birth, and early parenthood can be stressful for women and their partners, and this may cause women to undergo a period of poor mental health or witness a worsening of previous mental health conditions [2]. Such phenomenon undoubtedly, may lead to perinatal depression and anxiety. Perinatal depression is defined as depression occurring in a woman during pregnancy or within 12 months of delivery [3]. Recent and preliminary studies have brought to the fore the direct impact of perinatal depression and anxiety on the mother, baby, entire family as well its global economic burden [4].

However, much has not been done about the caregivers' (Midwives) preparedness and ability to understand and utilize well-validated perinatal depression and anxiety assessment tools to help identify perinatal women who may require mental health support during the perinatal period. Many women experience changes in their mental health during the perinatal period and this can negatively impact on their health and the wellbeing of their babies and families [2]. It is evidently clear that feelings of weepiness and labile emotions, called the "baby blues," do occur in up to 80% of new mothers within several days of delivery due to some biochemical imbalances and these symptoms are usually brief and last no longer than 10 days. However, perinatal depression may last more than 14 days and impairs a woman's normal daily functions [5]. A longitudinal study explored trends of stress, anxiety, and depressive symptoms from pregnancy to postpartum and understands predictions of stress and anxiety on postpartum depression [6]. The study revealed that levels of anxiety and depressive symptoms increased from 24 weeks gestation to postpartum, whereas stress levels decreased during pregnancy but increased in postpartum. Globally, about 10% of pregnant women and 13% of women after giving birth suffer from a mental disorder, primarily depression. In developing countries, this is even higher, that is, 15.6% during pregnancy and 19.8% after childbirth [3,7].

The World Health Organization posits that almost 1 in 5 women experience a mental health condition during pregnancy or in the year after the birth with about 20% of them experiencing suicidal thoughts or undertaking acts of self-harm [2]. This clearly indicates that poor maternal mental health including perinatal depression and anxiety could have dire consequences on the mother and the baby. Some reports indicate that about 30% of adults suffer from an anxiety disorder (AD) at some point in their lives, with evidence clearly showing that these disorders are two to three times more common than mood, impulse-control, or substance-abuse disorders over a twelve-month period [8,9]. This longitudinal study further revealed that mother-child pairs demonstrate a higher rate of ADs in children of mothers with an AD compared to children of mothers without an AD. Additionally, children of mothers in the top 15% for symptoms of antenatal anxiety have been shown to have twice the risk for ADHD at ages 4 and 7 [10,11].

In Africa, Maternal Mental Health Services (MMHS) is seriously lacking within the entire healthcare space due to numerous factors and challenges. Barriers to poor treatment are multifactorial and could be associated with personal behaviour, the severity of the disorder, social norms, and the lack of effective mental health care systems [12,13]. The issue of Maternal Mental Health Services (MMHS) is not deeply rooted in the Ghanaian health sector which is characteristically reflective of how mental health issues are poorly understood and handled in its entirety. Challenges that have impeded the provision of Maternal Mental Health Services (MMHS) in other parts of Africa are not entirely different from that of Ghana. A prior study provides the evidence that supports this assertion [8,14]. In this study, they investigated factors that were hampering the provision of mental health services by nurses and midwives to childbearing women to assist in the prioritization and distribution of limited mental health resources. Three hundred and nine (309) nurses and midwives participated in the study. About 77% of the respondents reported unavailability of mental health services as the main challenge during the perinatal period whereas 75.7% of them lamented the lack of knowledge of mental health in women from different tribes as the contributing factor to the menace. The results further revealed that 75.1% of the participants revealed the lack of a clear mental healthcare pathway as a major hindrance to this important health service whiles 74.1% of them attributed this challenge to heavy workload.

It is evidently clear that integrating Maternal Mental Health Services (MMHS) in the training and practice of midwives cannot be overemphasized looking at the role they play in taking care of these service user population. Their knowledge in perinatal depression and anxiety is unavoidably needed and therefore serious attention in this direction is required. Much research has not been conducted to assess the knowledge, attitude, and practices of healthcare providers in this regard. In a qualitative study, the respondents explained that depression diagnosis is difficult due to insufficient knowledge among healthcare providers and the hidden signs of postpartum depression [3]. A study conducted in seven Maternity Services in the Republic of Ireland concluded that Midwives have high levels of knowledge (71.1%) and confidence (72%) in identifying women who experience depression and anxiety. However, they reported less confidence in caring (43.9%) for women. Only 17.8% (n=28) of midwives felt equipped to support women [15]. Additionally, the Midwives expressed interest to be educated on the spectrum of perinatal mental health problems. A wide knowledge gap about perinatal depression exists

among perinatal women, nurses, and medical practitioners [17]. There are not adequate healthcare providers trained in maternal, newborn, and child mental health, which goes a long way to affect services' ability to identify mental health conditions, provide psychosocial interventions for their prevention and management, and make referrals appropriately [10,16].

Furthermore, the quality of assessment of the perinatal mother for any sign of perinatal depression and anxiety by the midwife cannot be guaranteed without the use of well-established assessment tools. Screening for perinatal depression and anxiety in community-based maternal and child health settings may help close the detection and treatment gap among women at higher risk of these conditions [10,17]. Some of the assessment tools include Edinburgh Postnatal Depression Screen (EPDS), Patient Health Questionnaire (PHQ2, PHQ9), Prenatal Anxiety Screening Scale (PASS). Perinatal PTSD Screening Scale (PCL-5), and Clinically Administered PTSD Scale (CAPS-5). Other tools are Generalized Anxiety Disorder (GAD2 or GAD7) and Perceived Prenatal Maternal Stress Scale (PPMSS). The Edinburgh Postnatal Depression Screen (EPDS) is mostly used to assess for the presence of depression in the pregnant woman or the postnatal mother [18]. The Edinburgh Postnatal Depression Scale (EPDS) is a questionnaire originally developed to assist in identifying possible symptoms of depression in the postnatal period [11,12].

2. Methods
2.1 Study Design and Settings
A structured questionnaire was to collect data from the participants (midwives) to explore their knowledge on perinatal depression and anxiety assessment tools. The study was conducted in selected hospitals across all 16 regions in Ghana. The regions have several government and private hospitals that provide primary and specialised health care services to the public. They include teaching hospitals, regional hospitals, municipal hospitals, district hospitals as well as clinics within the sub-districts.

Work Experience

2.2 Study Participants and Sampling
A total of 319 midwives with varying degrees/ qualification and experience working at different levels (teaching, municipal, regional and district hospitals) of the health care system in Ghana participated in the study. The purpose of the study was explained to them and consent for same granted by participants.

2.3 Data Collection and Analysis
A field survey was conducted based on a structured questionnaire. The data collected were analysed with Microsoft Excel and SPSS (Version 24) software. Basic descriptive quantitative analysis was used based on frequency tables, pie chart and graphical illustration to interpret the data.

3. Results
Participants' characteristics are shown in tables 1 to 4 (figures 1 to 4 respectively). Overall, a greater proportion of participants (n=180; 57.5%) have 2 to 5 years of working experience whiles 32.9% (n=103) have 5 to 10 years of working experience. However, only 9.3% (n=29) have over 10 years of working experience. In terms of the qualification or the educational background of respondents (Table 2/ Figure 2), a significant number of respondents (n=195; 62.5%) are diploma holders with a little over a quarter (n=83; 26.4%) of the total number of respondents having their bachelor's degree as registered midwives. Post-basic midwives accounted for only 11.1% (n=35) of the total number of respondents. Additionally, the participants work at different levels across the health care system. Table 3/ figure 3 illustrate the different workplace of study participants. Most participants work in district hospitals (n=99; 31.8%) whiles the sub-districts accommodate about 27.2% (n=85) of the participants as their workplace. Similarly, 66 participants representing 21.6% of the study subjects work in teaching hospitals whereas 13 and 49 participants work in regional and municipal hospitals, representing 3.9% and 15.5% respectively.

VARIABLES/YEARS	FREQUENCY (n=312)	PERCENTAGE (%)
2 - 5	180	57.5
5 - 10	103	32.9
10+	29	9.3

Table 1: (Source: Authors' Field Work, 2024)

WORK EXPERIENCE

YEARS OF EXPERIENCE
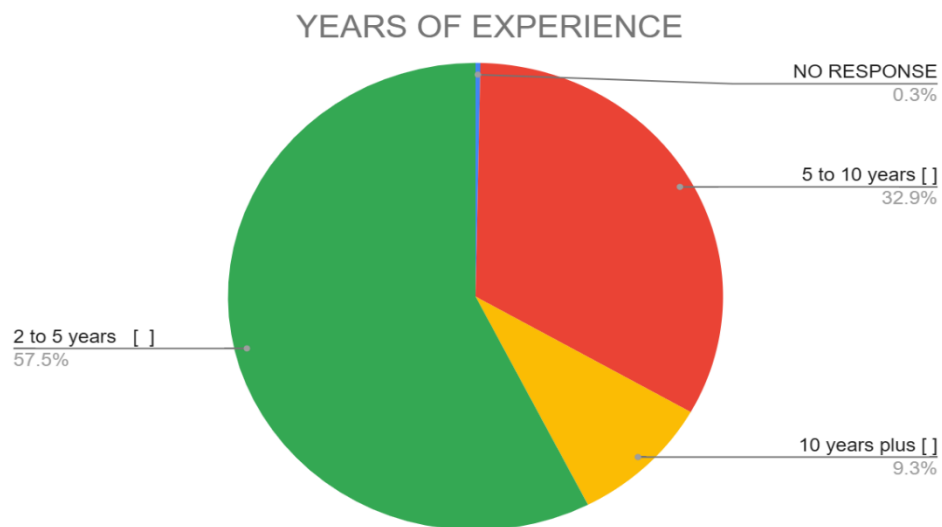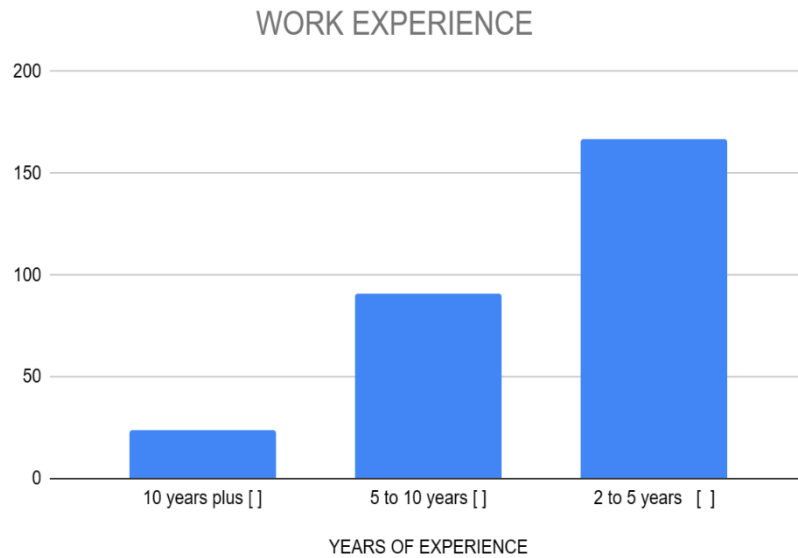
Figure 1: Qualification /Educational Background

VARIABLES (REGISTERED MIDWIFERY)	FREQUENCY (n=313)	PERCENTAGE (%)
Bachelor's	83	26.4
Diploma	195	62.5
Post-Basic	35	11.1

Table 2: (Source: Authors' Field Work, 2024)

QUALIFICATION/ EDUCATIONAL BACKGROUND

Registered midwife (… 11.1%

NO RESPONSE 0.3%

Registered midwife (… 26.4%

Registered midwife (… 62.1%

QUALIFICATION/ EDUCATIONAL BACKGROUND

ENTRY POINT
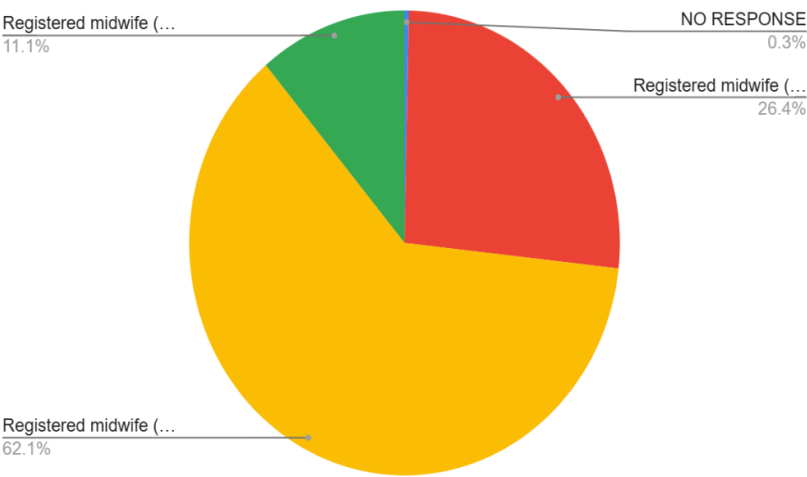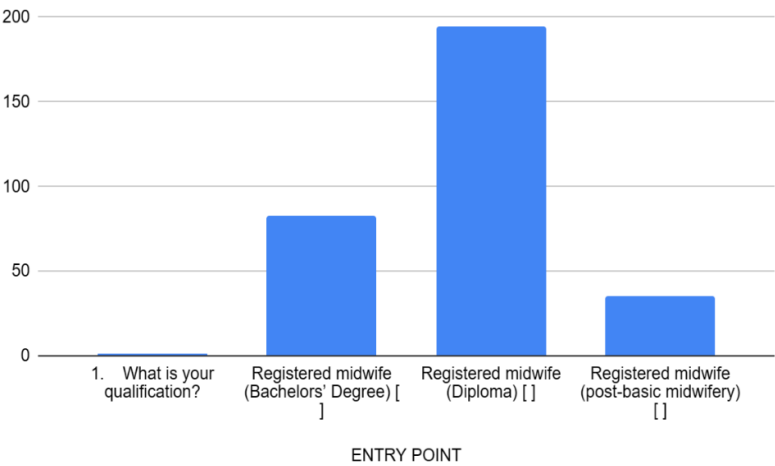
Figure 2: Location/ Workplace Description

VARIABLES	FREQUENCY (n=312)	PERCENTAGE (%)
Teaching Hospital	66	21.6
Regional Hospital	13	3.9
Municipal Hospital	49	15.5
District Hospital	99	31.8
Sub-district Hospital	85	27.2

Table 3: (Source: Authors' Field Work, 2024)

LOCATION/ WORKPLACE DESCRIPTION

Regional hospital [ ] 3.9%

Sub-district hospital [ ] 27.2%

District hospital [ ] 31.8%

Teaching hospital [ ] 21.6%

Municipal hospital [ ] 15.5%

LOCATION/ WORKPLACE DESCRIPTION

(bar chart with y-axis 0 to 100 and x-axis categories: Indicate your area/ site of work, District hospital [ ], Teaching hospital [ ], Sub-district hospital [ ], Regional hospital [ ], Municipal hospital [ ])
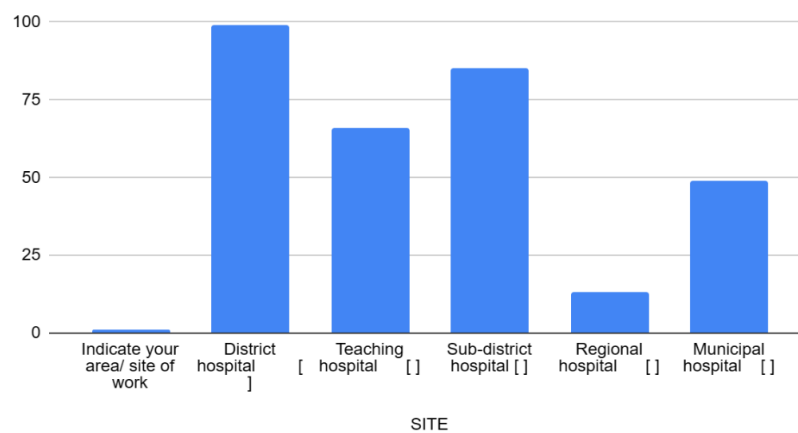
SITE
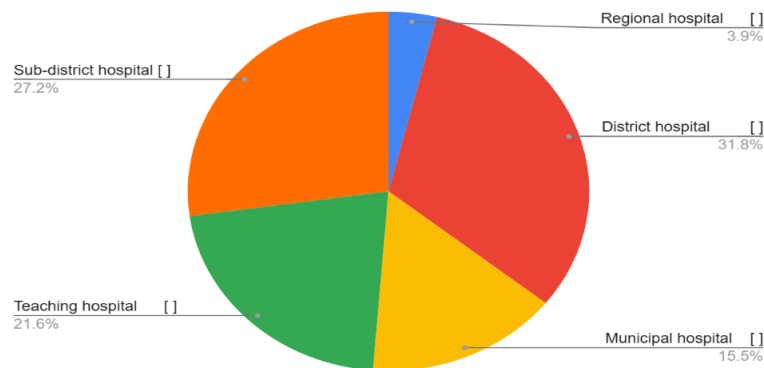
Figure 3: In furtherance, Table 4/ Figure 4 illustrate the "current job titles" of the study participants where a significant number of participants (n=127; 40.4%) are Senior Staff Midwives (SSM), 98 (31.2%) are Staff Midwives (SM) and 21.7% (n=68) accounting for the number of Midwifery Officers (MO). Moreover, there are 15 (4.8%), 5 (1.6%) and 1 (0.3%) Senior Midwifery Officers (SMO), Principal Midwifery Officers (PMO) as well as Director/Deputy Director of Midwifery Services (DDMS) respectively.

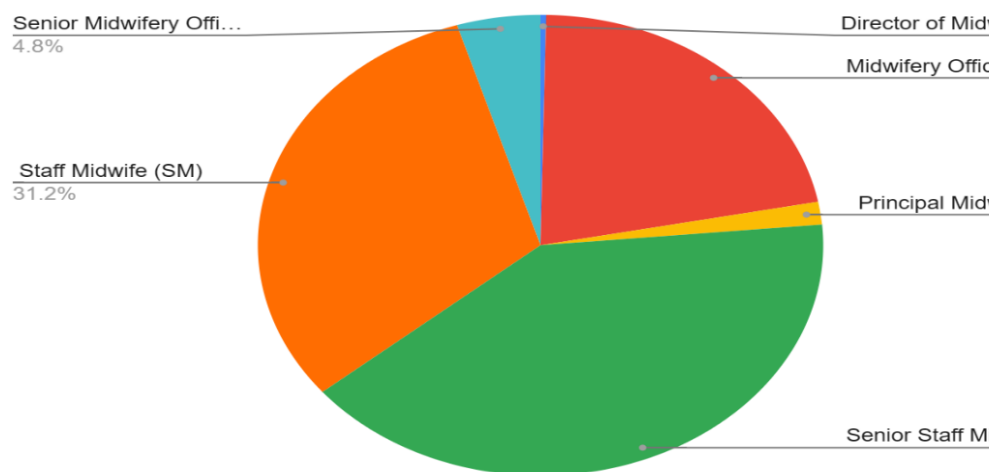## Current Job Title

CURRENT JOB TITLE

Senior Midwifery Offi... 4.8%

Director of Mid...

Midwifery Offic...

Staff Midwife (SM) 31.2%

Principal Mid...

Senior Staff M

Figure 4:

VARIABLES	FREQUENCY (n=313)	PERCENTAGE (%)
Staff Midwife (SM)	98	31.2
Senior Staff Midwife (SSM)	127	40.4
Midwifery Officer (MO)	68	21.7
Senior Midwifery Officer (SMO)	15	4.8
Principal Midwifery Officer (PMO)	5	1.6
Deputy Director/Director of Midwifery Services (DDMS)	1	0.3

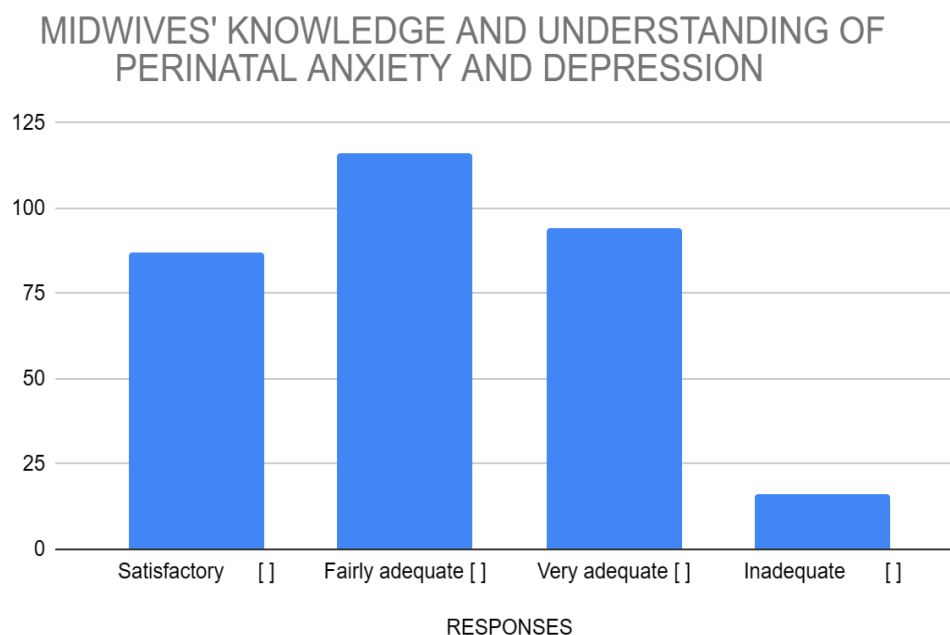**Table 4: (Source: Authors' Field Work, 2024)**

Regarding the '*midwives' knowledge and understanding of perinatal anxiety and depression*'' (Table 5/figure 5), 116 participants representing 37.1% indicated having a 'fairly satisfactory' knowledge and understanding of the subject matter whiles others indicated having *very adequat*e' knowledge (n=94; 30.0%). Again, 27.8% (n=87) indicated that their knowledge and understanding of perinatal anxiety and depression is 'satisfactory' with a handful of participants (n=16; 5.1%) having 'inadequate' knowledge of the subject matter.

Midwives Knowledge and Understanding of Perinatal Anxiety and Depression

VARIABLES	FREQUENCY (n=313)	PERCENTAGE (%)
Satisfactory	87	27.8
Fairly Adequate	116	37.1
Very Adequate	94	30.0
Inadequate	16	5.1

Table 5: (Source: Authors' Field Work, 2024)

MIDWIVES' KNOWLEDGE AND UNDERSTANDING OF PERINATAL ANXIETY AND DEPRESSION

MIDWIVES' KNOWLEDGE AND UNDERSTANDING OF PERINATAL ANXIETY AND DEPRESSION

Inadequate   []
5.1%

Satisfactory   []
27.8%

Very adequate []
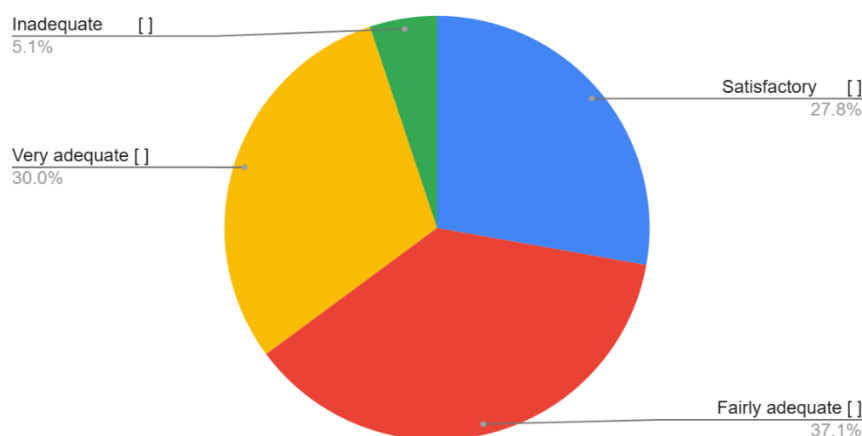30.0%

Fairly adequate []
37.1%

Figure 5: *Furthermore, in terms of the "midwives' familiarity" with validated and reliable perinatal anxiety and depression assessment tools, 55.3% (n=172) of participants are unfamiliar whereas 44.4% (n=139) are familiar with the assessment tools. This is shown in table 6/ figure 6 below:*

Midwives' Familiarity with Anxiety and Depression Assessment Tools

VARIABLES	FREQUENCY (n=311)	PERCENTAGE (%)
YES	139	44.4
NO	172	55.3

Table 6: (Source: Authors' Field Work, 2024)

FAMILIARITY WITH ANXIETY & DEPRESSION ASSESSMENT TOOLS

NOT SURE
0.3%

YES   []
44.4%

NO   []
55.3%

FAMILIARITY WITH ANXIETY&DEPRESSION ASSESSMENT TOOLS
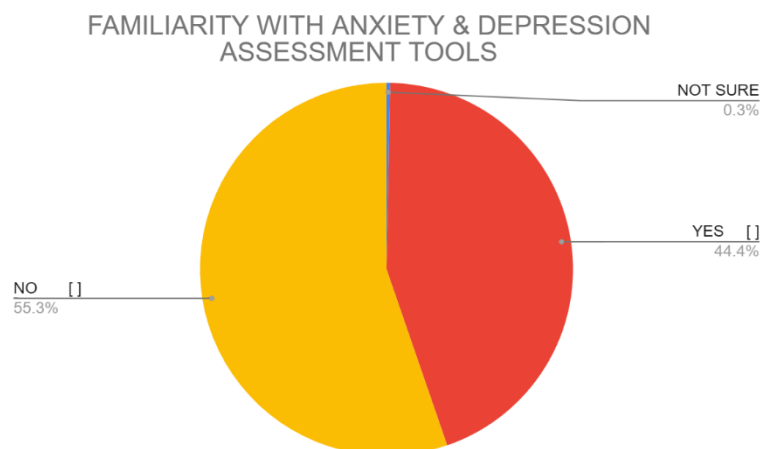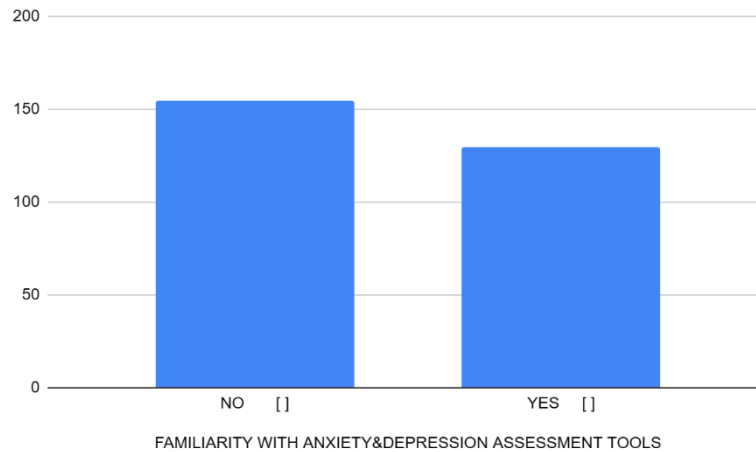
Figure 6:

Perinatal Anxiety and Depression Assessment Skills

VARIABLES	FREQUENCY (n=312)	PERCENTAGE (%)
YES	191	60.8
NO	121	38.9

Table 7: (Source: Authors' Field Work, 2024)

PERINATAL ANXIETY & DEPRESSION ASSESSMENT SKILLS

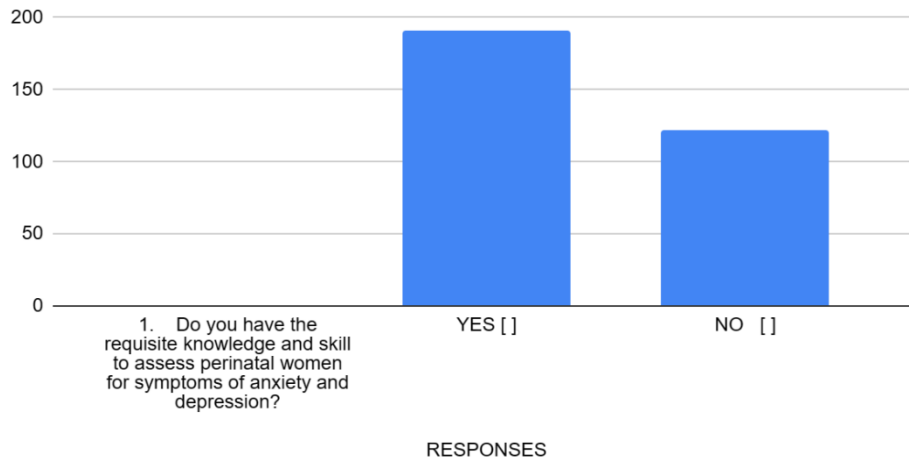NOT SURE 0.3%

NO [] 38.9%

YES [] 60.8%
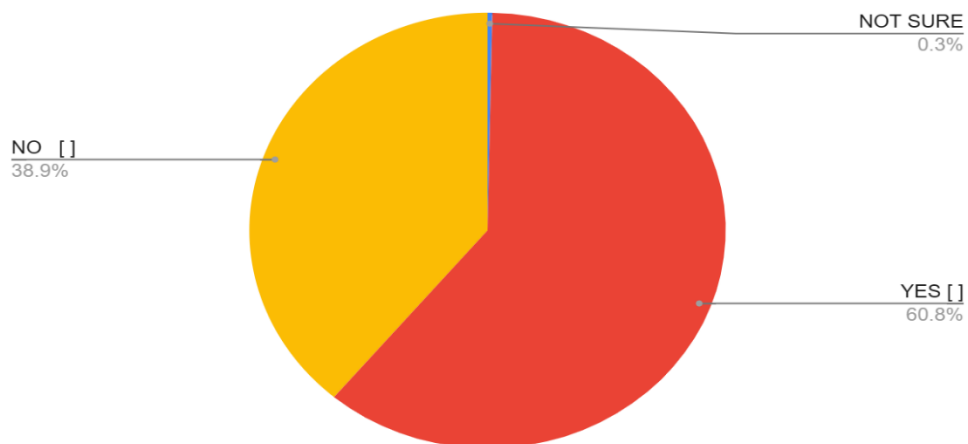
Figure 7

In relation to the "assessment skills" to screen for symptoms of perinatal anxiety and depression by midwives, over 60% (n=191) of participants indicated having the requisite assessment skills whiles a substantial number of participants (n=121; 38.8%) recorded a lack of same as shown in table 7/figure 7 above. Similarly, in terms of utilization of the assessment tools in routine perinatal care, over 62% (n=192) of the participants do not or have never utilized any of the globally validated and reliable assessment tools in their daily practice. However, a hand full of participants (n=67; 21.5%) indicated that they employ Perinatal Anxiety Screening Scale (PASS) in their daily practice. Other tools such as the PHQ-9, EPDS, and PCL-5 recorded very low representations as seen table 8/figure 8 below:

Utilization of Anxiety and Depression Assessment Tools in Routine Perinatal Care

VARIABLES	FREQUENCY (n=313)	PERCENTAGE (%)
Edinburg Postnatal Depression Scale (EPDS)	14	4.6
Perinatal Anxiety Screening Scale (PASS)	67	21.5
Perinatal PTSD Screening Scale (PCL-5)	18	5.1
PHQ-9 Scale	21	3.5
NONE	192	62.1
OTHER (SPECIFY)	1	3.2

Table 8: (Source: Authors' Field Work, 2024)

PERINATAL ANXIETY&DEPRESSION SCREENING SCALES

PERINATAL ANXIETY&DEPRESSION ASSESSMENT SCALES/TOOLS
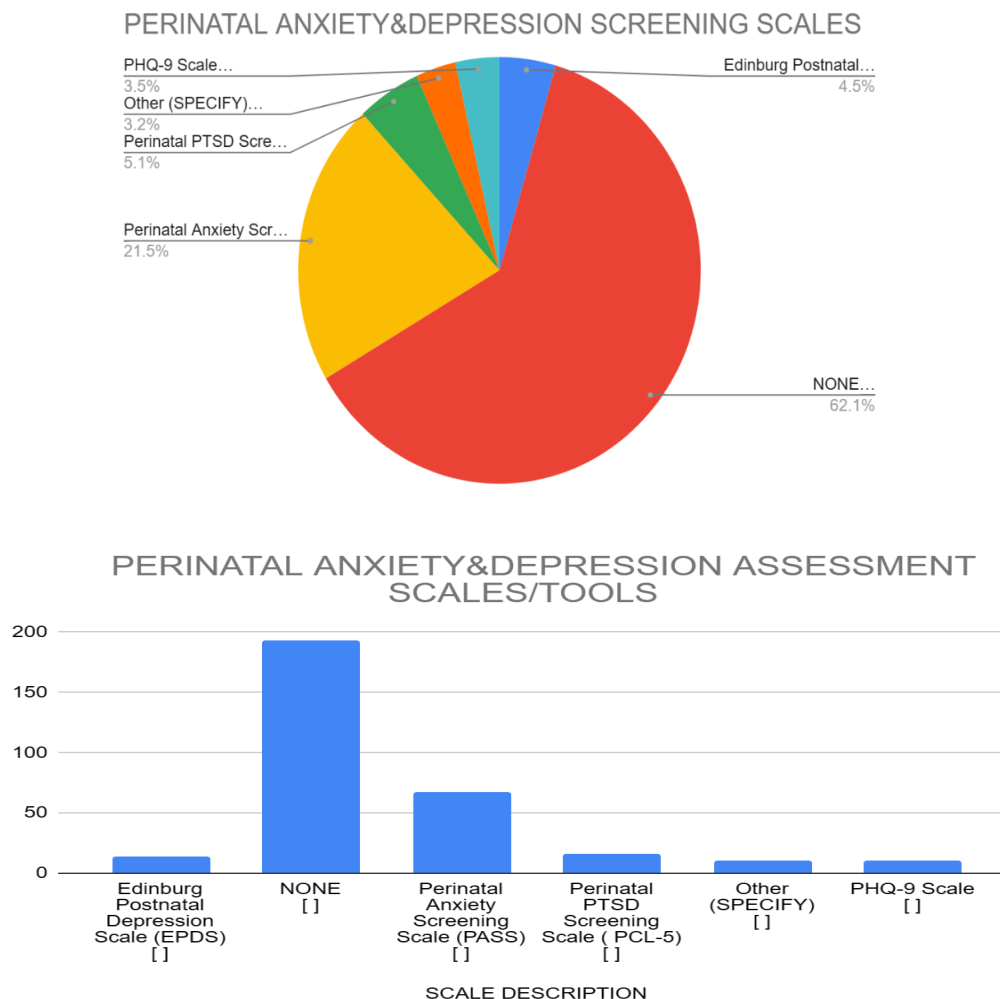

Figure 8

Additionally, considering the ''*integration of mental health into routine perinatal care*'', over 70% (n=217) of the participants indicated that they incorporate mental health services into the care of perinatal women whiles a considerable number (n=89; 29.3%) of participants reported that they do not incorporate mental health services into perinatal care. Table 9/figure 9 shows participants' responses in this regard.

Mental Healthcare and Routine Perinatal Care

VARIABLES	FREQUENCY (n=306)	PERCENTAGE (%)
YES	217	70.7
NO	89	29.3

Table 9: (Source: Authors' Field Work, 2 024)

MENTAL HEALTHCARE & ROUTINE PERINATAL CARE

NO   []
29.3%

YES   []
70.7%
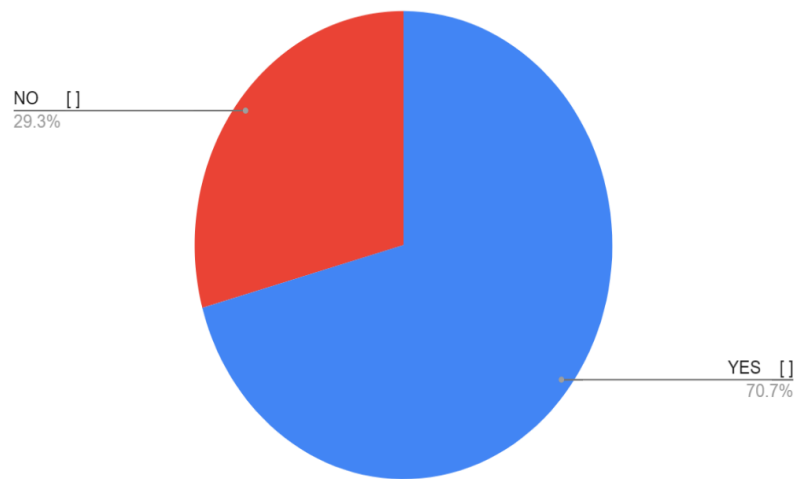
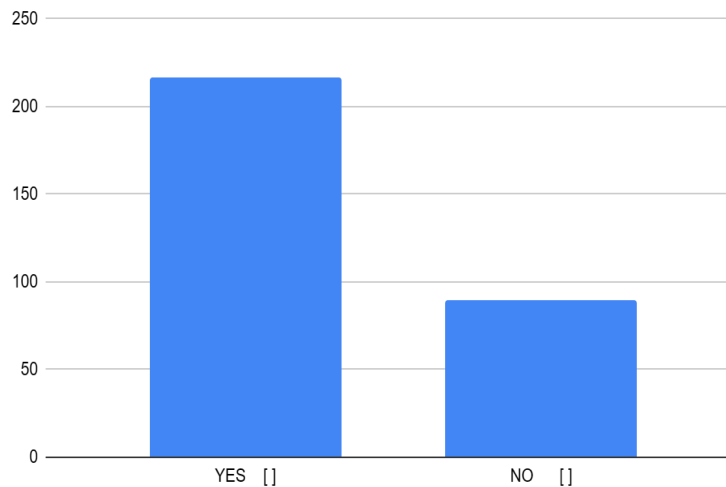## MENTAL HEALTHCARE&ROUTINE PERINATAL CARE

Figure 9:

Table 10/ figure 10 shows participants responses regarding '*mental health assessment and screening in routine perinatal care*". A little over one-third of the participants (n=106; 33.9%) perform mood and anxiety screening or assessment for the perinatal women in their care whiles 23.0% (n=72) conduct alcohol use screening, with only 7.0% (n=21) of participants assessing perinatal mothers' psychiatric treatment history. Furthermore, only 5.8% (n=18) of study participants perform substance-use screening whereas 7 and 10 participants carry out trauma and abuse history representing 2.2% and 3.2% respectively. Nonetheless,13.1% (n=41) do not perform any mental health assessments for the perinatal women in their care.

A. Mental Health Assessment/ Screening In Routine Perinatal Care

VARIABLES	FREQUENCY (n=312)	PERCENTAGE (%)
Trauma Screening	7	2.2
Substance-Use Screening	18	5.8
Mood and Anxiety Screening	106	33.9
Alcohol Use History	72	23.0

Mental Status Examination	37	11.8
Psychiatric Treatment History	21	7.0
Abuse History	10	3.2
None	41	13.1

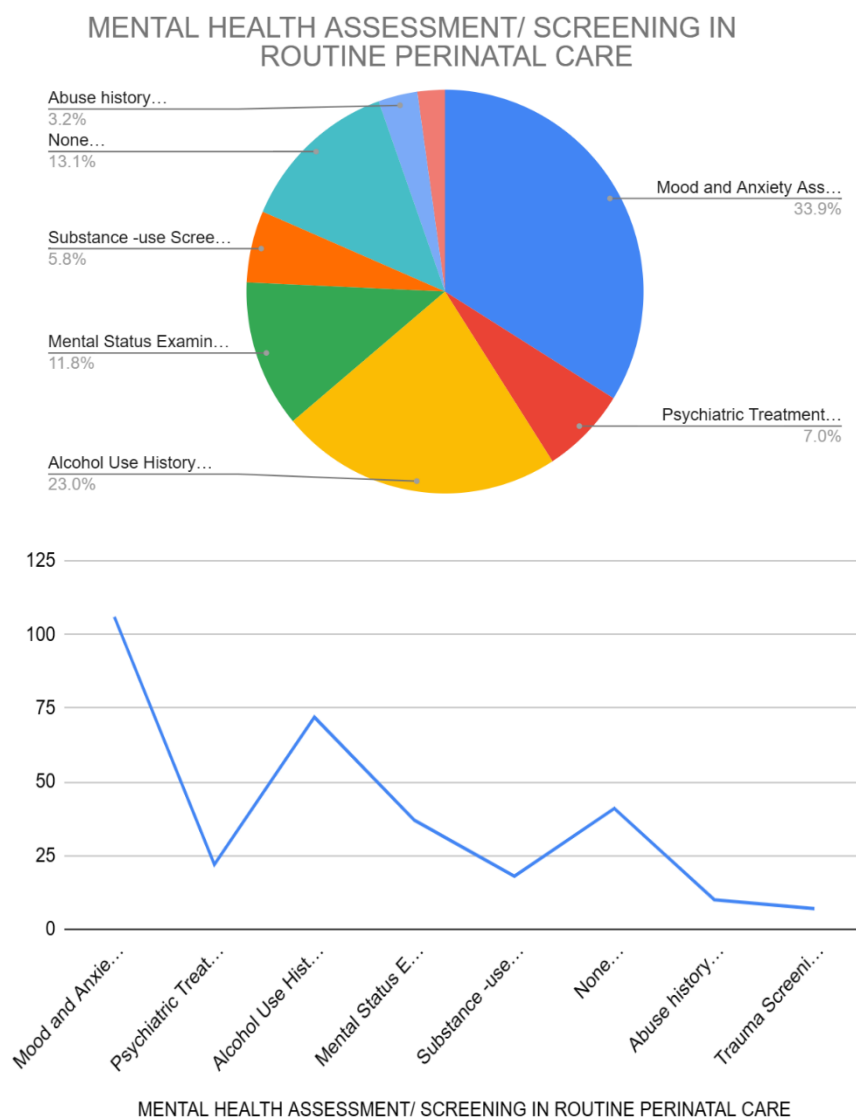**Table 10: (Source: Authors' Field Work, 2024)**

Figure 10

Participants' responses in relation to the '*mental health support pathways*'' are shown in table 11 / figure 11 below. A significant proportion of the respondents (n=105; 32.7%) provide supportive counselling for the perinatal women in their care. However, a greater proportion (n=179; 57.9%) refer perinatal women with mental health challenges to the mental health department for spe-cialist care. Similarly, 4.9% (n=14) of study subjects indicated that they assess mental health challenges that confront the perinatal women in their care whiles 4.5% (n=13) of participants indicated the absence of perinatal mental health services in their respective facilities.

VARIABLES	FREQUENCY (n=311)	PERCENTAGE (%)
SUPPORTIVE COUNSELING	105	32.7
ASSESSMENT OF MENTAL HEALTH CHALLENGES	14	4.9
REFERRAL TO MENTAL HEALTH TEAM	179	57.9
UNAVAILABILITY OF PERINATAL MENTAL HEALTH SERVICES	13	4.5

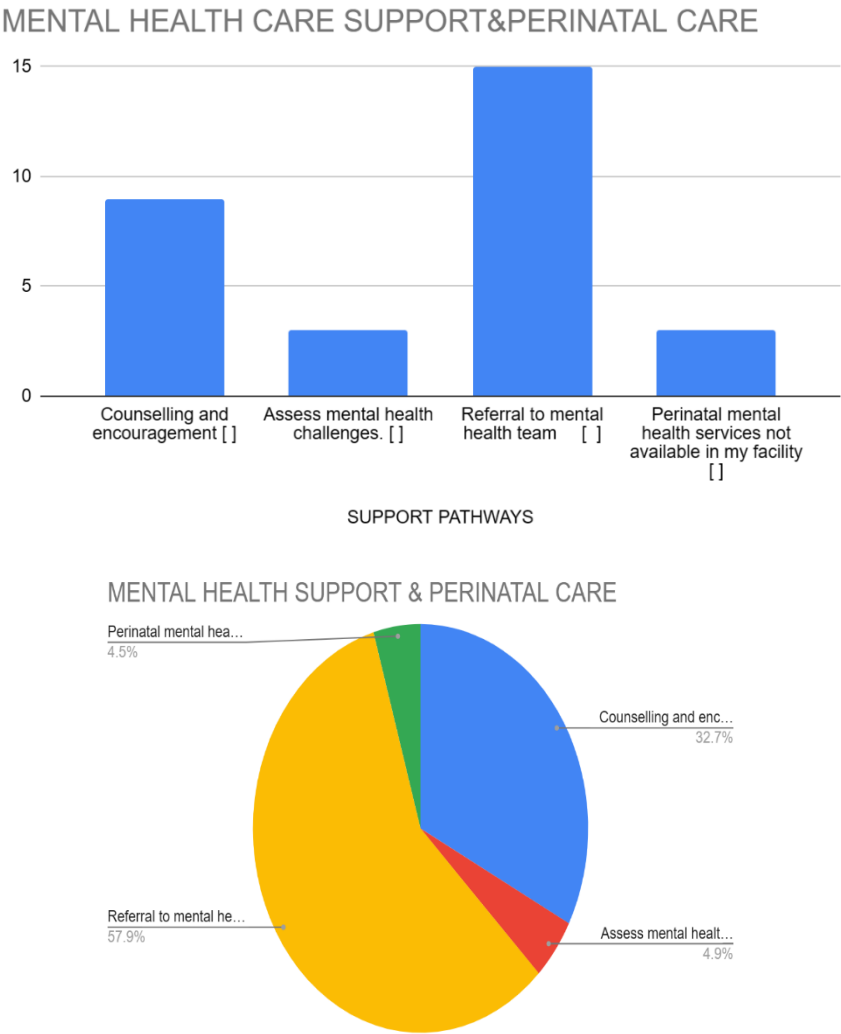**Table 11: (Source: Authors' Field Work, 2024)**

Figure 11

Figure 12 below represents participants' responses in terms of the '*'consequences of poor mental health on birth outcomes''*. Participants demonstrated the awareness of the impact of poor mental health effects on the new born as well as the mother. Participants reported such birth outcomes as low birth weight, loss of self-esteem, refusal to breastfeed the baby, stillbirth and postnatal depression among others as some of the birth outcomes emanating from poor mental health challenges.
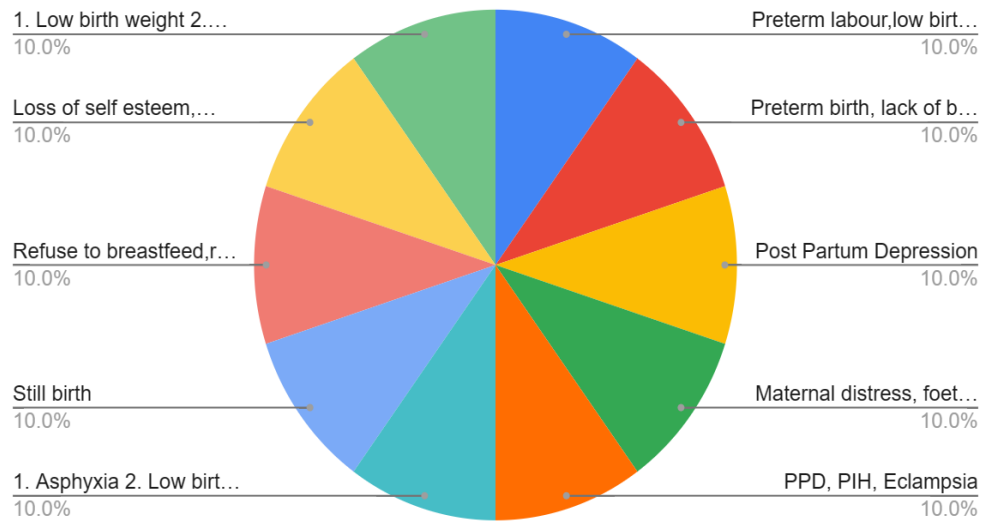
POOR MENTAL HEALTH EFFECTS ON BIRTH OUTCOMES

Figure 12:

3.1 Summary of Results

VARIABLE	ACTUAL RESPONSES (n)	RESPONSE RATE (n/N*100) %
WORK EXPERIENCE	312	97.8
QUALIFICATION	313	98.1
WORKPLACE DESCRIPTION	312	97.8
CURRENT JOB TITLE	313	98.1
Midwives Knowledge and Understanding of Perinatal Anxiety and Depression	313	98.1
Midwives' Familiarity with Anxiety and Depression Assessment Tools	311	97.4
Perinatal Anxiety and Depression Assessment Skills	312	97.8
Utilization of Anxiety and Depression Assessment Tools in Routine Perinatal Care	313	98.1
MENTAL HEALTHCARE AND ROUTINE PERINATAL CARE	306	95.9
MENTAL HEALTH ASSESSMENT/ SCREENING IN ROUTINE PERINATAL CARE	312	97.8
MENTAL HEALTH SUPPORT PATHWAYS	312	97.8

Table 12: (Source: Authors' Field Work, 2024). *N=319 (Total Responses Received) **n=Actual Responses

The '*actual responses and the respective rate of response*' by participants for each item or variable are shown in table 12 above. Overall, the rate of response ranged from 95.9% to 98.1%.

4. Discussion

In this study, we explored midwives' preparedness to use globally reliable and validated assessment tools in identifying anxiety and depression symptoms in perinatal women engaging maternity services. Overall, a little over one-third of study participants (table 5/ figure 5) have adequate knowledge and understanding about perinatal anxiety and depression. This finding contradicts prior studies suggests that midwives have high levels of knowledge and confidence in identifying women who experience depression and anxiety during the perinatal period [1,19]. However, the midwives demonstrated a better appreciation of the consequences of poor perinatal mental health on birth and maternal outcomes (figure 12). This resonates with earlier reports that found a strong association of maternal depression and anxiety with preterm birth, small for gestational age, stillbirth, low birth weight, and maternal morbidity including perinatal complications, increased operative delivery, and postpartum depression and further propose that to prevent these adverse outcomes, depression should be screened, monitored, and managed appropriately keeping risk-benefit in consideration [19]. Nonetheless, a greater proportion of the participants (table 6/figure 6) were uninformed about anxiety and depression assessment tools which impairs their ability to adequately identify and assess for symptoms of poor mental health among the perinatal women in their care. Additionally, over 60% of participants (table 8\figure 8) reported that they have never used any of the validated depression and anxiety assessment tools throughout their practice. This is a major hindrance to the provision of quality maternal mental health services during the perinatal period. New and expectant parents have unique mental health needs therefore, it is important to use the most validated screening instruments for this population to screen new and expectant mothers for symptoms of depression and anxiety. Evidently, this is rarely heeded to in most health facilities across Ghana, negatively impacting the provision of holistic perinatal care [6,16].

In furtherance, nearly one-third of participants (table 9/figure9) indicated that they do not incorporate mental health assessment into the provision of routine perinatal care. The perinatal period is a time of huge change and adjustment. For most new parents life settles after a few months but for others pregnancy and early parenthood can trigger symptoms of more serious mental health conditions that require active management. A consistent, early, and effective response by trained health professionals such as midwives during the perinatal period is essentially critical [13]. Therefore, it's necessary to conduct routine and universal screening for perinatal depression and anxiety in both antenatal and postnatal settings [11]. Preliminary report suggests that maternal mental health conditions are arising exponentially in the perinatal period, including depression and anxiety [2,20]. This presents the potential to impact negatively on not only the woman but also her partner, infant, and family. However, the capacity for routine, universal antenatal mental health assessment is lacking in many maternity settings in Ghana despite the potential for reduction of morbidity and mortality in this regard. There are several mental health assessments that ought to be carried out on pregnant women attending antenatal and postnatal reviews so that they may be provided with the needed support as well the required level of care and supervision. These mental health screening include but not limited those as trauma screening or assessment, abuse, mood and anxiety screening, drug and alcohol screening, mental status examination to determine severe forms of mental illnesses, psychiatric treatment screening or assessment among others [7]. In relation to this, it is astonishing that just about 34% of study participants (table 10/figure10) conduct mood and anxiety assessment and screening for the perinatal women in their care. In terms of mental health support given to perinatal women with mental health challenges, a greater proportion of the midwives (table 11/figure 11) placed much premium on "referrals" (57.9%) and on the provision of "supportive counselling" as the immediate support systems in such instances. This finding is consistent with prior studies that assert that supportive counselling that allows perinatal women to share and discuss their mental health challenges in a respectful manner with health professionals is the most effective way to assist perinatal women in this regard [3, 7,15].

4.1 Training, Practice, Professional Development and Progression of Midwives in Ghana

Midwifery education is a key solution to the challenge of providing universal and quality maternal and new born care to meet our Sustainable Development Goals and while improving access to care is critical, ensuring good quality of care has an even greater impact in terms of lives saved [2]. The World Health Organisation posits that midwifery education is designed to address three (3) strategic priorities namely, all midwives should be educated to high standards and enabled to practise to their full scope, midwives should be involved in education policy at the highest level as well as aligning and coordinating midwifery education processes to meet international standards [2]. Despite an understanding of the skills and competencies needed to provide high quality care to women during pregnancy, birth and the post-natal period, there is a marked lack of conformity and standardisation in the approach between countries to the pre-service education of midwives [4]. Report indicates that there is complexity in midwifery education in many countries, which is concentrated in low -and middle-income countries (LMICS). On average, LMICs have a greater number of education pathways and shorter duration of education programmes and are less likely to attain the ICM-recommended minimum duration of 36 months for direct entry [4]. However, in Ghana, candidates presenting themselves for the registered midwifery program are expected to possess strong grades (usually grades A1-C6 in specific subject areas) in the West African Senior School Certificate Examination (WASSCE). The midwifery profession in Ghana is regulated by the Nursing and Midwifery Council of Ghana. The council, together with the ministry of health, Ghana (MOH), the Health Training Secretariat (HTI) and the Ghana Tertiary Education Commission (GTEC) prescribe three different routes to becoming a registered midwife (RM) in Ghana. A candidate could undertake a 3- year diploma program in an accredited nursing and

midwifery training college or pursue a 4- year Bachelor of science degree in an accredited university in Ghana. Similarly, post-basic midwifery candidates would have undergone a 2- year certificate nursing assistant clinical or community health nursing program and an additional two-year top-up midwifery training to qualify for registration as a midwife with the NMC-Ghana.

A candidate having received her certification as a registered midwife with the NMC of Ghana begins her career as a staff midwife (SM) and progresses steadily through such ranks as senior staff midwife (SSM), midwifery officer (MO), senior midwifery officer (SMO), principal midwifery officer (PMO), deputy director of midwifery services (DDMS) and director of midwifery services (DMS). Conventionally, it takes a midwife an average of 20 to 25 years to obtain the rank of DDMS OR DMS. However, this could be enhanced through academic development to obtain the same rank and reduced the duration by 5 to 10 years on the average. Traditionally, the professional progression of nurses and midwives in Ghana takes a 5-year stepwise promotion. For instance, it takes an SM 5 years to obtain the rank of an SSM from the first appointment and subsequently another 5 years to become an MO until s/he reaches the last rank. Nonetheless, some nurses and midwives may skip ranks partly due to special appointments to certain positions or through academic developments. Midwives work in a variety of settings and at different levels across the healthcare system, ranging from health centres (sub-district hospitals) to teaching hospitals across the country as shown in table 1-4 (fig. 1-4 respectively).

5. Conclusion

Anxiety and depression disorders are common in women, and this extends into the perinatal period as well. Thus, screening for anxiety and depression symptoms during the perinatal period is crucially important for the proper management and treatment of these conditions. Our findings provide relevant information and pointers to stakeholders in the education, training, regulation, and practice of midwifery in Ghana to prioritise maternal mental health services for all women by equipping midwives who are the major frontlines in the delivery of holistic perinatal care services. Overall, the study revealed the lack of understanding and the ability of midwives to confidently use globally reliable and validated assessment tools to incorporate mental health screening into routine maternity services.

Declaration
Competing Interest
The authors of this paper have no competing interests or any other interests that seek to influence the results and discussions addressed in this paper. Additionally, the results/tables/ figures in this manuscript have not been published or submitted elsewhere for consideration. In furtherance, I confirm that I have read the journal submitting policies and hereby submit this manuscript in accordance with these policies. Again, all the materials in this manuscript are owned by the authors and do not require any permission to be published. Lastly, participants' engagement was done in ac-

cordance with the relevant guidelines and policies.

References
1. Howard, L. M., & Khalifeh, H. (2020). Perinatal mental health: a review of progress and challenges. *World Psychiatry, 19*(3), 313-327.
2. WHO (2020). A Global Brief on Mental Illnesses: Silent Killer, Global Public Health Crisis. World Health Day 2020. Geneva, Switzerland: World Health Organization Press.
3. Gupta, J., Kaushal, S., & Priya, T. (2023). Knowledge, attitude, and practices of healthcare providers about perinatal depression in Himachal Pradesh—A cross-sectional study. *Journal of Family Medicine and Primary Care, 12*(3), 478.
4. Neal, S., Stone, L., Moncrieff, G., Matthews, Z., Kingdon, C., Topalidou, A., ... & Downe, S. (2023). Assessing safe and personalised maternity and neonatal care through a pandemic: a case study of outcomes and experiences in two trusts in England using the ASPIRE COVID-19 framework. *BMC Health Services Research, 23*(1), 1-18.
5. Van Niel, M. S., & Payne, J. L. (2020). Perinatal depression: A review. *Cleveland Clinic journal of medicine, 87*(5), 273-277.
6. Cheng, C., Wang, H. Y., & Chau, C. L. (2021). Mental health issues and health disparities amid COVID-19 outbreak in China: Comparison of residents inside and outside the epicenter. *Psychiatry Research, 303,* 114070.
7. Ransing, R., Kukreti, P., Deshpande, S., Godake, S., Neelam, N., Raghuveer, P., ... & Padma, K. (2020). Perinatal depression–knowledge gap among service providers and service utilizers in India. *Asian journal of psychiatry, 47,* 101822.
8. Adjorlolo, S. (2023). Seeking and receiving help for mental health services among pregnant women in Ghana. *PLoS one, 18*(3), e0280496.
9. Fawcett, E. J., Fairbrother, N., Cox, M. L., White, I. R., & Fawcett, J. M. (2019). The prevalence of anxiety disorders during pregnancy and the postpartum period: a multivariate Bayesian meta-analysis. *The Journal of clinical psychiatry, 80*(4), 1181.
10. Bhat, A., Nanda, A., Murphy, L., Ball, A. L., Fortney, J., & Katon, J. (2021). A systematic review of screening for perinatal depression and anxiety in community-based settings. *Archives of Women's Mental Health*, 1-17.
11. Highet, N. J., Gemmill, A. W., & Milgrom, J. (2011). Depression in the perinatal period: awareness, attitudes and knowledge in the Australian population. *Australian & New Zealand Journal of Psychiatry, 45*(3), 223-231.
12. Dadi, A. F., Miller, E. R., Azale, T., & Mwanri, L. (2021). "We do not know how to screen and provide treatment": a qualitative study of barriers and enablers of implementing perinatal depression health services in Ethiopia. *International Journal of Mental Health Systems, 15*(1), 41.
13. Milgrom, J., Holt, C. J., Gemmill, A. W., Ericksen, J., Leigh,

B., Buist, A., & Schembri, C. (2011). Treating postnatal depressive symptoms in primary care: a randomised controlled trial of GP management, with and without adjunctive counselling. *BMC psychiatry, 11*, 1-9.

14. Adjorlolo, S., & Aziato, L. (2020). Barriers to addressing mental health issues in childbearing women in Ghana. *Nursing Open, 7*(6), 1779-1786.

15. Noonan, M., Jomeen, J., Galvin, R., & Doody, O. (2018). Survey of midwives' perinatal mental health knowledge, confidence, attitudes and learning needs. *Women and Birth, 31*(6), e358-e366.

16. Austin, M. P., Highet, D. (2017). Psychosocial assessment and depression screening in the perinatal period: Benefits, challenges, and implementation. In: Joint Care of Parents and Infants in Perinatal Psychiatry. Eds: A. L. Sutter-Dallay, N. M. C. Glangeaud-Freudenthal, A. Guedeney and A. Riecher-Rössle, 167-95.

17. Manolova, G., Waqas, A., Chowdhary, N., Salisbury, T. T., & Dua, T. (2023). Integrating perinatal mental healthcare into maternal and perinatal services in low and middle income countries. *bmj, 381*.

18. Keleher, H. (2022). Policy brief Why women's health matters.

19. Jahan, N., Went, T. R., Sultan, W., Sapkota, A., Khurshid, H., Qureshi, I. A., & Alfonso, M. (2021). Untreated depression during pregnancy and its effect on pregnancy outcomes: a systematic review. *Cureus, 13*(8).

20. Gaillard, A., Le Strat, Y., Mandelbrot, L., Keita, H., & Dubertret, C. (2014). Predictors of postpartum depression: prospective study of 264 women followed during pregnancy and postpartum. *Psychiatry research, 215*(2), 341-346.