STRENGTHENING MATERNAL MENTAL HEALTH IN GHANA

SITUATIONAL ANALYSIS OF MATERNAL MENTAL HEALTH SERVICES IN GHANA

75 HEALTH FOR ALL

World Health Organization

UK International Development

Partnership | Progress Prosperity

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PREAMBLE TO PROJECT

The current project proposal describes a collaboration between the WHO Country Office in Ghana and the UK Foreign, Commonwealth and Development Office (the UK-FCDO) in the area of strengthening maternal mental health service in Ghana.

The collaboration is aimed at contributing to the objectives and priorities of the Health Sector Medium Term Development Plan of Ghana (2022-2025), the UKAid objectives on strengthening the social sector systems under the Leave No One Behind (LNOB) and the Partnerships Beyond Aid programmes and to the 'triple billion' goals of the WHO Global Programme of Work (GPW-13) for 2019-2025, among others (as defined in the Results Framework). The interventions will build on the results of the UKAid-funded project on Maternal Mental Health implemented by Basic Needs-Ghana (BNGh) in 2015-2021, ensuring complementarity with the FCDO-WHO Health Systems Strengthening for UHC in Ghana, among other ongoing relevant initiatives.

The intended Outcome of the collaboration is "Improved evidence base for policy making, institutional strengthening and delivery of quality and integrated maternal mental health services by the Ministry of Health and its agencies in Ghana". The logic of the strategic collaboration is visualized in Figure 1.

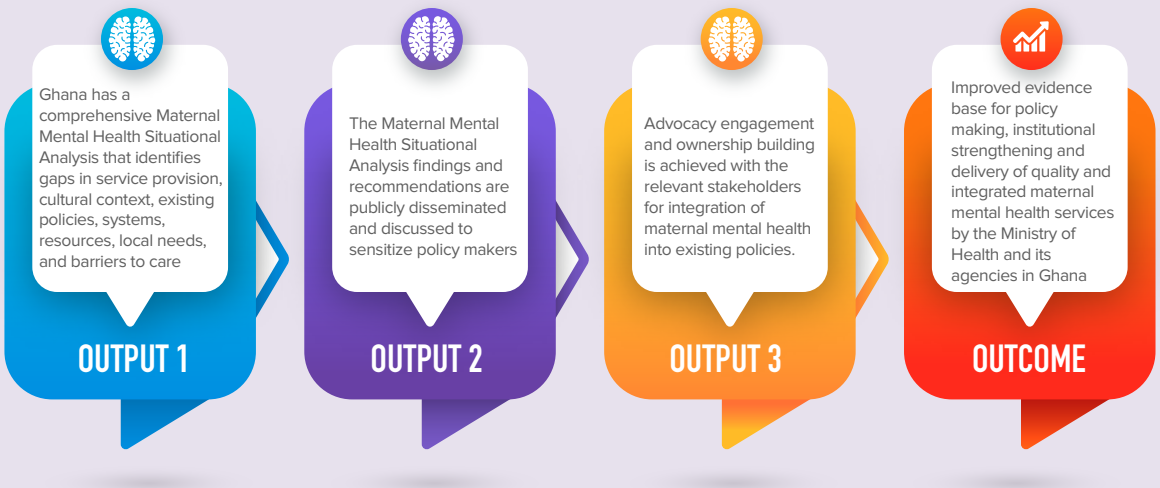

Figure 1. Visualized overview of the FCDO-WHO collaboration on maternal mental health

The FCDO-WHO will focus on supporting strengthening the availability, analysis and use of data for evidence-based policy making and to inform more targeted, efficient and integrated maternal mental health services at Primary Health Care (PHC) level.

REPORT ON PROJECT EXECUTION APRIL – NOVEMBER 2023

Following the award of the project contract, a National Technical Working Group was constituted with membership as follows:

1. Dr Promise E. Sefogah, (Snr Lecturer, Univ. of Ghana Med. Sch.; Consultant OBGYN Korle Bu Teaching Hospital, **Project Consultant to WHO**
2. Dr Charles Takyi, Consultant OBGYN, KBTH, MOH, Ghana
3. Dr Henry Kumi, Consultant OBGYN, KBTH, MOH, Ghana
4. Dr Chris Fofie, Head, Safe Motherhood Programme, Ghana Health Service
5. Dr Nana Ayegua Hagan Seneadza, Public Health Consultant, UGMS
6. Dr Dzifa Abra Attah, Department of Psychiatry, Lecturer/Clinical Psychologist Consultant, UGMS
7. Dr Mishael Yankey, Public Health Specialist, KBTH, UGMS
8. Dr Kenneth Mibut Dam, Public Health Specialist, TTH
9. Dr Grace Newman, Specialist OBGYN, Korle Bu Teaching Hospital
10. Dr Martin Boamah, Technical Officer, RMNCAH, WHO Ghana
11. Mr Peter Yaro, Basic Needs Ghana
12. Dr Joana Ansong, NPO, NCD, WHO Ghana
13. Dr Leveana Gyimah, Technical Officer, Mental Health, WHO, Ghana

The technical working group (TWG) received the project execution plan and provided support for streamlined execution.

The project execution was scheduled to involve eight main steps across its lifespan to culminate in the expected outputs. These are:

1. A desktop scoping review of maternal mental health research work in Ghana to provide a baseline overview of the context and maternal mental health disorder landscape in Ghana.
2. A multi-stake-holder inception conference for sensitization and gathering of input into data collection tools for the nationwide survey.
3. Nationwide situational data collection and analysis via:
    - A nationwide quantitative survey across the three main ecological zones of Ghana among healthcare providers (namely Midwives, Nurses, Physician Assistants, Clinical Psychologists, Mental Health Nurses, Doctors, Medical officers, Specialists, Consultants from CHPS Compound, Sub-district Health Center, District Hospitals, Regional, and tertiary facilities); Healthcare Managers, NGOs, Civil Society Groups, Community-based support groups, local government authorities, traditional leadership, and academia)
    - In-depth interviews of community members and women with lived experiences at maternal mental health disorder
4. Data analysis of findings from nationwide data collected.
5. Three Zonal meetings nationwide for purposes of results validation by various stakeholders across Ghana.
6. One national stake-holder results validation conference.
7. Final validated results compilation, report writing and preparation of advocacy policy briefs.
8. Series of Policy-Maker engagements for integration of maternal mental healthcare into routine maternity care in Ghana.

CONTENT

LIST OF ABBREVIATIONS

AAP	Annual Activity Plans
ANC	Antenatal Care
AOR	Adjusted Odds Ratio
BP	Blood Pressure
CHAG	Christian Health Association of Ghana
CHN	Community Health Nurses
CHO	Community Health Officer
CHPS	Community-Based Health Planning &Services
CMHO	Community Mental Health Officer
COVID-19	Coronavirus Disease 2019
cRCT	Cluster-randomized controlled trial
CRH	corticotrophin-releasing hormone
CS	Caesarean Section
DADCF	District Assembly Disability Fund
EPDS	Edinburgh Postnatal Depression Scale
FCDO	Foreign, Commonwealth and Development Office
FDA	Food and Drugs Authority
FGD	Focus Group Discussion
GARH	Greater Accra Regional Hospital
GHS	Ghana Health Service
GPW	Global Programme of Work
HCM	Health Managers
HCP	Healthcare Provider
HCW	Healthcare Worker
HIV	Human Immuno-Deficiency Virus
HPA	Hypothalamic-Pituitary-Adrenal axis
IDI	In-depth Interviews

INR	Indian Rupee
KBTH	Korle-Bu Teaching Hospital
LNOB	Leave No One Behind
MCH	Maternal and Child Health
MHA	Mental Health Authority
MMDA	Metropolitan, Municipal, and District Assemblies.
MMH	Maternal Mental Health
MMHC	Maternal Mental Health Conditions
MMHD	Maternal Mental Health Disorders
MTDPs	Medium-Term Development Plans
NHIS	National Health Insurance Scheme
NICU	Neonatal Intensive Care Unit
OBGYN	Obstetrician-Gynecologist
PHQ-9	Patient Health Questionnaire-9
PND	Postnatal Depression
PPD	Postpartum Depression
RCH	Reproductive and Child Health
RCT	Randomized Controlled Trial
RMNCH	Reproductive, Maternal, Newborn and Child health
SHG	Self-Help Group
UHC	Universal Health Coverage
UK	United Kingdom
UK-FCDO	UK Foreign, Commonwealth and Development Office
USD	United States Dollars
WHO	World Health Organization
CPD	Continuous Professional Development
NoP	Networks of Practice
PTSD	Post-Traumatic Stress Disorder

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EXECUTIVE SUMMARY

Background

The mental health of mothers and the physical development, especially nutrition, of their infants are inextricably linked. Maternal Mental Health (MMH) is a critical mediator between social adversity and poor infant growth. Even though sufficient evidence exists on the adverse impact of maternal mental health disorder on the mother and infant, and the high prevalence of the disorder in Ghana, there is little provision in the country current healthcare system for its screening, early detection and effective management. There is a need to integrate maternal mental health interventions within health systems from the level of the community and across all levels of healthcare. The objectives and priorities of the Health Sector Medium Term Development Plan of Ghana (2022-2025), the UKAid's objectives on strengthening the social sector systems under the 'Leave No One Behind' (LNOB) and the 'Partnerships Beyond Aid' programmes; and the 'triple billion' goals of the World Health Organization (WHO) Global Programme of Work (GPW-13) for 2019-2025 align with the Ghana Health Service strategic objective of improving quality of care for mothers and newborns among others. In that regard, the aim of this situational analysis was to review literature, existing policies, state of maternal mental healthcare with the view to identify gaps for recommendations towards integration of maternal mental health into routine maternity care in Ghana.

Methods and Materials

To obtain a true state of maternal mental health conditions in Ghana with the view to clearly identify the available policies, services, challenges and gaps, a systematic stepwise approach was adopted for this situational analysis. The methodology involved an in-depth desk review of relevant policy documents on maternal mental health in Ghana, and of scientific research on the subject over the past two decades (2003-2023) in Ghana. This was followed by a national key-stakeholders inception and sensitization conference that set the stage for key stakeholder input and buy-in, following which the nationwide primary data collection was rolled out through quantitative surveys among healthcare workers (clinicians such as obstetrician/gynaecologists, midwives, nurses, mental health nurses, psychiatrists, and clinical psychologists), healthcare managers and leadership.

Next was the qualitative key informant interviews and focus group discussions among pregnant women, postpartum mothers, community members with lived experience, and local Government Authority functionaries. Findings through these engagements were validated through nationwide four zonal validation meetings to consolidate the findings and recommendations.

Results

Research publications on the subject in Ghana over the past two decades (2003 – 2023) have consistently reported high prevalence of perinatal depression up to 50.1% in Ghana with suicidal ideation rates of 13-17%; absent routine antenatal and postnatal screening; inadequate access to maternal mental

health service; limited capacity of healthcare workers for detection, management; lack of treatment and referral protocols and pathways, and a low formal healthcare seeking behavior among affected women due to lack of awareness and stigma. Postpartum depression was associated with pregnancy complications, adverse obstetric outcomes and the children of affected mothers also reportedly suffered three-times likelihood of stunted growth in Ghana.

Specific key findings from the primary survey include: inadequate training of healthcare workers on maternal mental health; limited capacity, lack of knowledge on diagnostics and management / referral pathways, conducive care environment; inadequate human and logistic resources; physical and financial barriers to access; inadequate patient education and awareness. Patients also reported antenatal, intrapartum, postpartum and community-based experiences, lack of compassionate care as factors that contributed to their mental disorder. Further, absent national policy, lack of screening; lack of privacy at points of care, lack of community awareness; stigma and financial barriers emerged as dominant themes associated with maternal mental health disorder nationwide.

Recommendations

Based on the current situational analysis findings from the scientific methodological approach, the following are recommended for the effective integration, institutionalization and ownership for sustainability, maternal mental health services in routine maternity care in Ghana.

KEY STAKEHOLDERS	ROLES & RESPONSIBILITIES
Parliamentary Select Committee on Health	■ High level advocacy, ■ Support for enactment of relevant laws and legislations
Ministry of Health	■ Development of relevant policies, ■ High level advocacy, ■ Capital investment ■ Inter-sectoral collaborations and partnerships
Non-Health Ministries, Departments and Agencies	■ Promotion of gender mainstreaming, equity and psychoeducation, ■ People-centered and rights-based care ■ Provision of financial risk protection for high-risk groups and affected women ■ Collaboration with UNICEF on the implementation of the Integrated Social Services (ISS) and SWIMS case management intervention Curriculum review to include MMH at secondary & tertiary levels
National Health Insurance Authority	■ Inclusion of MMH preventive & management services under benefits package

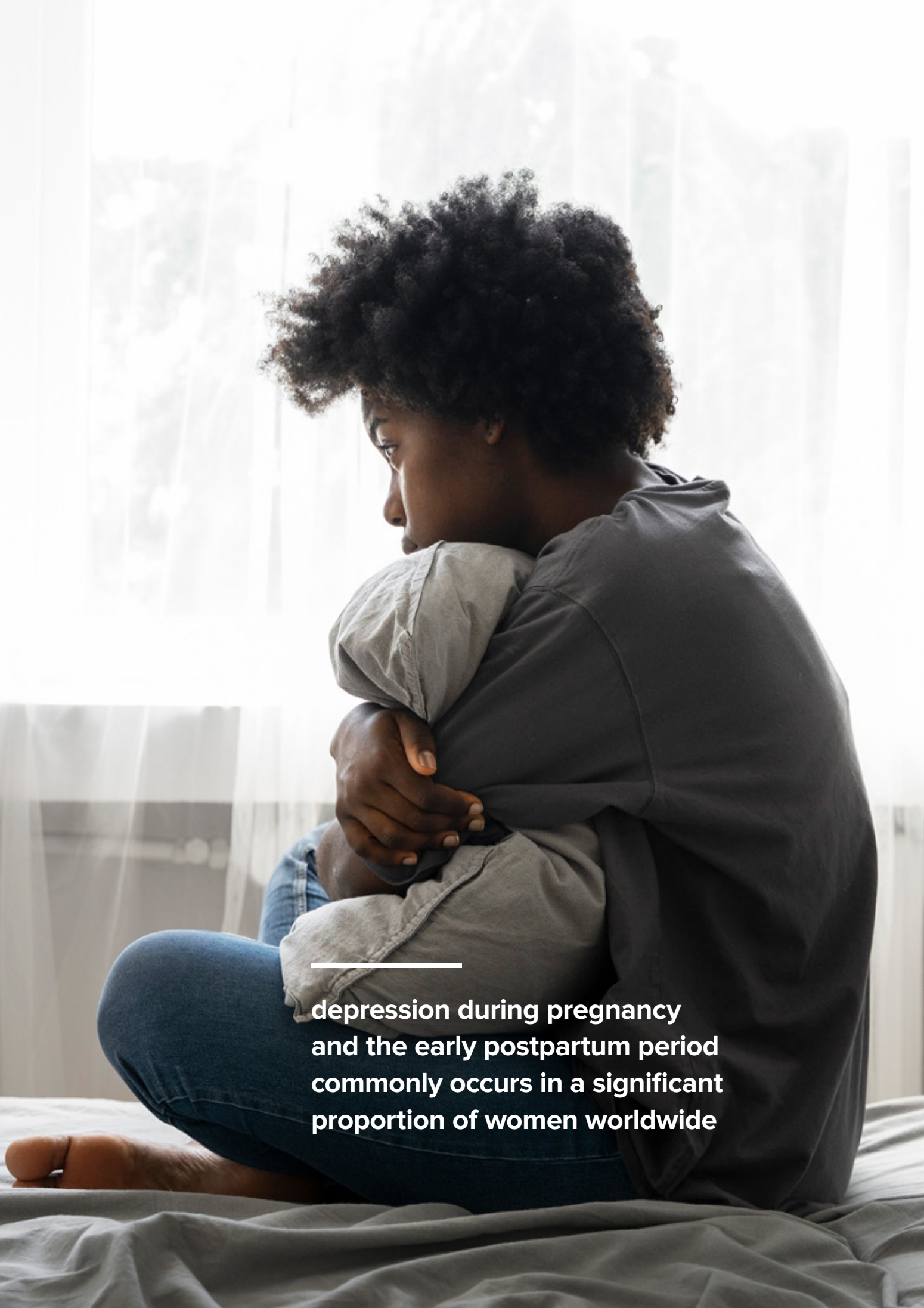
Ghana Health Service	■ High level advocacy ■ Development of new and review of existing tools and guidelines ■ Alignment to Network of Practice Concept and implementation ■ Prioritization of mental wellbeing for all healthcare workers ■ Capacity building programmes ■ Improved data capture, reporting & analytics for decision-making ■ Strengthen comprehensive compassionate care ■ Equitable healthcare worker distribution ■ Monitoring and evaluation of MMHS
Mental Health Authority	■ Prioritize maternal mental health in the review of Mental Health Act and other related strategic documents ■ Advocate for the establishment of mental health facilities to improve access ■ Strengthen referral pathways for maternal mental health disorders ■ Build the capacity of traditional healers and promote collaboration with orthodox facilities ■ Monitor and regulate activities of traditional and spiritual healers and prayer camps
Health Facilities Regulatory Authority	■ Include availability of minimum standards for MMHS (infrastructure, standards, logistics and care environment) into checklist for accreditation of healthcare facilities
Teaching Hospitals, Quasi Government Institutions, Faith-Based, Private & Public health facilities	■ Train and orient healthcare workers including community-based volunteers for the provision of MMHS ■ Promote provision of non-judgemental, client-centered and respectful care for MMH ■ Provide supportive environments and logistics to promote client-centered, rights-based services, ensuring privacy and confidentiality ■ Strengthen integration and synergies among various Health Programmes ■ Enhance analytics capacity at subnational levels for effective data use for decision making in MMHS ■ Train Quality Improvement teams to proactively identify MMH Services gaps and implement intervention to improve service at facility level ■ Provide psychoeducation, stress management techniques, self-care strategies and life skills ■ Integrate routine screening and counselling services for MMH during antenatal, pregnancy schools, postnatal and child welfare clinics, as well as post-abortal reviews. ■ Strengthen supportive supervision, clinical mentoring, and onsite coaching at subnational levels

Development Partners	■ Advocate for improvement of maternal mental health ■ Advocate for strengthened governance, intersectoral collaboration and partnerships ■ Technical assistance for the improvement of MMH: ■ development and adaptation of standards, guidelines, and protocols, ■ Development of monitoring and evaluation frameworks, & facility-level indicators ■ Capacity development programmes to improve MMH ■ Resource mobilization efforts ■ Support development of training models ■ Catalytic financial support for the piloting MMH interventions for scale up ■ Promote and support research agenda for MMH ■ Lead the piloting of perinatal mental health units to generate evidence to guide scaling up of integrated MMH services
Academic Institutions	Include MMH modules into curriculum for medical, nursing, midwifery, and allied health training institutions Prioritize implementation research for MMH Include MMH module in postgraduate residency training in advanced midwifery, obstetrics/gynaecology and psychiatry
Postgraduate Training Institutions	Explore the creation of subspecialty training in MMH for postgraduate fellowships in Obstetrics/Gynaecology, Psychiatry, Nursing, Midwifery
Health Regulatory Bodies	Accreditation of continuous professional development (CPD) programmes on maternal mental health as a prioritized area
Professional Societies & Associations	Organize CPDs on maternal mental health for members Awareness creation for public education on maternal mental health Advocate and actively promote the integration of MMHS at the points of care
Media	Drive public advocacy agenda on maternal mental health issues in the Ghanaian society Lead awareness creation campaign nationwide through print, radio, television, social media, etc Prioritize agenda setting for discussions on MMH related issues (policy, service delivery, social support systems and structures) in collaboration with relevant stakeholders
Traditional and Spiritual Healers	Strengthen collaboration with orthodox health facility
Traditional Leaders, Civil Society Organizations and Community-Based Health Groups	Advocate for screening services in the community Support advocacy initiatives for awareness creation and stigma reduction Mobilize resources for promotion and provision of MMHS Promote community members' service utilization, participation, and ownership

Conclusion

Maternal mental health conditions are highly prevalent in Ghana with some documented evidence of its impact on maternal, newborn and child outcomes as well as long term growth and cognitive developmental sequelae.

Strong national leadership that promotes multi-sectoral collaboration and the adoption of a rights-based approach across all levels of care holds significant prospects for effective integration of maternal mental health services within the enhanced context of compassionate respectful maternity care that would improve quality as well as reproductive, maternal, newborn and child health outcomes in Ghana. The implementation of a pilot perinatal mental unit that educates, screens, and provides appropriate therapeutic interventions to eligible women across selected primary, secondary and tertiary healthcare facilities would significantly enable learning and documentation of real implementation challenges for redress prior to nationwide scaling up and integration in Ghana. In this regard, a coordinated intensive hands-on attachment placement in a well-established system in Ghana, learning from best practices from the United Kingdom's mother and baby unit (MBU) for instance should be useful for national level capacity building towards the integration. The World Health Organization (WHO) is very well positioned with the needed capacity to lead with high-level advocacy, capacity building for institutions and providers, development of training guides, as well as piloting of the perinatal mental health units (PNMHU) for evidence generation towards national scaling up.



depression during pregnancy and the early postpartum period commonly occurs in a significant proportion of women worldwide

01– INTRODUCTION

1.0 Background

According to the WHO, maternal mental health can be defined as “a state of well-being in which a mother realises her abilities, can cope with the everyday stresses of life, can work productively and fruitfully, and can contribute to her community”(1). It refers to the state of emotional and psychological well-being of the woman during pregnancy, delivery, or the period of up to one year following delivery.

While the physical health of women and children is emphasised during antenatal and postnatal clinics, the mental aspects of their health are often ignored by maternal and child health programs, especially in low- and middle-income countries(2). Maternal mental health care remains conspicuous by its absence in large-scale global MCH programs. In agreement with health experts advocating for the comprehensive definition of health, encompassing complete physical, mental, and social well-being, it becomes evident that emphasizing the mental health aspect of maternal health is essential.

Despite the WHO recommendations and the mounting evidence indicating the high prevalence of maternal mental health and its adverse impact on both mother and her newborn, the maternal mental health agenda has not been incorporated into the primary health care system in most low- and middle-income countries (LMIC).

It is essential to incorporate maternal mental health interventions into health systems, starting at the community level and extending across all levels of healthcare. The Ghana Mental Health Policy and Plan advocates for integrating mental health services into primary healthcare facilities, with a specific focus on vulnerable populations such as women during pregnancy and postpartum. However, very little progress has been made.

1.1 Problem Statement

Historically, pregnancy and puerperium have been considered periods that protect women from mental disorders. However, it is currently understood that the opposite is the case: these periods elevate the risk of developing and experiencing a recurrence of mental health disorders, making it imperative for public health to address this issue. Throughout pregnancy, labour and delivery, and the postnatal period in a woman’s life, the accompanying variations in hormonal levels predispose her to major psycho-emotional dysfunction. Particularly, depression during pregnancy and the early postpartum period commonly occurs in a significant proportion of women worldwide. It affects up to 15% of women in high-income countries (HIC) and 20%–40% of women in low-income countries (3). In the case of Ghana, a prevalence of 41% has been reported among women who delivered at the largest teaching hospital in the country and 50% in a postnatal sample in a community setting (4). Perinatal depression can negatively affect the lives of mothers,

neonates, and families. Research evidence has been consistent that undiagnosed and untreated perinatal depression is associated with adverse foetal and neonatal outcomes in addition to long-term effects on the mothers, children, and families.

There is a need to integrate within health systems at the community level, low-cost interventions that promote maternal mental health, tackle child under-nutrition and promote child development.

The importance of the project is contextualised by two key findings of a 2008 WHO report:

1. That the prevalence of maternal mental health conditions are significantly higher in LMICs than in HICs and
2. The impact on infants goes beyond delayed psycho-social development to include low birth weight, reduced breastfeeding, stunted growth and malnutrition, increased episodes of diarrhoea and lower compliance with immunisation schedules.

02 — LITERATURE REVIEW

2.0 Maternal Mental Health

Maternal mental health refers to the state of emotional and psychological well-being of the woman during pregnancy, delivery or the period of up to one year following delivery (5). Maternal mental health disorders can occur throughout pregnancy and the postpartum period. However, the majority of the most severe manifestations occur following delivery. Maternal mental health conditions can encompass a spectrum of conditions, ranging from mild and subtle issues like anxiety, and maternal blues to more prevalent and severe forms such as postpartum depression and psychosis, substance use disorders and suicidal behaviour (6–9).

Postpartum depression is defined as the development of mood disturbance two weeks to one year after delivery(10). The Royal College of Psychiatrists in their 2014 review of postpartum psychosis, defined the condition as a severe episode of mental illness, which begins suddenly in the days or weeks following delivery. The symptoms may vary and change rapidly and include mania, depression, confusion, hallucinations and delusions.(8) The undifferentiated nature of these disorders has remained the cause of diagnostic confusion, contributed to by the intrinsic neurochemical changes of the puerperium, giving rise to unusual combinations of symptoms (11).

Disorders of the mother-infant relationship are prominent in 10–25% of women referred to psychiatrists after childbirth. In some extreme cases, the mother may attempt to get a family member to care for the baby permanently or may demand that the baby be adopted. The most poignant manifestation is the wish that the baby disappears, be stolen or succumb to cot death. These constitute maternal rejection and are usually accompanied by pathological anger, with shouting, cursing, and screaming at the infant, or impulses to strike, shake, or smother the child (12). Globally, the prevalence of postpartum depression, anxiety, and stress is estimated at 18.6%, 13.1%, and 8.7%, respectively (13). “A recent study in Ghana,Click or tap here to enter text. found the prevalence of perinatal depression at 2 weeks postpartum to be 8.6%, 31.6%, and 41.1% at Lekma (district) Hospital (a primary level hospital), Greater Accra Regional Hospital (a secondary level hospital), and Korle Bu Teaching Hospital (a tertiary referral level hospital) respectively” (4).

Postpartum psychosis is linked to chemical, social and psychological changes associated with pregnancy and childbirth. These chemical changes involve a rapid drop in progesterone levels after delivery. The actual link between this drop and the mechanism of the depression remains unclear (14). Considering Ghana’s high fertility and birth rates, characterised by a Total Fertility Rate (TFR) of 3.9 and a Crude Birth Rate (CBR) of 27.9, postpartum mental disorders may have a notably high incidence, especially with a likely elevated prevalence of depression among mothers caring for sick infants. This situation could potentially place their children at an even greater risk of health issues (Guo et al., 2013; GDHS 2022).

2.1 Aetiology

Maternity blues and postpartum depression have been found to result from changes in the metabolism of L-tryptophan, progesterone and endorphins, without a very conclusive bio-psychophysiological model yet to explain these disorders. Puerperal psychosis on the other hand has been attributed to serum concentrations of dopamine and beta-enkephalin in the postpartum period(17). Striking hormonal changes take place in the transition from pregnancy to the postpartum period. The third trimester of pregnancy is characterised by high levels of circulating oestrogen and progesterone, and a hyperactive hypothalamic-pituitary-adrenal (HPA) axis (normal during pregnancy). There is a high plasma (stress hormone) cortisol level, which is partially stimulated by the high levels of oestrogen and progesterone. At childbirth and during the transition to the postpartum period, oestrogen and progesterone levels rapidly decline, and there is blunted HPA axis activity due to suppressed hypothalamic corticotropin-releasing hormone (CRH) secretion(18). The suppression may be due to the length of time it takes for the hypertrophic adrenal cortices (due to the hyperstimulation by the pregnancy), to gradually return to normal. The HPA axis appears disturbed in women with PPD. Additionally, although the trigger for postpartum depression (PPD) is likely heritable, literature from human and animal studies suggest that the onset of PPD is determined by the contributions of both genetics and life events(19).

From a biopsychosocial perspective, social and psychological factors also contribute to its manifestation. Building on the early work of John Bowlby and other theorists on “Insecurity” in attachment and significant relationships and its links to psychopathology, Papapetrou C. et al examined the experiences of women during each perinatal phase. According to Papapetrou C et al (20), the attachment security and stability of an expecting couple is important for adequate adjustment to the demands of pregnancy, childbirth and care after birth. Security and stability in attachment offer a good foundation for the formation of positive attitudes towards the pregnancy and the unborn baby as well as the newborn and the period after birth. The theorists argue that in contrast, insecurity in attachment may create a risky emotional environment, leading to difficulties in adjustment to pregnancy and the maternal role and negatively affecting the developing mother-child bond. During childbirth or labour, the presence of partner support can help alleviate the experience of pain during labour. On the other hand, if there is an insecure partnership or a lack of partner support, an adverse experience of labour can become complicated and lead to the experience of post-traumatic stress disorder (PTSD). In the postpartum period, insecure-ambivalent women who receive poor spousal support may experience a decline in marital satisfaction postnatally, as many couples experience marital conflict and dissatisfaction due to the overall difficulties of the demanding perinatal phase(20).

2.2 Predictors of Maternal Mental Health Disorders

The physiology of pregnancy together with the stress of pregnancy and delivery trigger the occurrence of maternal mental health disturbance.

In addition to the rapid changes in hormonal levels, several studies have identified various contributing factors to the development of postpartum mental disorders. Weobong et al reported that social factors such as marital problems and financial difficulties as predisposing factors, and further observed that the absence of specific protocols or diagnostic criteria in Ghana may also contribute to the very few identified cases in their study in Ghana(21).

Depression and anxiety are the most common mental disorders that are highly prevalent among women of childbearing age(22). These disorders are even higher among mothers in low- and middle-income countries (LMIC). This may probably be as a result of exposure to risk factors such as poverty, gender disparities and violence, and a high prevalence of medical comorbidities in LMIC.

While “postpartum blues” (which are mild, transient and very common disturbances of postnatal mood), does not appear to be related to environmental, social or cultural factors, postnatal depression has been found to have a significant psychosocial aetiology(23).

A study of socio-psychological and obstetric risk factors for postpartum depression conducted in Japan, reported primiparity, preterm delivery, poor self-concept, lack of social support, difficult labour, experience of adverse life events and worries about baby care to be significant predictors(13).

Another study reported a 3-fold increase in the odds of postnatal depression among women who had experienced partner violence during pregnancy (odds ratio 3.1, 95% CI 2.7-3.6) (24).

According to Sefogah PE et al, the key predictors for perinatal depression among women in Ghana two weeks following delivery were: maternal age below 20 years or above 35 years, having a vaginal delivery, and receiving a blood transfusion during or after delivery(4).

Maternal age, educational attainment and occupational status have also been considered as determinants to developing postpartum mental illness. In a research project that included more than 2,000 mothers, it was found that young mothers and those with education beyond the secondary level experienced higher levels of depression (35.7% and 67.5%, respectively), anxiety (34.9% and 68.3%, respectively), and stress (29.7% and 62.1%, respectively) during their postpartum period(13). Postpartum working women were also more stressed (60.7%) and anxious (51.8%), while housewives were more depressed (51.6%). Approximately half of the depressed mothers reportedly experienced at least one stressful life event postpartum, for example, low income (41.9%; $P = 0.05$) or unplanned pregnancy (60.4%; $P < 0.001$) (13). Unplanned pregnancy (OR = 1.9; $P < 0.001$) was a significant correlate for postpartum depression, while a lack of family support (OR = 1.9; $P < 0.001$) was a significant correlate for postpartum anxiety. Being an older mother aged 40 to 45 years (OR = 2.0; $P = 0.04$) and having dissatisfaction in married life (OR = 1.9; $P = 0.006$) were the significant correlates for postpartum women getting stressed(26). In Ghana, 7% of pregnancies are unwanted, 31% unplanned and 24% mistimed (17). These suggest there could be a potentially high incidence of postpartum depression among women of reproductive age in Ghana.

Having female babies in some settings in West Africa has been associated with postpartum depression. A prospective study among postnatal women in Lagos, Nigeria, demonstrated that exposure to interpersonal violence within the last 12 months and having increasing numbers of female children predicted the presence of peripartum mental illness (OR = 3.400; 95%CI = 1.374 - 8.414 and OR = 5.676; 95%CI = 1.251 - 25.757 respectively) (27).

In consonance with suggestions that financial difficulty contributed as a risk factor, Suneet Kumar et al, found that per capita family income in India was less than 5000 INR (60.13 USD) among 72% of patients and 56% among controls ($P = 0.01$). Non-psychiatric perinatal maternal complications were also 16% more among patients than controls ($P = 0.01$). Neonatal complications were again 21% in patients and 8% in controls ($P = 0.009$) (4). The woman’s husband’s support during pregnancy, labour and delivery may be an important factor in preventing postpartum psychosis. The Indian study reported that husbands were present in 58% of patients and 76% of controls. ($P = 0.006$). They subsequently concluded that risk factors related to postpartum mental illness were younger age, lower per capita income, perinatal and neonatal complications, and absence of a husband during labour and delivery (18). A larger study of 9028 women reported a high incidence among primiparous women and those with young maternal age below 30 years (28). Very instructively, the National Institute of Clinical Excellence (NICE) and Royal College of Psychiatrists, in the April 2014 review, (29) indicated that many women with postpartum psychosis may not have any warning signs. Other women may have a high risk of developing it.

In Ghana and many low-income countries, many people view symptoms of depression and other mental disorders as spiritual or personal issues rather than medical psychiatric conditions that can be treated by healthcare providers(30). Again, in the Ghanaian setting, the prevailing significant challenges to providing adequate mental health care for new mothers, including a lack of trained staff, financial constraints, lack of affordable medications, and social stigma may further contribute to the burden of this disorder. Additionally, maternal infection with HIV contributed to the prevalence of postpartum psychosis in Ghana (29).

2.3 Manifestations of Maternal Mental Health Disorders

Three distinct psychopathological conditions have been associated with pregnancy and childbirth. These are the maternity blues (postpartum blues or baby blues), postnatal depression and postpartum psychosis(23).

The symptoms of postpartum psychiatric disorder include anxiety or irritability, low mood and tearfulness, rapid changes in mood, severe confusion, restlessness, agitation, racing thoughts, behaviour that is out of character, feeling 'high', mania or, being more active, talkative, and sociable than usual or being withdrawn and not talking to people. Other symptoms are: difficulty in falling asleep, or not wanting to sleep, loss of inhibitions, feeling paranoid, suspicious, or fearful and feelings of being in a dream world(23).

In Ghana, new mothers have demonstrated symptoms such as shedding tears for fear of not knowing how to handle and care for their new babies; psychosomatic symptoms like feeling they are unable to move various body parts in the immediate puerperium, just to soon be able to do same with just some encouragement from obstetricians and midwives. Cases have been reported with frank psychotic episodes with hallucinations and delusions among new mothers following delivery. There have also been anecdotal reports of postpartum mothers jumping out through windows in the maternity wards on some occasions among others.

2.4 Effects of Maternal Mental Health Disorders

MMHDs can have profound and far-reaching effects on both the expectant or new mother and her family. The emotional and psychological toll of, for example, perinatal depression can be significant, impacting a woman's ability to care for herself and her baby, as well as the overall family dynamic. Understanding the effects of MMHDs is crucial for early recognition, intervention, and support to ensure the well-being of both mother and child.

Effects on Mother

Although prognosis in terms of symptom remission is generally good for postpartum mental disorders, long-term disability can persist in some cases(32). Majority of women who receive treatment recover in up to 12 weeks, with 15% continuing to experience symptoms over 24 weeks. The course of the condition is sometimes delayed by late diagnosis or inadequate treatment, contributed to by the stigma of the disorder. Postpartum depression confers a 25% future risk of non-postpartum depressive episodes and a 41% risk of postpartum depression (33). Postpartum psychosis is a more severe illness with symptoms of depression, mania or a combination of both. Up to 57% of women with postpartum psychosis experience a relapse in a subsequent pregnancy, 62% will suffer persistent mood disorder beyond the postpartum period and 4% have suicidal tendencies (33). These perinatal psychiatric disorders impair a woman's function and are associated with suboptimal development of her offspring(8). Complications of pregnancies and puerperal psychosis pose a disproportionate burden to females in sub-Saharan Africa. The majority of affected women often remain at home with their families under the care of traditional or spiritual healers. Since a worrying number of mothers who suffer from this severe mental illness are not identified, diagnosed and treated, they remain vulnerable to greater maternal morbidity and mortality (34). Postnatal depression

has profound effects on the quality of life, social functioning, stigmatization and economic productivity of women and families (20).

Effects on the Infant

The long-term adverse effects of prenatal and postnatal depression, anxiety and stress on the offspring include ineffective emotional regulation, poor social skills, and neurocognitive developmental delays (33). They are also more likely to experience emotional instability later in their own life. Data from research on animal parenting has consistently reinforced the notion that maternal mental illness can be viewed as the first adverse life event for the child(4).

In low- and middle-income countries like Ghana, perinatal mental disorder has been found to negatively impact infant and child growth, and also lead to preventable illness and death among children(27). One possible mechanism is that maternal mental disorder negatively influences the mothers' health-promoting behaviours like contraceptive use, postnatal care attendance, and other child-care practices including vaccination uptake, cessation of breastfeeding, and hygienic practices(13). These may indirectly lead to increased under-five morbidity and mortality among children of affected mothers.

Postpartum depression therefore means higher health risks for the baby, especially in low-income countries like Ghana where the condition is not well-recognized for effective intervention (28).

It has also been further shown that these affected mothers are about 20% less likely to follow up on preventive health care behaviours including attending well-child postnatal visits and vaccinations as women without symptoms (24). In Ghana, Okronipa et al, found an increased incidence of infantile diarrhoea among the babies of affected mothers(29).

A separate study that examined the association between maternal depression and the prevalence of febrile illness among their children in Ghana and Ivory Coast, found relatively higher hazard ratios of febrile illness among children of affected mothers (1.57 and 1.32 respectively). They subsequently concluded that perinatal depression was frequent and associated with febrile illness in the offspring, and further stated the high prevalence of postpartum depression in sub-Saharan Africa may pose a serious public health threat to women and their offspring(24). Hence, early screening, diagnosis, and prompt intervention have a greater overall value.

2.5 Screening and Diagnosis of Maternal Mental Health Disorders

With the recognition of maternal mental health to the overall health of mothers and children, stakeholders in health such as the UK National Institute for Health and Care Excellence, the US Preventive Services Task Force, and the World Health Organization recommend universal postpartum mental health screening and follow-up (35). Evidence shows that screening alone has clinical benefits, and that early detection leads to favourable outcomes. However, in most centres in LMIC such as Ghana, maternal mental health screening is not universal. Universal screening with reliable and validated tools is critical to ensuring appropriate treatment and follow-up and decreasing stigma. Where screening exists, the EPDS is commonly known and used. Although the EPDS takes just 5 minutes to administer and has high sensitivity, it does not evaluate other common maternal mental health conditions such as PTSD and psychosis (36). In order to improve early detection and treatment of perinatal common mental disorders (PCMDs) beyond the UK where it was originally developed, local language versions of the EPDS (LLV-EPDS) are needed to accurately identify people with PCMDs.

2.6 Management of Maternal Mental Health Conditions to consider using Disorders for uniformity in the previous paragraphs

The mainstays of treatment for peripartum depression are psychotherapy and antidepressant medication. Psychotherapy is the first-line treatment option for women with mild to moderate peripartum depression(11). Treatment for postpartum depression is generally guided by the severity of symptoms, past response to treatment, the woman's preference and breastfeeding status or wishes.

Antidepressant medication in combination with psychotherapy is recommended for women with moderate to severe forms of the disorder(11). Concerns have remained about which treatment modalities are safe, effective and preferable; alongside those medications that may have short and long-term adverse effects on the infants of affected mothers. Overall, research has shown that women prefer non-pharmacological treatment for fear of the potential to secrete drugs in their breast milk, addiction, dependence or adverse reactions(31). However, a study that reviewed, pooled case reports and small controlled studies reported that there were undetectable infant serum levels and no short-term adverse events in infants of mothers breastfeeding while taking these antidepressant and antipsychotic medications(11). The relatively small numbers examined, as well as the fact that it lacked long-term follow-up of infants exposed to these medications through breastmilk might limit the strength and generalizability of their paper. On the whole, non-directive cognitive behavioural therapy, psychodynamic therapy, interpersonal psychotherapy and telephone-based peer support have been reported as effective treatments for postpartum depression (31).

Cases of severe postpartum depression with suicidal or homicidal ideation, or with desire, intent or plan to harm themselves or others including the infant connote a major psychiatric emergency that would require immediate Psychiatrist intervention.

Early detection and effective management of perinatal psychiatric disorders are critical for the welfare of women and their offspring in both the short and long term.

Overall, balancing the risks and benefits of the treatment is particularly important because both medication and the illness may have adverse effects on the fetus. Owing to its complexity, multidisciplinary specialist teams have an important role in the effective management of postpartum psychiatric disorders (22).

2.7 Barriers to Accessing Maternal Mental Health Services

The availability of maternal mental health services can be limited due to inadequate capacity to provide screening programs and analyse their cost-effectiveness(37). Furthermore, inconsistent use of screening tools, combined with under-screening in underserved populations, and a lack of treatment options also contribute to the challenge of accessing maternal mental health services. Having knowledgeable HCWs is essential in promoting a non-judgemental discussion on maternal mental health. This helps to remove stigma and improve self-reporting by mothers(38). The cost of mental health services can be a significant hurdle for many patients, especially those who are more vulnerable, such as teenage mothers and patients without insurance(39). Certain societal and cultural norms may hinder individuals from seeking necessary mental health services. These beliefs may stigmatize mothers and their families who disclose or receive a diagnosis for mental health concerns. Sadly, this can lead to a culture of shame, causing many cases of maternal mental health issues to go unreported and untreated, leaving mothers to suffer in silence.

03 – METHODS FOR SITUATIONAL ANALYSIS

3.0 Introduction

To obtain a true state of maternal mental health disorders in Ghana with the view to clearly identify the available policies, services, challenges and gaps, a systematic stepwise approach was adopted for this situational analysis. A mixed-method research design was used. This included a(an):

- Desk review which involved an in-depth evaluation of relevant policy documents on maternal mental health in Ghana, and of scientific research on the subject over the past two decades (2003-2023) in Ghana.
- National key-stakeholders inception and sensitization conference where initial data collection tools were reviewed and challenging items, as well as ambiguities, were addressed.
- Nationwide quantitative survey of relevant stakeholders in maternal and mental health. This included clinicians such as obstetricians/gynaecologists, midwives, nurses, mental health nurses, psychiatrists, and clinical psychologists.
- Nationwide quantitative survey among healthcare managers and leadership.
- Qualitative key informant interviews among local Government Authority functionaries.
- In-depth interviews and focus group discussions among women in the community with a lived experience of maternal mental health disorders.
- Focus group discussions among pregnant women.
- In-depth interviews among postnatal women.

3.1 National Stakeholders Inception Conference

- This conference was held in Accra on May 17, 2023, at the Best Western Premier Hotel. The meeting was attended by approximately 65 participants from across all the 16 regions of Ghana drawn from the Ministry of Health, Ghana Health Service, Teaching Hospitals, Mental Health Authority, Academia- Faculty from Schools of Public Health University of Health & Allied Sciences, Ho; Kwame Nkrumah University of Science and Technology Kumasi, Executive Director Options Ghana, Representatives of Society for Obstetricians and Gynaecologists of Ghana (SOGOG), Clinicians, Regional and District Directors of Health Services, Obstetrics and Gynaecology Faculty Chairman and Secretary from Ghana College of Physicians and Surgeons, WHO Country Office (WCO) staff, Health Partners, UK-FCDO Representative, and NGOs.

  Speakers at the conference included:

- Chief Programmes Officer, Medical and Dental, Ministry of Health
- The Deputy Director of Family Health Division, Ghana Health Service
- UK-FCDO Representative
- The WHO Representative
- The Chief Executive Officer, Mental Health Authority Ghana
- Faculty Chairman, Obstetrics and Gynaecology Faculty, Ghana College of Physicians and Surgeons

There were technical presentations by the lead Consultant, Dr Promise Sefogah and his team on an overview of maternal mental health disorders, desktop review findings and the data collection protocol for the national situational analysis in Ghana. The presentations were followed by a plenary discussion after which participants were put into four separate groups to discuss various aspects of the drafted data collection tools. Participants' and all stakeholders' inputs and suggestions were later presented and discussed in another plenary session and proposed amendments were by consensus, accepted and incorporated into the finalized tools for primary data collection.

3.2. Primary Research

The primary data for this situational analysis was collected using a mixed-method study design comprising both quantitative and qualitative approaches. The research protocol was discussed at the national key stakeholders' conference, participant inputs were incorporated and the data collection tools and data collection methodology were finalized. Ethical approval was subsequently obtained from the Institutional Review Board (IRB) of the Noguchi Memorial Institute for Medical Research, University of Ghana, Legon, Accra. All participants provided informed consent prior to participation. The study targeted respondents from all the 16 regions of Ghana.

3.3 Quantitative Data Collection

The quantitative component utilised the administration of an online electronic survey which was shared with relevant stakeholders in maternal health care across the 16 regions of Ghana. The identified stakeholders included clinicians such as obstetricians/gynaecologists, midwives, nurses, community health nurses, mental health nurses, psychiatrists and clinical psychologists. Similarly, there was nationwide administration of electronic survey questionnaires for healthcare managers and leaders across all the regions in Ghana.

Responses from 572 different cadres of health care providers and managers such as obstetrician gynaecologists, medical officers, midwives, nurses and mental health professionals, were received.

3.4 Qualitative Data Collection

For the qualitative component, participants were purposively recruited nationwide from 10 regions. To consider omitting the nationwide and specifying just the regions. Greater Accra Region; Bolgatanga Municipal Area in the Upper East Region; and Sagnarigu Municipal Area, and Tamale Metropolitan Area in the Northern Region. Participants included a sample of pregnant women, postpartum women, women with a lived experience of maternal mental health disorder, healthcare managers and administrators, public health practitioners, NGOs, Civil Society Organizations, relevant professional bodies, academicians, officials of Metropolitan, Municipal and District Assemblies (MMDAs), other local government authorities, and policymakers.

The individual in-depth interviews and focus group discussions were conducted by trained research assistants. Each of the interview sessions was audio-recorded with permission from the participants. The individual and key informant interviews were discontinued when data saturation was reached, and no new themes emerged.

04 – RESULTS

4.0 Introduction

A desktop review of national policies and guidelines on maternal mental health and existing country-specific research data in Ghana was conducted with ten main thematic areas identified.

A total of 572 different cadres of health care providers and managers across the country participated in the survey. In addition, a total of fifty-three (53) in-depth interviews and five (5) sets of focus group discussions (FGDs) comprising 6-8 participants, were conducted.

4.1 Desk Review

National Policy Provisions / Practice Guidelines on Maternal Mental Health in Ghana

There is currently no national policy on maternal mental health in Ghana. Existing and related guidelines such as the Ghana Reproductive Maternal Newborn Child, and Adolescent Health and Nutrition programme (2014-2018); Ghana Reproductive Maternal Newborn Child, and Adolescent Health and Nutrition programme (2020-2025); National Reproductive Health Service Policy and Standards (2014); National Safe Motherhood Protocol ALL have NO provisions for maternal mental health disorder. The Mental Health Act of Ghana (Act 846) 2012 also had no provision for maternal mental health.

Desktop Review of Existing Country-specific Research Data on Maternal Mental Health in Ghana

A thorough search of research in the area of maternal mental health in Ghana found 14 publications over the past decade. From a review of these articles, the investigators identified several thematic areas summarised in Table 4.0.

Table 4.0 Thematic areas identified during desk review

THEMATIC AREAS	OBSERVATION	RECOMMENDATIONS
1. Routine screening for maternal mental health disorders	Routine screening is not available, even for high-risk women	Screening for MMHCs should be a priority
2. Capacity building for healthcare workers	Inadequate MMH Services and Tools	Equipping Health Facilities to provide MMH Services
3. Knowledge levels among healthcare workers	Low knowledge level on MMH among HCW	Training and equipping healthcare providers with the tools in Mental Health
4. Patient-initiated help-seeking for maternal mental health services	Low prevalence of mental health-seeking behaviour among pregnant women	Increased awareness of MMH and the ability to identify clients at risk of mental health issues for care
5. Access to MMH services	Inadequate access, and knowledge of mental health. Human rights abuse issues during care for mental health patients	Increase the coverage of the Quality Rights Initiative to help train more people to improve access and quality of mental health care in Ghana
6. Human resources, funding.	A well-resourced mental health authority is needed.	Focus on creating a decentralised system of mental health care provided within communities throughout the country; regional and district mental health subcommittees will have a duty to ensure that multidisciplinary mental healthcare is available within existing medical services in every district
7. Prevalence of maternal mental health conditions	High Prevalence of Antenatal Depression, with significant suicidal ideation, and elevated risk for maternal psychosis.	Screening for perinatal depression and psychosis risk should be prioritized
8. MMHC and child health outcomes	Childhood stunting is strongly linked with Maternal Depression	Further research is needed to identify the determinants of maternal depression, and to verify the link between maternal depression and child stunting.
9. Mental healthcare action plan	There is a lack of mental healthcare plan, inadequate infrastructure and trained personnel	Urgent implementation of comprehensive District Mental Healthcare Plans and training of HCW
10. Screening and diagnosis of MMHC	There is an unmet need for risk detection & diagnosis of depression, anxiety and psychosis at antenatal and postnatal care	There is an urgent need to incorporate into maternity care routine screening for MMHCs and provide screening tools

These studies were carried out in various regions and at different levels of the healthcare system in Ghana. Interestingly, despite the fact that these studies were conducted by different investigators and in different settings, the results consistently indicate that maternal mental health issues are prevalent in Ghana, and that there is an unmet need for capacity building in health facilities in Ghana to better understand and address MMH issues (details in Appendix).

4.2 Quantitative Surveys

Of the 572 participants involved in the quantitative survey, 483 were health care providers of different cadres and 89 were health care managers.

4.2.1 Health Care Provider Survey

Demographic Characteristics

A total of 483 healthcare providers (HCP) participated in the survey giving a response rate of 98.6% (483 of 490). There were respondents from all the 16 regions in Ghana. The highest proportion of HCPs was from the Greater Accra Region (47.8%) whilst the Northeast and Bono East regions had the lowest participation.

Majority (65.6%) of the HCPs were females with more than half of the providers aged between 31-40 years. Doctors and nurses/ midwives constituted 95.3% of the total number of HCP participants. Midwifery and Obstetrics & Gynaecology were the most common specialties noted.

More than half (58.8%) of healthcare providers had worked in their respective professions for 10 years or less, with 1.2% of them having more than 30 years of work experience. HCPs surveyed were of different ranks, including consultants, medical officers, house officers, principal nursing officers, senior physician assistants and staff nurses. (Table 1).

Table 4.1: Demographic characteristics of Health care providers in Maternal Mental Health (MMH) study in Ghana, 2023 (N=483)

CHARACTERISTIC	NUMBER	PERCENTAGE
Region		
Ahafo	23	4.8
Ashanti	18	3.7
Bono	8	1.7
Bono East	3	0.6
Central	14	2.9
Eastern	44	9.1
Greater Accra	231	47.8
North East	2	0.4
Northern	46	9.5
Oti	33	6.8
Savannah	18	3.7
Upper East	4	0.8
Upper West	18	3.7
Volta	10	2.1
Western	6	1.3
Western North	5	1.1
AGE (YEARS)		
18-30	104	21.5
31-40	270	55.9
41-50	87	18.0
51-60	15	3.1
Greater than 60	7	1.5

Table 4.1 continued

CHARACTERISTIC	NUMBER	PERCENTAGE
Sex		
Female	317	65.6
Male	166	34.4
Profession		
Medical Doctor	208	43.1
Midwife/Nurse	252	52.2
Pharmacist	1	0.2
Physician Assistant	6	1.2
Public Health	5	1.0
Other	11	2.3
Years in profession		
10 & below	284	58.8
11-20	165	34.2
21-30	28	5.8
>30	6	1.2

Table 4.1 continued

CHARACTERISTIC	NUMBER	PERCENTAGE
Anaesthesia	4	0.8
Dentistry	1	0.2
Family Medicine/General Practice	27	5.6
General Nursing	11	2.3
Internal Medicine	4	0.8
Midwifery	177	36.7
Obstetrics and Gynecology	148	30.7
Paediatrics	13	2.7
Pharmacy	1	0.2
Physician Assistant	6	1.2
Psychiatry	27	5.6
Psychology	3	0.6
Public Health	24	5.0
Surgery	5	1.0
Other	32	6.6

Table 4.1 continued

CHARACTERISTIC	NUMBER	PERCENTAGE
Rank		
Consultant	29	6.0
Deputy Chief Nursing Officer	2	0.4
House Officer	28	5.8
Medical Officer	28	5.8
Nursing Officer	79	16.4
Principal Nursing Officer	20	4.1
Senior Medical Officer	31	6.4
Senior Midwifery Officer	13	2.7
Senior Nursing Officer	12	2.5
Senior Physician Assistant	4	0.8
Senior Staff Midwife	24	5.0
Senior Staff Nurse	12	2.5
Specialist	96	19.9
Staff Midwife	31	6.4
Staff Nurse	7	1.4
Other	67	13.9

Experience with managing Maternal Mental Health (MMH) disorders.

More than two-thirds (353, 73.0%) of the HCPs had managed or been involved in the management of a patient with a maternal mental health (MMH) disorder, with 155 (43.9%) having managed a case within the last 6 months. The majority (83%) of the cases managed, fully recovered. Depression was the most common and severest form of MMH disorder managed by the HCPs (as shown in Table 4.2).

Table 4.2: Health Care Providers' Experience with Managing Maternal Mental Health (MMH) Disorders in Ghana, 2023 (N=353).

CHARACTERISTIC	NUMBER	PERCENTAGE
Ever managed MMH		
I do not remember	23	4.8
No	107	22.2
Yes	353	73.0
Duration of last managed MMH case		
<3 months	77	21.8
3-6 months	78	22.1
7-9 months	32	9.1
10-12 months	32	9.1
>1year	134	37.9
Outcome of case		
Fully recovered	293	83.0
Developed into chronic mental disorder	53	15.0
Died	7	2.0
VARIABLE	**NUMBER**	**PERCENTAGE**
Severest form of MMH managed/seen		
Bipolar disorder	24	6.8
Depression	120	34.0
Maternity blues	54	15.3
Psychosis	2	0.6
Other	153	43.3
Commonest MMH condition at facility		
Bipolar disorder	8	2.3
Depression	149	42.2
Maternity blues	133	37.7
Other	3	0.8
Psychosis	60	17.0

Perception of Knowledge, Skills and the Attitude of Health Care Providers (HCP) Towards the Management of Maternal Mental Health Disorders

Though about half (53.0%) of the HCPs indicated that they were adequately knowledgeable in the management of MMH, only 42.5% perceived that they were adequately skilled. Health care providers were likely to refer mothers with MMH disorders to the psychiatrist/psychologist/mental health unit in their facility. Only 187 (38.7%) perceived themselves as being adequately trained to detect MMH disorders. A total of 189 (39.1%) providers admitted to the existence of education on MMH issues, at the ANC session in the facilities where they worked. Majority (72.7%) of the HCPs viewed that clients accessing services in their facilities were encouraged to freely report MMH challenges/issues. Nonetheless, half of them admitted to this occurring only sometimes. Only 60 (12.4%) providers thought HCPs always actively looked for MMH issues in the provision of services, even though more than half (63.8%) considered MMH issues to be important/ extremely important (Table 4.3).

Table 4.3: Perception of Knowledge, Skills and the Attitude of Health Care Providers Towards the Management of Maternal Mental Health Conditions in Ghana, 2023 (N=353)

VARIABLE	NUMBER	PERCENTAGE
Adequately knowledgeable		
No	166	47.0
Yes	187	53.0
Adequately skilled		
No	203	57.5
Yes	150	42.5
First action taken		
Called a senior colleague	78	22.1
Counselled clients/relatives	115	32.6
Gave medications	28	7.9
Referred to other facility	5	1.4
Referred to psychiatrist/psychologist/mental health unit	127	36.0
Adequately trained to detect MMHC		
No	188	38.9
Not sure	108	22.4
Yes	187	38.7

Table 4.3 continued.

VARIABLE	NUMBER	PERCENTAGE
Education at ANC on MMH		
No	126	26.1
Not sure	168	34.8
Yes	189	39.1
Clients encouraged to freely report MMH challenges/issues		
No	68	14.1
Not sure	64	13.2
Yes, sometimes	242	50.1
Yes, always	109	22.6
Actively look for MMH		
No	182	37.7
Yes, sometimes	241	49.9
Yes, always	60	12.4
Consider MMH Important		
Extremely important	271	56.1
Important	37	7.7
Not important	2	0.4
Very important	173	35.8

Ability to Diagnose Maternal Mental Health Disorders

In all, 325 (67.3%) of the providers admitted to being able to diagnose persons at risk of MMH disorders, with the majority (71.8%) self-reporting basic knowledge in identifying MMH disorders. Only a fifth of the HCPs knew of any screening tool for MMH conditions. The most common tool mentioned was the Edinburgh depression scale. Approximately, 11.0% had used an MMH screening tool (in a non-research setting). Majority (86.9%) of the HCPs did not know/ were unsure of any checklist/tool for identification of MMH disorders in their facility. Among the 32 HCP who had used a checklist/tool for identification of MMH issues in their facility, only 14 (43.8%) perceived the tool as adequate. Approximately 30.0% of all participants admitted to their facilities having a clearly detailed pathway/practice to be followed during the management of MMH disorders when detected. Some practices frequently followed by the HCPs included referral to the psychiatrist/mental health Unit, calling a senior colleague/doctor, assessment/management, and counselling patients/relatives. Majority (83%) had not had in-service training on MMH disorders in their facility (Table 4.4).

Table 4.4: Health Care Providers' Ability to Diagnose Maternal Mental Health Conditions in Ghana, 2023.

VARIABLE	NUMBER	PERCENTAGE
Ability to differentiate clients at risk		
No	158	32.7
Yes	325	67.3
Knowledge in identifying MMH		
Advanced knowledge	7	24.2
Adequate knowledge	117	1.5
Basic knowledge	347	71.8
None	12	2.5
Knowledge of any MMH screening tool		
No	384	79.5
Yes	99	20.5

VARIABLE	NUMBER	PERCENTAGE
***Name any screening tool**		
Edinburgh depression scale	34	34.3
DASS	5	5.0
GAD	6	6.1
Based on observation/ Behavior	7	7.1
Patient Health Questionnaire	7	7.1
Other	35	35.4
Can't remember	5	5.0
Ever used a screening tool for MMH disorders		
No	431	89.2
Yes	52	10.8
****Name of tool used**		
Edinburgh	17	32.7
Other	35	67.3
Availability of checklist/tool for identification of MMH in their facility		
No	232	48.0
Not sure	188	38.9
Yes	63	13.1

Table 4.4 continued.

VARIABLE	NUMBER	PERCENTAGE
***Used checklist/tool identify women at risk of MMH in their facility		
I do not remember	4	6.3
No	27	42.9
Yes	32	50.8
****Adequacy of screening tool at the		
Not adequate	13	40.6
Not sure	5	15.6
Yes	14	43.8
Detailed management protocol/pathway for MMH		
No	339	70.2
Yes	144	29.8
Pathway/practice followed in management of MMHC		
None	67	13.9
Refer/ inform psychiatrist/mental health Unit	268	55.5
Call senior colleague/doctor	15	3.1
Assessment/management	73	15.1
Counselling patient/relatives	45	9.3
Other	15	3.1
In-service training on MMH		
I do not remember	37	7.7
No	401	83.0
Yes	45	9.3

*n = 99. **n = 52. ***n = 63. ****n = 32.

Effects of Maternal Mental Health conditions on mother, infant and family

Common effects of MMH conditions according to the HCPs included the following:

Effects on the mother included changes in sleep patterns and neglect of oneself; on the infants, the disorders affected breastfeeding; hampered the mother-infant attachment; and resulted in poor feeding; stigma and discrimination and poor relationship with family members (Table 4.5). Most health care providers (390, 81%) believed that the role of the father in MMH involved providing emotional, financial, and physical support to the mother. Below are some of the comments given by the respondents:

> ***"By giving emotional and physical support to newborn mothers".***
>
> ***"Physical, emotional and spiritual support".***
>
> ***"Provide support both physical, psychological and emotional".***
>
> ***"Generally being supportive of mothers and offering a helping hand in caring for the infant".***
>
> ***"Provide unwavering emotional support".***

Table 4.5: Effects of Maternal Mental Health disorders on mother, infant and family in Ghana

VARIABLE	NUMBER	PERCENTAGE
Effects on mother		
Change in appetite	327	15.0
Change in weight	298	13.7
Changes in sleep patterns	391	17.9
Neglect of oneself	456	20.9
Infanticide	305	14.0
Suicide	366	16.8
Other	38	1.7
Effects on infant		
Low birth weight	305	14.4
Affects breastfeeding	406	19.2
Mother-infant attachment hampered	426	20.1
Poor infant feeding	397	18.8
Higher rates of preterm birth and delivery complications	267	12.6
Death	307	14.5
Other	8	0.4
Effects on family		
Stigma and discrimination	438	49.4
Poor relationship with family members	425	47.9
Other	24	2.7

Perception on an Acceptable Screening Tool for MMH Conditions

About three quarters of the providers agreed/strongly agreed to the introduction of a socio-culturally acceptable screening tool for MMH in their facility, with about a fifth of them recommending that the tool be simple/effective/ respect individuals, their religion, culture, and social status.

4.2.2 Healthcare Managers Survey

Demographic Characteristics of Respondents

A total of 89 healthcare managers (HCM) from 13 out of the 16 regions in Ghana participated in the study with about 50% from the Eastern and Greater Accra regions. About 60% were aged between 21 and 40 years. Table 4.6 below summarises the demographic characteristics of the HCMs.

Table 4.6: Demographic Characteristics of Respondents (Healthcare Managers) in Ghana's MMH survey, 2023 (N=89).

VARIABLE	NUMBER	PERCENTAGE
Ahafo	1	1.1
Ashanti	7	7.9
Bono	10	11.2
Bono East	3	3.4
Central	5	5.6
Eastern	29	32.6
Greater Accra	16	18.0
Northern	2	2.2
Oti	2	2.2
Savannah	6	6.7
Upper East	2	2.2
Upper West	3	3.4
Volta	3	3.4
Age		
21-30	11	12.4
31-40	44	49.4
41-50	17	19.1
51-60	15	16.9
>60 years	2	2.2

Table 4.6 continued

Profession		
Community Mental Health Nurse	6	6.7
Data Manager	1	1.1
Medical Doctor	3	3.4
Medical Laboratory Scientist	1	1.1
Mental Health Nurse	3	3.4
Midwife	21	23.6
Nurse	36	40.4
Nutritionist	1	1.1
Pharmacist	1	1.1
Physician Assistant	3	3.4
Public Health Practitioner	12	13.5
Unknown*	1	1.1
Years in Profession		
<11	41	46.1
11-20	23	25.8
21-30	18	20.2
>30	7	7.9

*One respondent didn't indicate their profession

Knowledge of MMH Disorders and Their Effects

Eighty-seven [87, (97.7%)] of the healthcare managers reported that they were aware of MMH disorders; 73.0% knew the risk factors and 43.8% had been involved in managing MMH disorders as shown in Table 4.7.

Table 4.7. Knowledge and Experience of Healthcare Managers with MMH Disorders (N=89)

REGION	FREQUENCY (N=89)	PERCENTAGE (%)
Awareness of MMH disorders		
No	2	2.3
Yes	87	97.7
Knowledge of Risk Factors		
No	24	27.0
Yes	65	73.0
Ever managed MMH disorder		
No	50	56.2
Yes	39	43.8
Total	89	100.0

Common MMH Disorders and Effects of MMH Disorders Identified by Healthcare Managers

Tables 4.8 and 4.9 below summarise the knowledge of healthcare managers with regards to common MMH disorders in Ghana and the effects of these disorders on mothers, their offspring and family. All 89 healthcare managers responded to these questions. Majority of the managers identified psychosis and depression as common examples of MMH disorders. Also, most of the managers had knowledge of several examples of the effects of MMH disorders on mothers, their offspring and family.

Table 4.8. Common MMH Disorders Identified by Healthcare Managers in Ghana

DISORDER	FREQUENCY	PERCENTAGE (%)*
Depression	47	52.8
Psychosis	39	43.8
Anxiety	2	2.2
Bipolar disorder	1	1.1
Epilepsy	1	1.1
PTSD	1	1.1
Stress	1	1.1
Mental disorder	1	1.1
Alcohol Foetal Syndrome	1	1.1

*Multiple responses apply

Table 4.9. Effects of MMH Disorders Identified by Healthcare Managers in Ghana

EFFECT ON MOTHER	FREQUENCY	PERCENTAGE (%)*
Loss of Productivity	73	82.0
Impaired sleep	68	76.4
Failure to eat	57	64.0
Neglect of oneself	77	86.5
Killing of one's infant	64	71.9
Suicide	55	61.8
Other	9	10.1
Effects on the Offspring		
Low birth weight	49	55.1
Poor breastfeeding	78	87.6
Mother-infant attachment hampered	77	86.5
Poor infant feeding	73	82.0
Higher rate of preterm birth and delivery complications	35	39.3
Other	7	7.9
Effects on the Family		
Discrimination from others	67	75.3
Poor relationship with family members	75	84.3
Social stigmatisation	81	91.0
Loss of productivity	68	76.4
Others	7	7.9

*Multiple answers apply

Health Care Managers' Perceptions of the Burden Severity of Maternal Mental Health Disorders

Majority (92.1%) of the HCMs managers perceived MMH disorders as being a burden with the majority (96.5%) describing the burden as moderate/severe.

Table 4.10. Healthcare Managers' Perception of the Burden of Maternal Mental Health Disorders Ghana (N=89)

	FREQUENCY	PERCENTAGE (%)*
MMH disorders considered a burden		
No	7	7.9
Yes	82	93.1
Total	89	
Perception of severity of burden		
Mild	3	3.7
Moderate	25	30.5
Severe	54	65.9
Total	**82**	

Perceptions of Health Care Managers of Screening Practices

About 65% of the HCMs were either not sure or stated that there was no routine screening of clients for MMH disorders in their facilities. However, most HCMs (94.4 %) thought that screening should be done at all levels of care (73.8%). HCMs were of the view that mental health nurses and midwives should be the main professionals screening for MMH disorders (as detailed in Table 4.11).

Table 4.11. Healthcare Managers' Perception of Screening Practices in Ghana

VARIABLE	NUMBER	PERCENTAGE (%)*
Routine Screening at health facility		
No	40	44.9
Not sure	18	20.2
Yes, always	4	4.6
Yes, sometimes	27	30.3
Total	**89**	**100.0**
Should routine screening be done by health care providers		
No	2	2.2
Not sure	3	3.4
Yes	84	94.4
Total	**89**	**100.0**
		.
Level of health care delivery where screening should be done in Ghana		
All Levels of care	62	73.8
Primary	21	25.0
Secondary	1	1.2
Total	**84***	**100.0**
Who should screen		
Nurse	55	61.8
Midwife	72	80.9
House officer	44	49.4
Medical officer	56	62.9
O&G Specialist	58	65.2
Psychiatrist	60	67.4
Clinical Psychologist	59	66.3
Physician Assistant	47	52.8
Mental Health Nurse	74	83.1
Other	8	9.0

*These are the 84 individuals who agreed that routine screening should be done by healthcare providers

Support Given to Babies and Families of Mothers who are suffering from MMH disorders

Table 4.12 provides the summary of responses given by HCMs with respect to the kind of support given at the facilities to mothers suffering from MMH disorders and as well as that given to their offspring and family.

Table 4.12. Support Given to Babies and Families of Mothers who are suffering from MMH Disorders.

SUPPORT	DETAILS OF SUPPORT	FREQUENCY	PERCENTAGE (%)
Given to Baby			
Feeding related support	■ Bottle feeding at nursery ■ Staff contribute to feeding the baby ■ Feeding at mother and baby unit ■ Infant formula ■ Sent to nursery and catered for by nutritionist ■ They are fed and clothed	11	12.4
NICU	■ Routine assessment and vaccination	7	7.9
Counselling	■ Counselling services for mothers ■ Counselling and treatment	7	7.9
Refer to psychiatry unit	■ Refer to psychiatry unit for assessment and management. ■ Education and treatment ■ for psycho-social support ■ Psychotherapy	6	6.7
Refer to social welfare	■ Refer to the department of social welfare. ■ Social workers informed and invited. ■ Baby taken to orphanage by social worker if relatives unavailable	11	12.4
Refer to other facility	■ Referral to other facility where they can receive care. ■ Refer to see appropriate specialist. ■ Counsel and refer	7	7.9
Given to family			
Health education on MMH	■ Education on condition and home visiting ■ Awareness on MMH to family	6	6.7
At home	■ Follow up care ■ Family education ■ Monitored with a relative of client ■ District health directorate informed. ■ Mothers breastfeed when calm, but baby sent to NICU if mother aggressive ■ Facility contacts family and hands over baby to responsible family member	23	25.8
Don't know/ not sure		6	6.7
No support		5	5.6

Perceptions of Healthcare Managers on the Staff Knowledge and Capacities to Manage MMH Disorders

More than half of the HCMs perceived that their staff had the capacity to identify risk factors whilst 70.8% thought their staff could identify signs and symptoms of MMH disorders. Only a fifth indicated that their staff receive training to detect or screen for MMH disorders (Table 4.13).

Table 4.13. Health Care Managers' Perception of Staff capacity to Manage Maternal Mental Health Disorders (N=89)

IDENTIFY RISK FACTORS	FREQUENCY	PERCENTAGE (%)
No	11	12.3
Not sure	29	32.6
Yes	49	55.1
Identify Signs and Symptoms Of MMH		
No	6	6.7
Not sure	20	22.5
Yes	63	70.8
Trained to Detect or screen for MMH		
No	42	47.2
Not sure	29	32.6
Yes	18	20.2
How often are they trained (in a year)*		
Not yearly	2	11.1
Once	9	50.0
Twice	6	33.3
Six times	1	5.6

*These are the 18 individuals who indicated their facility trains its staff to detect and screen for MMH

Health Care Managers' Perception of Staff Knowledge of Maternal Mental Health Conditions

When asked about their staff's knowledge of MMH issues and treatment techniques available in managing MMH conditions, 61.8% indicated that the providers were knowledgeable in MMH issues whilst only 16.9%

perceived that the providers knew how to treat MMH (Table 4.14).

Table 4.14. Health Care Managers' Perception of Staff Knowledge of Maternal Mental Health Conditions (N=89)

KNOWLEDGE OF MMH	FREQUENCY	PERCENTAGE (%)
No	11	12.4
Not sure	23	25.8
Yes	55	61.8
KNOWLEDGE OF TREATMENT OPTIONS	**FREQUENCY**	**PERCENTAGE (%)**
No	31	34.8
Not sure	43	48.3
Yes	15	16.9
Total	89	100.0

Perceptions of Healthcare Managers on the Availability of Adequate Provisions to Detect and Manage MMH Conditions in Healthcare Facilities

Less than a quarter (22.5%) of HCMs admitted to having any provisions in their health facilities to detect; 46.0% to having provisions for the management; 15.7% to having clear management protocols and 23.1% had clear referral pathways for MMH disorders and in their facility as shown in Table 4.15.

Table 4.15. Health Care Managers' Perception of the Healthcare System's Ability to Adequately manage Maternal Mental Health Conditions (N=89)

PROVISIONS TO DETECT MMH	FREQUENCY	PERCENTAGE (%)
No	35	39.3
Not sure	34	38.2
Yes	20	22.5
Provisions for the management of MMH disorders		
No	20	22.5
Not sure	28	31.5
Yes	41	46.0
Clear management protocols		
No	36	40.5
Not sure	39	43.8
Yes	14	15.7
Clear referral pathways		
No	13	33.3
Not sure	17	43.6
Yes	9	23.1
Enough Awareness of MMH disorders		
No	53	59.6
Not sure	17	19.1
Yes	19	21.3

4.2.3 Key Suggestions from Quantitative Survey

Suggestions by Healthcare Workers

The top three suggestions for improving maternal mental health in Ghana were “Education & awareness at ANC”, “Screening & early diagnosis” and “Pre-service & in-service training”.

Table 4.16 Suggestions by Healthcare Workers

SUGGESTIONS	NUMBER	PERCENTAGE (%)
None	4	0.8
Education & awareness at ANC	149	30.8
Screening and early diagnosis	121	25.1
Pre-& in-service training	114	23.6
Family and spousal support	28	5.8
Other	67	13.9

Suggestions by Healthcare Managers

Almost all the HCM suggested pre- and in-service training to enhance the attention on MMH disorders among health care providers. Almost half of the HCMs recommended biannual in-service training for HCPs (Table 4.17).

Table 4.17. Suggestions for Improvement of Maternal Mental Health Conditions (N=89)

PRE-SERVICE TRAINING	FREQUENCY	PERCENTAGE (%)
Not sure	2	2.3
No	1	1.1
Yes	86	96.6
Total	89	100.0
In-service Training		
Not sure	2	2.3
Yes	87	97.7
Total	89	100.0
In-service training frequency (Yearly)		
1	14	16.1
2	43	49.4
3	14	16.1
4	15	17.2
6	1	1.2
Total	87*	100.0

*These are the 87 individuals who proposed in-service training on MMH disorders in the preceding question

4.3 Qualitative Study

The qualitative results indicate that a total of fifty-three (53) in-depth interviews and five (5) sets of focus group discussions (FGDs) were conducted. These interviews were held with key informants (e.g., Healthcare Managers (HCM), healthcare providers, caregivers, and local governmental officials at the municipality and district levels), pregnant women, postpartum women and women with the lived experiences of having a MMH conditions, from within a hospital setting or within the community. The demographic details of these groups of participants are summarised as follows:

Table 4.18. summarises details of key informants who were either a healthcare manager or a healthcare provider. These key informants reported having between one to thirty-seven years of working experience in the field of health/mental health care. At the time of the interview, these key informants held healthcare positions in diverse health settings across 10 regions in the country.

Table 4.18. Demographic Characteristics of Key Informant (KI) Interviews with Healthcare Managers and Providers

NO	REGION	ROLE	PROFESSION	AGE	NUMBER OF YEARS IN ROLE
KI 1	Greater Accra	Director, Institutional Care, GHS	Medical Doctor	48	5 years
KI 2	North-East Region	Director in charge of public health, regional health directorate	Medical Officer	51	
KI 3	Greater Accra	CEO, MHA	Consultant Psychiatrist	48	
KI 4	Greater Accra		Public health nurse	50	
KI 5	Greater Accra	Program Officer	Midwife	59	15
KI 6	Greater Accra	Advocate	Medical Doctor	36	3 years
KI 7	Bono East		Mental Health nurse	39	15
KI 8	Upper East		Nursing	42	17
KI 9	Savannah	Partner	Community Mental Health Service Nurse	43	1
KI 10	Oti		Midwife	36	12
KI11	Central		Lecturer	45	
KI 12	Northern		Psychiatrist	37	4
KI 13	Ashanti		OBGYN	67	28
KI 14	Ashanti		Public health nurse	55	32
KI 15	Ashanti		Specialist OBGYN	33	3
KI16	Western	Healthcare manager	Midwife (prior to retirement)	60	37

Table 4.19. Details the profile of a total of 14 pregnant women who participated in 2 sets of focus group discussion held within a teaching hospital setting in the Greater Accra region . Majority of the pregnant women were between the ages of 31- 40, married and had a tertiary education. In addition, most of the participants in these focus group discussions were expecting the delivery of their second child and were in their third trimester.

Table 4.19. Demographic details for pregnant women sampled in a hospital setting.

FOCUS GROUP ONE						
ID	**AGE**	**MARITAL STATUS**	**EDUCATIONAL LEVEL**	**PARITY**	**OCCUPATION**	**WEEKS PREGNANT**
1	34	Married	Tertiary	3	Self employed	30 + 2 days
2	40	Single	Senior High School	0	Secretary	31 + 4 days
3	35	Married	Tertiary	1	Nurse	36 + 6 days
4	42	Married	Class 5	4	Business woman	32 + 2 days
5	38	Married	Junior High School	1	Hairdresser	34
6	27	Single	Tertiary	1	Student University	30
7	33	Married	Senior High School	1	Seamstress	39 + 5 days
8	29	Married	Tertiary	1	Caterer	35 + 6 days

FOCUS GROUP TWO						
ID	**AGE**	**MARITAL STATUS**	**EDUCATIONAL LEVEL**	**PARITY**	**OCCUPATION**	**WEEKS PREGNANT**
1	30	Married	Masters	0	Student - University	37
2	29	Married	Tertiary	1	Teacher	15
3	44	Married	Junior High School	3	Seamstress	7 + 1 day
4	29	Married	Senior High School	1	Seamstress	30
5	26	Married	Senior High School	0	Leading Launderer	37 + 5 days
6	41	Married	Class 6	4	Porridge seller	36

Table 4.20. summarises the details of 11 postpartum women who participated in the study. Majority of these women were between the ages of 21-30 and 30-40, married and had a tertiary education.

Table 4.20: Demographic details for postpartum women (0-2 weeks) sampled in a hospital setting

ID	AGE	MARITAL STATUS	EDUCATIONAL LEVEL	PARITY	OCCUPATION	DAYS AFTER DELIVERY
1	32	Single	Tertiary	1	Banker	14
2	37	Married	Tertiary	3	Cashier	10
3	38	Married	Vocational School	1	Business woman	7
4	24	Married	Senior High School	1	Fashion designer	14
5	38	Married	Junior High School	3	Business woman	14
6	23	Married	Senior High School	2	Unemployed	7
7	37	Married	Tertiary	2	Advertiser	7
8	21	Married	Uneducated	1	Unemployed	13
9	28	Married	Vocational School	2	Caterer	7
10	26	Married	Tertiary	1	Nurse	6
11	19	Single	Junior High School	1	Unemployed	12

4.21. Summarises a total of 11 IDIs conducted at the community level with women with a lived experience of having a maternal mental health disorder. The participating women were between the ages of 20 and 38. Parity ranged between 1 and 3 with a majority of the women having two children. Majority of these women had a history of depression, the rest of the women reported other diagnosis including bipolar, psychosis, schizophrenia. Most of the women were married and living with their husbands in compound houses where other relatives also were residing, but with separate household arrangements. Three women indicated they were single mothers. A majority of these women delivered in a health facility with their deliveries supervised by trained personnel.

Table 4.21. Demographic Characteristics of Persons with a History of Maternal Mental Health Disorders sampled within a community

NO.	AGE	PARITY	TYPE OF DIAGNOSIS	EDUCATION LEVEL	RELIGION
IDI	32	3	Depression	Senior High School (SSCE)	Christian
IDI	30	4	During pregnancy up to delivery, I suffer dizziness and sometimes I fall [Epilepsy suspected]	No formal education	Traditional Religion
IDI	30	2	Depression; anxiety/ stress	Junior High School	Christian
IDI	30	4	Depression	Junior High School	Christian
IDI	29	1	Psychosis	Junior High School	Christian
FGD/IDI	38	2	Depression	Tertiary	Christian
	32	3	Schizophrenia	No education	Traditional Religion
	20	1	Bipolar	Primary School	Christian
	38	5	Depression	No formal education	Muslim
	22	3	Mental illness (my mother had mental illness too)	No formal education	Muslim
	32	4	Depression	Junior High School	Muslim

Interviews in the community were conducted with key informants including healthcare providers, primary caregivers and local government officials. Healthcare providers comprised of a Community Psychiatric nurse, community senior staf nurse, a senior staff nurse and a midwife. A few caregivers also took part in the intervie. The local government officials included Coordinating Directors (substantive and deputies), Planning Officers, directors of the Department of Social Welfare and Community Development, and a Regional Mental Health Coordinator. Interestingly, the local government officials engaged were overwhelmingly male with only one of the nine officials interviewed being a female.

Table 4.22. Demographic characteristics of Key informants at the district level

NO.	GENDER	ROLE	YEARS OF EXPERIENCE
1	Male	Community Psychiatric Nurse	9
2	Female	Senior Staff Nurse	6
3	Female	Community Health Nurse	3
4	Female	Midwife	4
5	Female	Primary Care giver/ Mother	10
6	Female	Primary Caregiver/ Mother	5
7	Male	Planning Officer	15.
8	Male	Municipal Director	Not known but said he would soon retire
9	Male	Deputy Director of Nursing Services (DDNS) – Community Psychiatry	27
10	Male	Planning Officer	6
11	Male	Deputy Coordinating Director	8
12	Male	Senior Mass Communication Officer	15
13	Male	Senior Social Development Officer	16
14	Male	Senior Social Development Officer	15
15	Female	Assistant Social Development Officer	8

Table 4.23 shows a summary of themes and sub themes based on a combined analysis of key informants, pregnant and postpartum mothers. Four (4) major themes emerged: Narratives of poor maternal mental health in Ghana; current maternal mental healthcare services in Ghana, barriers to the provision of maternal mental healthcare services, as well as facilitators/recommendations for improving maternal mental healthcare.

Table 4.23. Summary Table of Overall Themes and Sub Theme Based on Interviews with Key Informants, Women with a History of Maternal Mental Illness, Pregnant and Postpartum Women

	BROADER THEMES	THEME	SUBTHEMES
1	**Narratives of poor maternal mental health during pregnancy and after birth**	Contributory factors affecting maternal mental health	■ Biological/Physical changes ■ Hormonal changes ■ Bodily pains ■ Sleep deprivation ■ Gestational complications ■ Mother's pre-existing mental health disorder ■ Pregnancy loss ■ Baby's ill health
			■ Social factors ■ Relationship problems ■ Marital distress ■ Poor social support ■ Low level of education ■ Mother's unemployment status
			■ Psychological stress and trauma during pregnancy ■ Fears and beliefs about the pregnancy ■ Traumatic birth experience ■ Current and previous obstetric history ■ Baby's physical health ■ History of abuse and neglect ■ First time pregnancy experience
		Type of maternal mental health problems/ disorders	■ Emotional distress ■ Maternal anxiety ■ Birth trauma ■ Postpartum Bipolar ■ Postpartum Depression ■ Postpartum Psychosis ■ Postpartum blues
		The impact of having a mental health problem/ disorder	■ Social and functional impairment ■ Social stigma and discrimination

2	**Existing maternal mental healthcare activities and services in Ghana**	Formal maternal mental health systems of care	■ Training healthcare staff on early identification ■ Screening pregnant women and mothers for depression ■ Established referral systems to mental health specialists ■ Community mental maternal health services ■ Maternal mental health awareness education/ public awareness campaigns
		Informal systems of care	■ Churches ■ Prayer camps ■ Self-help support groups
3	**Barriers to the provision of mental health care services**	Healthcare professional related barriers	■ low knowledge of mental health issues ■ Dismissive of or normalising women's complaints ■ low confidence about addressing MMHDs
		Structural barriers	■ Inadequate infrastructure ■ lack of privacy during hospital visits ■ Stigma
		Organizational barriers	■ Mental health not prioritized ■ Inadequate systems in place to screen and identify MMHDs ■ Limited mental health professionals ■ Inadequate provision of MMH training for healthcare professionals ■ Inadequate data on the magnitude and burden of maternal mental health challenges ■ No national policy and funding ■ Limited access to psychotropic drugs
		Sociocultural barriers	■ Ignorance/lack of mental health awareness ■ Gender inequality ■ Spiritual beliefs as causation for MMHDs ■ Social stigma
		Financial constraint of the mother	

4	**Facilitators/ recommendations for the improvement of maternal mental health care.**	Formal health care system perspective	■ Formalise education and the training of healthcare professionals ■ Integrate maternal mental health services (e.g. screening, referral, management) ■ Improve distribution of needed resources across the country (human, structural, financial) ■ Public mental health awareness ■ Create a national policy on maternal mental health ■ Implement mental health law
		Pregnant and postpartum women perspectives	■ Practice self-care ■ Improve social support ■ Psychoeducation/counselling on mental health problems ■ Inclusion of fathers/companion in maternal care ■ Gentle and compassionate care from healthcare professional

Narrations of Poor Maternal Mental Health

In the words of a 41-year-old pregnant woman (14), "pregnancy is not the same for every woman". While this statement may hold some truth, the narrations of the interviewed women indicate a variety of common risk factors that can potentially affect the mental health of a mother and baby during pregnancy, labour and postpartum. Based on participant accounts' adapting to pregnancy or the life after sometimes involve a complex interplay of biological/physical, psychological and social factors.

Biological/Physical Changes

As part of the pregnancy process, expectant women often experience a series of physical changes including morning sickness, digestive changes and physical pain. In the accounts below participants highlight how these changes can be a source of discomfort and stress:

> *My experience hasn't been a pleasant one because, I've been vomiting from the start of my pregnancy. That is, from the first trimester to the third trimester and I am still vomiting, and my doctor is even saying something like, I could even vomit till delivery. So, after eating, I vomit everything out (Pregnant woman 12, seamstress).*

> *Eating becomes a problem .... you tend to lose appetite, and certain food scents are not good for you...for instance perfumes, I didn't like the scents...during my pregnancy, I often used shea butter and nothing else...sometimes when I get to the workplace, the scents of my colleagues.....so I normally stay far away from them....so these things normally occur in our lives. (Pregnant woman 2, Secretary)*

> *Some of my challenges is erhm, I can eat, but sometimes after eating, after washing my hands, I am hungry again. Like, that thing really, haha and then, the bitterness in my mouth, haha. These are two main challenges for me. (Pregnant woman 10, Teacher)*

You will go through pains. You won't feel happy, you even get easily irritated over certain things... (Pregnant woman 5, Hairdresser).

Sometimes, you'll be having sleepless night and with the left position when you are sleeping mtchew, sometimes you will not feel comfortable. (Pregnant woman 13, Launderer)

Another significant concern for pregnant women emerges from pre-existing health conditions particularly in the light of a previous pregnancy loss or mascarriage. The presence of these conditions pose a threat and may cause some women to question their ability to carry their pregnancy to full term. The quote below reveals this concern as a woman narrates a sense of anxiety and worry about her current pregnancy after a previous miscarriage:

Personally I had BP and also had diabetes which is even currently becoming serious, but before I even conceived, my BP level were fine, my sugar level was also fine, so all these problems was what caused my first miscarriage....ahaah....so when I conceived this current pregnancy, I became very anxious, because I thought there is a possibility of miscarriage for this baby (Pregnant woman 3, Nurse)

Similarly, participants shared that routine maternal health procedures that could reveal possible ill-health also seemed to trigger the experience of constant worry. One women narrated how a doctor's request for a prenatal scan became a source of distress and worry:

I was told to do a scan.... So, I asked why, and he said they have to check if the baby is intact. If the baby's leg is there, the hand, the heart, the eye, the nose. So that thing, like when she told me that when I went home, oh my God! That week I've been thinking about it. So, it means that when you come and this thing is not okay, then it means that, maybe you have to remove the baby, you have to do this. I was so worried, ahaa! So, that experience really mtchew, it has really been on my nerves (Pregnant woman 10, Teacher)

The mode of delivery also seemed to serve as a source of stress for expecting mothers. According to participant narratives, vaginal delivery is valued as the preferred, natural way of birth. However, health implications may necessitate a Caesarean section (CS). The prospect of a surgical intervention can be disappointing and upsetting for some women, as undergoing a CS deviates from their expectations. A respondent shared her emotional reactions, after being informed that she had to undergo a CS.

Oh for the journey, I didn't have any issues but then erm during the last days, that was when the baby, the baby head wasn't down, it was transverse. Aha. So that is the reason why we did the CS. If not, it would have been a normal delivery. It's just that fear that I had. That's all. I don't know, but then I didn't want it. That's it. I had my own fear for it. (Postpartum woman 1, Banker)

The women's accounts are fraught with fear, reflecting the emotional impact of such decisions on their mental wellbeing.

For postpartum women, complications such as haemorrhage or physical discomfort can pose a mental health threat as a mother is attempting to recover from the toll of childbirth. Postpartum complications can leave a mother feeling vulnerable and distressed. Sharing the case of a postpartum woman, KI 13 (OBGYN) mentioned that "she had postpartum haemorrhage, we managed her and she was fine and then...the...two days .... after delivery she started showing signs of depression so the psychiatrist- had to come in"

For me my issue was with the cut. And because I know with the normal delivery it's the labour that you'll suffer but after when the child comes out, that is it. When the child comes out, you are free. But with this you have a wound to be treating and those things. So those things were also something that made me emotional a bit. (Postpartum woman 1, Banker)

As indicated above, when the experience of delivery does not align with a mothers' initial expectations due to potential health implications, it can pose a threat to a mother's mental health. In addition to their own health status being a cause of concern, some postpartum women also expressed profound concern about their baby's' physical health, before and after birth:

They tried inducing labour, or taking me to the emergency ward to track my baby's temperature because it was high. I got scared because this is my first child but I'd gotten so tired (Postpartum woman 3, Business woman)

Upon hearing that my time was not up to deliver my baby at the Usher Clinic, they proposed to put the baby in a certain small bottle…I don't know…….eehh, yes so that was the only thing I was worrying about. (Postpartum woman 8, unemployed).

Mm, as for that I knew my due date wasn't up when they admitted me so I was a bit nervous and hearing about the disease going round, I was concerned for my baby's health that I left everything to come and be admitted so that I could be monitored and have a safe delivery, mm hmm. (Postpartum woman 3, Business woman)

Social Issues and Interpersonal Relationships

In addition to the influence of biological or physical changes, one KI 7 (Mental health nurse) shared that maternal mental health challenges are also brought about by other factors such as "social issue(s), marital issues and a whole lot". The dynamics of social issues and interpersonal relationships can create situations of vulnerability, and subsequently problems of poor adjustment. The availability of support and resources from one's social network is an important aspect of the pregnancy journey. Reflecting on interpersonal relationships and poor mental health outcomes, some participants described moments of social tension and conflict between intimate partners, and the resulting emotional strain. One mother shared her experience of vulnerability when her husband initially rejected the pregnancy:

Err I got really worried at the time when I took out my family planning device because I was feeling its side effects and got pregnant. My husband got so upset with me and told me he wants nothing to do with the baby. I then told him if he wants nothing to do with the baby I will take care of the baby on my own. It made me wonder if I made a foolish decision getting pregnant by him …… and of all my kids it's this baby that looks very much like him. (Postpartum women 5, Business woman)

For some women, navigating the journey of pregnancy was difficult because of the irresponsible behaviour of their partner. Some of these behaviours included neglect and inadequate financial upkeep. A number of women shared their ordeal:

I went through a lot…like especially when I was in the house like this…like my husband was giving me one or two problems' if I was someone that had BP it would have been a different thing (Postpartum woman 2, Cashier)

He really hurt me when I was pregnant, he paid no attention to me whatsoever, and he didn't even give me money for food…. He will spend all his time on the phone with other women and when I bring it up, he'll tell me he doesn't love me (Postpartum woman 5, Business woman)

Speaking angrily about her husband, one woman shared her experience of maltreatment during pregnancy:

> *I don't even want to see his face…madam as for me, I say what I think so I don't want to see his face or even have a conversation with him eh heh. If I was working I wouldn't even take his money, because a man such as himself was able to maltreat a pregnant woman instead of pampering her. On the 31st of last month he told me that I got pregnant and I'm now suffering because of my evil mind. As a pastor, he told me this when I was in my 41st week and struggling to deliver, so madam, let's just forget it. (Postpartum woman 6, Business woman)*

KI6 (medical doctor) shared a similar account of a woman who experienced neglect by her partner when she became pregnant:

> *Twenty-four-year-old girl…who…erm…had gone through a state of neglect, okay? So the person who impregnated her said its not him blah- you know. And her family was against the fact that she was doing "nkɔdaa bonesɛm" [naughty child]*

Motherhood comes with changes, additional roles and responsibility. It is therefore apparent from the narratives that women would require adequate support as they adjust to their new roles. In an account offered by KI10 (midwife), a woman battled with mental health challenges (depression) following the increasing demands of caring for twins and an absence of social support, she said:

> *We brought in the mental health people and then from the assessment we realised she was depressed because she said she had no one at home to take care of her…It's her mother that usually does that but she lost the mother when she was pregnant with twins and this one came twins it will be more demanding so she just went cold.*

Adequate social support can help alleviate the burden of adjusting to new roles associated with pregnancy and motherhood. On the other hand, if there is an insecure partnership or a lack of partner, family and friend support, the maternal experience can become overwhelming and stressful. In a related case, KI 12's (psychiatrist) account demonstrates how a mother's mental health can deteriorate due to poor physical health, inadequate social and financial support. KI 12 states that:

> *After the placenta was taken out, we realised that family barely come to see her because they don't have much money and yeah. She became sad, she said she had very low energy, and she'd have, she will cry most of the day and yeah, she said her erhm confidence too, or her self-esteem was very- low.*

As depicted in the account above, financial constraints can negatively impact the experience of a pregnant mother. Based on several participant accounts, the current cost of living, maternal healthcare and raising a child can be overwhelming for a couple who struggle with limited financial resources. One woman shared her current frustration as she prayed for a natural birth due to the high cost of undergoing a CS:

> *It has made me think more, because sometimes living conditions changes and also the CS is very expensive… so it's made me think more, it is a worry to me. I am praying for a natural birth… because for the cost…mmm… its serious, it's become very challenging in these times…. (Pregnant woman 8, Caterer)*

One mother shared how her husband had initially rejected her pregnancy due to financial difficulties:

> *Okay, for me in the beginning, I made up my mind I will give birth, but the man I live with has two children and decided he will not give birth again…but I only had one child, and my daughter said she wanted a brother to play with, so that was the time I started to get sad, because my husband*

said he was not ready...he didn't have money.....so I decided that, if he didn't have money then I will take care of my baby myself.....in the beginning I was not happy, I cried a lot, and while I cried the baby in my stomach also cried, so my husband eventually accepted and decided we will have the child.... (Pregnant woman 5, Hairdresser)

Financial problems can create a substantial amount of social tension and distress between a partner and pregnant woman. One pregnant women attempted to explain this further:

Some pregnant women may not be so strong to come to work and so the employer may ask you to stay home and in that case, what else will you do....maybe you do not have any property available to sell and that affects our thoughts, you begin to think about it a lot, and if your partner has no job, then both of you will be at home.....and so with that it brings about a big problem and makes you to think more. (Pregnant woman 8, Caterer)

Similar to what is depicted in the quote above, some mothers noted how being pregnant could interfere with one's major life goals including maintaining a job and pursuing an education:

With regards to work, it is not the same when one gets pregnant, the strength to work changes, so.....maybe if you often go to work at 6am.....sometimes when you sleep and you are waking up...(laughs)...it becomes difficult, but because you have to go.....sometimes you get to work late and sometimes you are not able to fulfil all your goals for the day, sometimes you cannot even squat or even.....so for that one it can affect the work very much. (Pregnant woman 2, Secretary)

For me I am a student so.....I should be graduating next month, but because of the pregnancy...I often get sick....so I will not be able to graduate unless I give birth and then later go and continue.... so that is what makes me very sad anytime I remember that...I am the only child of my father.... but my father is not around, he provides for me and with my schooling, so he did not expect this to happen like this, so .....his relationship with me is not going well, so it makes me sad when I remember (Pregnant woman 6, University student)

Envisaging the negative impact of pregnancy on their life trajectories, some woman battle with the decision to accept or abort the pregnancy. One mother shared how she almost aborted her child, knowing that her pregnancy would interfere with an opportunity to gain an education:

I used to live with one woman, I left ... stayed with my husband, I became pregnant four months later, the woman called me to come back because she wanted to enroll me in school, and also do I intend to abort the pregnancy or not. That was when I thought negatively and I decided to abort it, I cried and was filled with sorrows on aborting it, however my husband begged me not to abort the pregnancy. (Postpartum woman 8, Unemployed).

Psychological Stress, Fear and Trauma

The fear of an adverse pregnancy outcome was a common theme in the women's stories. Stories of known and unknown women who had adverse pregnancy outcomes caused some women to worry about their own pregnancies. A woman's perceptions of pregnancy, labour and after birth can influence her wellbeing profoundly. This truth was evident in the narrations of women who shared their experience of preoccupation of fear:

Mmmm,....as for the fear it wasn't the time of delivery though, but it was .....pauses....like maybe.... a month before, eheeh, there was a lady in my church who was pregnant and when she went for

labor she passed and the baby too passed, so like I……I begin to panic a little because, someone went and she didn't come back so, what is my position, when I go will I come back or not eheeh… (Postpartum woman 10, Nurse)

Some mothers shared that the anticipation of childbirth, the negative stories about painful labour raising a child were often overwhelming and anxiety inducing. Prevailing concerns centred on their ability to deliver safely and the babies survival.

Sometimes, maybe, mothers are sitting down discussing like child labour is painful and stuff. When I hear these words then I become scared (Postpartum woman 4, Fashion designer).

Interestingly, one mother disclosed that being preoccupied with fearful thoughts about labour is a normal occurrence, see the quote below:

Mmmm……there are some people who think negatively when they are going to give birth, eheeh… like thoughts such as, they will not be able to deliver their babies, or when they give birth something might happen….mmm(laughs)…everyone does, even me, I used to think that way (Postpartum woman 8, Unemployed).

According to participant accounts, the intrusive thoughts typically reflect concerns about survival during labour or childbirth. Catastrophizing about going through labour, one mother said:

I've been hearing of many women going through labour and then not coming when we came here. So, sometimes, I will be like, what if I go and I don't make it? And what if I go and I make it? So, I have these two thoughts. (Postpartum woman 4, Fashion designer)

Another mother shared her experience of fear when it became apparent that she had to opt for CS.

With the CS… though the first time I was like… I was scared especially when you are going for CS for the first time, the way the nurse will be talking to you…who said you should come and do the CS?… give you pressure and things, is it your own will and all this will make you disturbed and makes you go through a lot (Postpartum woman 2, Cashier)

Worried that the CS procedure could go wrong, some mothers talked about their experience of fear and anxiety:

For the fear and anxiety dier, they move together. They were all part. Because going to the theatre, your fear is that "Ei, will I come out alive? " Like, "will everything be okay with me? ". A lot of things. So that's it. (Postpartum mothers 1, Banker)

For me, I will say it could be either anxiety, because….I have lost three babies…….ahaah, before I delivered this one, so if I look back at what I have experienced……but even if I didn't go through that, it is like I have become very conscious, when I see something small…..I feel anxiety…..ahaah….. so that is my challenge, (Pregnant woman 3, 35 years)

Some interviewed women mentioned that at the point of labour they battled with a wide range of other intense emotions including a sense of sadness, helplessness and fear in response to pain.

Yes, at that time I was…. sad because when I was on the bed the pains were coming, but immediately I got to the delivery bed the pain had stopped and I was asking myself what was really happening to me…and I wanted to ensure I get a live baby so like I became sad a little (Postpartum woman 10, Nurse)

I was still tired, I was like, anything should happen because I was tired. I tried everything and the most painful one was, it got to a time I couldn't handle it, so the, I was screaming. The nurses didn't know what to do. Instead of them like, maybe sometimes you get someone to interact with you, so that sometime you get you mind off it but nobody was there. I was there alone. Just feeling the pain like that. (Postpartum woman 4, Fashion designer)

Following delivery, separation from the baby or the uncertainty surrounding the baby's health could trigger concerns of worry. One mother shared her story of apprehension and worry post delivery:

I was thinking and remembered that in my hometown, a woman delivered her baby and later did not find her baby, meaning they went to sell the baby, that was what made me to start to worry and doubt where my baby was put, but I remember the gender was a boy not a girl. Also, I did not know how to mention the name of the ward my baby was put in. (Postpartum woman 8, Unemployed)

As reflected in the narrations above the period of pregnancy, labour and afterbirth can cause mixed feelings with implications for a mother's mental health.

Type of maternal mental health conditions

As depicted in some of the accounts above, women with a lived experience of poor maternal mental health may manifest with a spectrum of symptoms related to stress, anxiety and depression. From a professional point of view, KI 5 (midwife) explains possible maternal mental health diagnosis that can emerge from an eventful pregnancy, she said:

It can range from er just mild depression and to I mean on that long bridge up to er postpartum psychosis.

Describing common maternal mental health conditions seen in the hospital settings, KI3 (Consultant Psychiatrist) recounted:

Most of the time, we get post-partum psychosis. What we mean by post-partum psychosis is, usually, they become a bit hyper. Should I say their moods go high, they talk excessively, they become a bit aggressive and so on. So, you may have that one. Or, you may have post-partum depression. Whereby the person comes in very depressed and so on...okay, again, you can also have the post-partum blues and all that.

In a related quote, KI 7 (mental health nurse) recalled the experience of a new mother:.

The patient was depressed...she didn't want to even touch the baby, she didn't want to feed the baby, she just detached herself from the baby...At a point in time, the husband confined [sic] in me that, when they were in the house, the woman will go and put the baby in the sink and open the tap. I think in an attempt to whether to kill the child or bath the child

KI 8 (Nurse) also recounted a case postpartum psychosis:

A week after delivery that it was reported that the woman was not getting closer to the baby. And at a certain point she said she had not given birth. And so was not taking care of the baby. And then there was some issue of hallucination and then... sometimes she cries all of a sudden without any cause

From the accounts of managers and professionals, mental health disorders such as postpartum depression, psychosis and postpartum blues seemed relevant during pregnancy. On the other hand, as is seen from the narratives of participants described above, experiences of distress, anxiety and trauma are also events of great relevance for expectant and new mothers.

The impact of having a mental health problem or disorder

As seen from the narratives above, respondents noted how concerns about pregnancy and afterbirth, mental health problems or disorders influenced daily functioning, including social, educational or occupational functioning.

Existing maternal mental health care activities and services in Ghana

The participants described existing formal and informal maternal mental healthcare services currently being implemented in Ghana.

Formal health systems of care (e.g. hospital)

Training on early identification

KI12 shared that "the mental health authority has also been working for some years at integrating mental health services at the primary care level". Consistent with this, KI7 stated "what we have done at least is to train some few ehh, midwives on how to identify maternal health issues, specifically depression (KI, mental health nurse)

Established referral systems for specialised mental healthcare

From the participant's accounts, it appears that working partnerships between maternal healthcare providers (midwives, obstetricians and gynaecologists) and mental health professionals (psychiatrists, psychologists, mental health nurses) may exist in some health facilities. The quotes below signify this:

> *If the woman, if there's already er...a history and then a family member or a support person comes with the pregnant woman and says that 'Oh this woman has she has suffered some mental health erm problem er in- past pregnancies' then the midwife will of course quickly refer (KI 5, Midwife)*

> *Let's say a midwife in the facility approached a mental health worker that they have this case at hand and how to support or manage a problem then they work together with the mental health workers and ensure that they give support to the woman (KI 8, Nurse)*

> *Because we are with the client when we observe something like that we invite the mental health nurses to come and do their assessment and confirm the diagnosis (KI 10, midwife)*

Screening of Pregnant Women and Mothers

According to some participants the use of screening tools is not consistent across healthcare facilities, while some persons conduct no screening for maternal mental health disorders, other facilities use a screening tool or are planning to implement its use in the future:

> *Yeah, we use the ..., there's a screening tool, screening tool. So, I am trying to remember the name. It's either Edinburg or Ireland or something...Yes, Edinburgh postpartum KI 15 (specialist OBGYN)*

> *Oh in my facility we are we were trying to start screening the women on depression. We've realized that quite a number of them are depressed but we don't pay attention so, we were planning of starting the screening but we wanted to do the training so we invited the mental health nurse to*

come and talk to us about the maternal mental health and then we ourselves would design a screening tool to be screening them. That was what we were doing. We have it for our objectives in the year too KI 10 (midwife)

Some participants suggest that healthcare personnel have received some level of training to be able to screen, offer basic mental health services and refer for more specialized services.

> ***Each specialist is also** able to identify and manage mental health but if it goes (clears throat) becomes severe then we- have to refer. So the facility we have in Komfo Anokye is a department and also ei is a department dedicated for- mental health and also for us obstetricians er when it's maternal mental we start managing. If it's okay fine if it doesn't then we refer to the to the... department of mental health or department of psychiatry (KI 13, OBGYN)*

> *The non-specialists in mental health services were trained though, to identify or recognise minor mental health issues and also, erh, manage or treat them (KI 7, Mental health nurse)*

> *We manage them in the wards, if it becomes worse sometimes they have to refer them to the psychiatric hospitals (KI 10, Midwife)*

In instances, where there is no psychiatrist within the facility, participants shared that referrals are made to external facilities where such personnel are present.

> *The psychiatrist is not in the unit but currently we have one psychiatrist at the Presby psychiatry hospital in Bolga. So from last year till now he is the one that most often the clients can be referred to (KI 8, Nurse)*

Maternal mental health awareness

According to some participant accounts, current maternal mental health activities include education and awareness campaigns. Pregnant women, new mothers and the general public are educated on maternal mental health conditions in maternal health hospital spaces and via various media platforms.

> *We also go to the pregnant mothers and those who have given birth. We try to educate them on how to identify the common signs and symptoms of maternal health issues specifically, depression. This is what also, this is some of the things that we also do. Then, we also do some radio talks to educate members, community members on the need to recognise these signs and symptoms (KI 7, mental health nurse)*

> *We do education. So there are times that we go on radio. Personally, I carried out some radio programme on the postpartum depression and psychosis. And at antenatal and postnatal units too this also happens sometimes (KI 8, Nurse)*

Informal maternal mental health systems of care

Some participants shared that they used some informal systems of care, some of which included receiving support from the church, prayer camps and NGOs.

Barriers to the Provision of Mental Health Care

The HM's highlighted some challenges in the provision of mental health services in Ghana including structural, healthcare professional related, organizational, sociocultural and socioeconomic barriers.

Healthcare structural challenges

Some participants noted a lack of healthcare infrastructure and accessibility to maternal mental health services in some regions:

> *In our region, we don't have a facility where we can admit them. So, when we have such cases, we normally refer them to Bono-East Regional Health Directorate if the person needs admission, or to Komfo Anokye Teaching Hospital, where they can be admitted. And the extreme cases that is when we refer to either Ankaful or Pantang Psychiatric Hospital (KI 7, mental health nurse)*

Expalining further, KI 7, explained that in the absence of mental health services, people usually sought alternative healing options in settings such as prayer camps, see the quote below:

> *The unavailability of services rendered the people incapable of seeking healthcare and so, if the services are not there, then it means that the people are either kept at homes or they are sent to prayer camps or elsewhere. So, the unavailability is also accounting for that*

In healthcare facilities where mental health services or mental health personnel are not readily available, some participants noted the lack of expertise on the part of other health care professionals to screen or identify mental health problems:

> *Maybe in the facility there is no mental worker, sometimes there is a likelihood that the case may be missing. The likelihood that they may miss out on some cases because generally there is no screening tool that during antenatal and postnatal services, women will be screened consciously looking out for these cases (KI 8 mental health nurse)*

> *Many health providers are not aware of the symptoms to look out [for] (KI 6 medical doctor)*

> *There is a slight gap thinking that we are unable to pick...maybe the early warning signs of someone who may be having mental health issues KI 5 (midwife)*

To complicate matters, in some health facilities some participants noted the lack of a screening tool to help identify signs and symptoms of mental health challenges.

> *I think the only challenge we have is that...we don't actually...have the standards to measure you know the diverse disorders that mental I mean maternal...erm lemme say persons that are pregnant...persons that are...erm have given birth you know experience (KI 11, lecturer)*

> *We don't have...questions, screening questions you know, screening questions that will say that oh this pregnant woman that is this in front of you coming to seek care for her physical condition of pregnancy may also have mental health issues. We don't have any set of questions like that (KI 5, midwife)*

Based on the participants' accounts, current maternal health services focus on physical health concerns and not mental health:

> *What the gynae is looking out for... the gynae or the midwife's looking out for is you've come to the hospital, how are you doing? How's the baby doing? Examine...baby, examine you, examine ask you questions concerning...your health status. No one actually examines your mental health status (KI 6 medical doctor)*

> *In our facility here, the midwife for instance uh they don't have like the experience like if the er- a pregnant woman is having like er having like er signs and symptoms concerning about er this er problem, they don't always know like some of the details let me put it that way (KI 9 community mental health service nurse)*

A lack of a national policy on maternal mental health and funding

The absence of a national policy detailing consistent care standards for pregnant women or new mothers was another stated challenge, as described by some mothers in the quotes below:

> *I think there's no clear-cut policy from national level that cuts across the regions. Let's say if you go to facility this is what is expected when you go here this is what is expected (KI 8, Nurse).*

> *Mental health services are not fully funded by Government. Often time, patients have to pay out of pocket for medications and then for psychotherapy sessions and for electroconvulsive therapy sessions. Some patients can't afford that. So, they would rather not even bother (KI 12, Psychiatrist)*

According to the informant's financial difficulties/lack of funding make it difficult for health facilities to organise activities that can help improve maternal mental healthcare.

> *In my region because funds are not coming for any planned activities and trainings they are not able to be carried due to lack of funds. If there were to be, it's an area that we will venture into (KI 8, Nurse)*

Sociocultural barriers (e.g. gender inequality, ignorance and social stigma)

Beyond the limitations in the health sector, sociocultural factors affect access to and the provision of quality of maternal mental health care services. For instance, a number of participants mentioned that some mothers hesitate to seek care due to sociocultural and/or religious beliefs about their agency. In some parts of the country, women rely on men to make decisions concerning their health and thus are not able to seek help on their own accord. In line with this assertion some participants stated that:

> *Male-dominance er in some situations the woman depends upon the man even to go for pre pregnancy or prenatal care antenatal care, and if... the man is not available, the woman will not go. The woman may not attend er clinic (KI 13, OBGYN)*

> *In the northern sector where sometimes a woman may be having an issue which will need attention but the person will say maybe she will need the permission of maybe the husband or the family head for certain things to give permission for certain things to be done (KI 8, Nurse)*

One participant viewed that some women hesitate to seek help because of the stigma surrounding mental health and its potential to mar the family reputation.

> *Then stigma, because if I am to bring my family member for everybody to know that this person is having maternal health issue people will not come to my house. So, what I will do is, it's better I will hide the person at home, than availing the person for everybody to know that this person has maternal health issue (KI 7, mental health nurse)*

Ignorance or inadequate mental health awareness

In addition to the above mentioned barriers, some participants viewed people are unaware of the potential mental health problems that could emerge during pregnancy and postpartum. In response to talking about barriers to accessing care KI 9 (community mental health nurse) shared that *"the factors are uh...I can say because of er this thing like the lack of education and then financial er problems.* This statement was corroborated by another participant, who said:

> *If the individual involved does not have or is ignorant or has insufficient knowledge about maternal mental health issues, then definitely the person may not or the people around her also may not see the need for the mental health support (KI 8, Nurse)*

One participant viewed that some mothers had a poor understanding and awareness of mental health challenges and services that could be provided in the health setting, she shared:.

> *The client has a problem. Instead of seeking healthcare, people seem to relate it to spiritual things so when the person is a Christian they go to prayer camps for their pastors and when they are not Christians they tend to go the traditional way (KI 10, Midwife).*

A poor understanding of maternal mental illness often results in the delay of receiving appropriate treatment.

Financial constraints

According to the participant accounts in some cases, mothers may be aware that they need help for their condition, but may be constrained by a lack of financial resources. Some participants noted poverty as a barrier to seeking care:

> *When I am coming and I don't have money, and I have to pay for everything, even money for transportation from your house to the hospital is a problem, so if I don't have money, it means that I cannot get access to healthcare (KI 7, Mental health nurse)*

A number of respondents indicated that on some occasions they have to go outside of the premises of the hospital and travel into the Bolgatanga township to be able to buy the medicines. This is costly for them and due to poverty, payments for the medicines constitute a drain on their finances.

Facilitators / Recommendations for The Improvement of Maternal Mental Health Care

Formal Health Care System Perspective

As mentioned above, there are some gaps in the delivery of maternal mental health services which need to be addressed. Suggestions from the key informants included education and training of health personnel, mandatory screening procedures, the development of a national policy on maternal mental health and the implementation of the mental health law.

Formalize education and training of healthcare professionals

The key informants in this study suggested that healthcare providers need to receive specialized training in issues of mental health in order to build their capacity and expertise. KI10 (midwife) viewed that matters of maternal mental health *"should be inculcated into our training like nursing training. It should [not] be under anything, it should be a programme on its own. It's either it's a programme on its own or it should be a topic in midwifery. A course in midwifery just as we do like the puerperium where we talk about everything that happens to the mother after delivery; maternal mental health should be like that"*

Some participants also shared that training on maternal mental health should be incorporated into in-service training for health care professionals. Talking about mental health training, KI7 (mental health nurse) recommended that it could be a part of *"in service training, the capacity building, continuous one to always improve on their skills to help improve maternal mental health".*

Other health professionals shared similar views:

> *The health workers themselves who also work [with] these mothers also need to be trained on what they should look out for ... and then the kind of support that they can give so that in their service delivery, they will be able to offer this same support for them (KI 8, Nurse)*

> *So the first I recommend is the training needs, the screening needs for people with these issues and it should be available at the A&C area. So that, the midwives will be able to abreast themselves*

with it and whenever a pregnant woman comes, they will be able to use it to screen them for us. I think this screening too is very important (KI 7, Mental health nurse)

It will be good if the antenatal nurses also have a training in this field so, they also help with the screening, they have a lot of contact with these women so erh, yeah. (KI 12, Psychiatrist)

KI9 (community mental health service nurse) suggested that in situations where the entire workforce cannot be trained, some representatives could receive training, after which they will be tasked to share the knowledge acquired with their colleagues.

...just like the other time we came and then had the this thing at er Accra there 'no' so that if we also go to our various places so that we- will also be I mean we should also be to what, educate our people...er- concerning about some of these problems

To improve services some participants made suggestions on how existing maternal health services could integrate aspects of mental health into its routine documentation procedures as well as consider hiring psychologists who will specialise in the area of maternal mental health:

[The] maternal mental health report, the maternal mental health record booklets will also need to be expanded to include some key things on mental health (KI 8 nurse)

For health services, it will be a very good idea if there were psychologists who were dedicated only to the maternal mental health (KI 12Psychiatrist)

A national policy on maternal mental health/ mental health law implementation

Consistent with the views of other participants, KI 15, an OBYGN specialist emphasised the need for mandatory screening procedures, by stating that:

There should be protocols set in place in each facility preferably coming down from national telling us that oh, every pregnant woman should undergo at least the screening tool and every pregnant woman when screened and a diagnosis made, should have some or should have health care providers for their maternal mental health

KI 5, a midwife viewed that clinical guidelines would help guide the practices of clinicians:

The clinical guidelines will spell out erm...what to tell the pregnant women, what questions to ask...I mean that's the screening, what questions, the specific questions to ask and then based on the woman's responses what you'll- need to do if it means referral if it- means yes, most of the time it will be referral that's if you're able to pick serious issues, yeah

In addition to the creation of policies to guide maternal mental health activities, KI 12 a Psychiatrist, recommended that existing laws and policies need to be implemented:

At the Government level, implementing the fact that mental health services in the country are supposed to be as stated in the mental health law. But you know, it is not being properly enacted

Public mental health awareness

Beyond capacity building for health care professionals, some participants suggested that mothers, community and religious leaders as well as the general public also need to be educated and trained as explained by KI 5, a Midwife:

There are other avenues for er helping to spread the fact that maternal mental health is an issue

and has to be addressed and so it's good for all everybody in society, families and individual families and communities to know about the fact that pregnancy presents er...a more a- it- makes a woman more vulnerable and so the family needs to support them in terms of er- their mental health, yeah

KI 12 (Psychiatrist) suggests some media platforms via which education could occur *"Teaching about maternal mental health on TV, radio and then, yeah hopefully in schools"*.

In order to make an impact on pregnant and postpartum women's sociocultural beliefs and help seeking behavior, some participants recommended leveraging on the influence of media outlets, authority figures in the communities and family. This is highlighted by KI 8, a Nurse in the quote below:

The reverence that I will say we have for our traditional authorities. If we can tap into these opinion leaders, the chiefs and co then they could also come up with some rules in the community that will help women to freely get access to these services. Then in our church and mosques, the same thing applies to there.

For all of the above recommendations to be implemented some participants suggested the need for adequate budget allocations, see quotes below:

We should get more support funds because all these things will need money (KI 10 Midwife)

If you look at the budget for mental health er part of the budget for health in general is very scanty, very small. So there should be increase a bit of increase of budget to the care of mental health patients especially maternal mental health KI 13 (OBGYN)

Pregnant and postpartum women perspective

Transformation occurs during the journey to become a mother, as part of this transition, women change physically, psychologically, socially and situationally per their experiences. Navigating new roles, expectations and feelings requires some adjustment, sometimes mothers have the personal resources to do this, and other times they require some support. In this section, the mental health promotion needs and recommendations are reviewed from the perspective of the interviewed mothers.

Self-Care Strategies

Mothers described a range of personal strategies they had employed to deal with adjusting to their experience of pregnancy and the aftermath of childbirth. Some of these strategies included building a positive mind set and a sense of resilience as well as engaging in self-care activities. Some pregnant women believed that building a positive mindset was the best antidote to counteract the impact of psychological distress. A number of women explained how they employed this strategy to deal with stress:

Personally, I am that type that I always want to have positive energy...that's me, I always have positive energy, no matter how down I feel, I try to make sure the positivity is there. ...but I try my best to hold up. That's how I try and keep up with my pregnancy... because I always tell my mind that.... its just a matter of months.... within nine months, God himself will show up....so you just try your best and have positive energy. People see me and they think am too playful, but I tell them that no, is not that oo... (Pregnant woman 1, 34 years)

I think the brain is such a way that when you think negative.....you will realize that the end results will not be well.....but if you think positively...although you are going through difficult times.... you have motivated yourself or have a positive vibe that it shall be well.....it shall be well. Also I think that we should tune our mind and think positively.....the thoughts will surely come.....but when

it comes, overcome and suppress it and motivate yourself and its keeps you moving. (Pregnant woman 3, 35 years)

Other mothers emphasised the role of positive thinking and continuous reassurance in the face of labour pain and uncertainty surrounding child birth:

Bleeding isn't always why some women die in delivery; sometimes it is because of what is in their mind. As for me, I kept the thought that I wouldn't let any man kill me. (Postpartum woman 5, Business woman).

Oh, at that moment you'll not think about anything, just that you will be saying you can do it, you can do. So that you bring it out. Mmhm. (Postpartum woman 2, Cashier)

For many of these mothers building a sense of resilience is important in navigating this transition. Explaining her use of self-care strategies one postpartum woman stated how she managed the stress associated with pregnancy:

One thing that... I..... I was able to go through or help me give birth to a strong child is that I was doing erm.....I was taking my medications accordingly, I also try to do some exercise closer to labour I know that if you exercise it will help in the dilation of the... it will expand the pelvis for the baby to descend so I was doing some exercise and I think it helped so.....they can also do exercise so it will help them through the process and I know with normal exercise it will also help our mental state and we shouldn't be too stressed, if u stress yourself too much that's when other mental or negativity comes in mind so we shouldn't stress ourselves, we should always relax. (Postpartum woman 10, Nurse)

Sharing some of her relaxation techniques, one pregnant woman shared that listening to music was a helpful way to remain calm and gain a sense of pleasure during pregnancy:

Listening to music that also helps. Yes, it calms your nerves, it calms you down. Music is good. I love music. So, when I listen to music, I feel good. (Pregnant woman 12, Seamstress)

As part of her self-care strategies, one participant mentioned how talking to her mother to clarify and validate some of her feelings, was helpful in building her sense of positivity:

My mum told me that most people do it (Caesarean section). So, sometimes, I just get the support from my mum. Normally, sometimes I ask certain things. I will be like so when you were going to give birth to me, how were you feeling like? Or your first child, when you were going to give birth to your first child, how were you feeling like? She'll be like, I was also nervous, but we will all try. But if you go through this first one, the rest will be okay. So normally, she advices me to stop thinking have positive mind. So, whatever happens, just appreciate. (Postpartum woman 4, Fashion designer)

Social Support

In this study mothers also drew on the benefits of building a strong network of support that involved family, religion and professionals to help them through the process of pregnancy and labour. According to these women a good social support network could boost their mental wellbeing significantly. Supportive husbands formed a crucial part of this network. Two participants reported on this:

> *My husband is very supportive when it comes to pregnancy and I think he has contributed to my positive vibes....he has also helped me.....at work.....sometimes when I want do something he will say "ooh, mama lily, sit down, we will do it for you".....and I think in all of this, it has made my pregnancy journey very smooth. (Pregnant woman 3, Nurse)*

> *When .... the one supporting you is happy with the pregnancy, he's happy you are pregnant, he's happy you both are going to, even some people say we are pregnant, you see. So, he's happy you are bringing the baby home. So, that alone makes you feel happy and when it comes to the responsibility side, when you want to buy something or, he's there to support. Sometimes, "how is the baby feeling, are you okay" and all those stuffs, it makes you happy even when there is no money and he's happy around you, he's happy about the pregnancy, he's like, you see, this kind of things make you feel happy, yes. (Pregnant woman 12, Seamstress)*

Most of the participants agreed that it was necessary for pregnant women to have a friend or relative other than their husband that they could discuss their mental health challenges with, during pregnancy. They viewed that having a close companion could reduce feelings of isolation and sadness:

> *Women who are pregnant, they should be close to people and not stay isolated.....because if you stay at home alone...you will feel sad, the more you feel sad, the more your soul feels saddened..... eheeh... so try to move out, and sometimes your partner gets irritated by you, he doesn't come close to you, but if you have a friend involve yourself in a conversation....laugh at funny comments.....yoy don't sit isolated, and think you are alone, or don't have a supportive partner of family (Pregnant woman 4, Bussiness woman)*

> *Luckily enough I got a supportive family that helped me throughout when I lost the pregnancy..... my family was there for me and all that..... So if by God's grace we get support from at least our family members, friends.....like the sister said...if you have a good friend.....not a bad friend, but someone.....who will talk to you...things that will make you feel peaceful (Pregnant woman 1, self-employed)*

> *But if you get someone constantly encouraging and reassuring you, it makes you (kisses teeth)... develop some boldness, aha.. (Postpartum woman 3, Business woman)*

Some women also viewed that having a close companion during and after the delivery process would be helpful. One participant indicated that she would be happy if she had someone to help her take care of the baby, after delivery:

> *Ooh...everything is fine here.....but one thing is ..... somebody for you...to help care for your baby about 2 days because you are already in pain and you have to also take care of your child alone. (Pregnant woman 5, hairdresser)*

Reliance on religious beliefs was another strategy to cope with the demands of pregnancy and motherhood. Some mothers talked about their use of religious beliefs and practices to address obsessive thoughts about being pregnant:

> *Eeeh....whatever you do, the pregnancy has already occurred, with the thoughts , they are going*

to come into your head...but it comes to a time you need to pray to be able to cope with the thoughts....because if you are going through challenges and you don't pray, there won't be open doors for you...eheeeh....so all I can say is...we will forget some...but let's motivate ourselves....when the thoughts come....it will be well.....but mostly don't sleep, pray and God will solve it. (Pregnant woman 8, Caterer))

In some instance, what is said when you go for scan, it frightens you but if you have faith, you don't give many thoughts about what they said. (Pregnant woman 11, Seamstress)

For you to have endured until now....is that what you will have thoughts of death?.....it is a fact that we need money and all that, but in all of this it is God who cares for us.....God cares for us....he can pave a way where there is no way....so don't think about death.....no.....not death....aah why death. (Pregnant woman 2, Secretary)

On the other hand, for another pregnant person who goes to antenatal, what is said there affects her to the extent that she overthinks. But if you overthink about it, it affects the child in the womb. In some situations, you have to ignore it, take it as if the child was placed in your womb by God and He is the one who protects the baby in your womb. So, whatever happens, God is guarding you against something like this, ahaa. (Pregnant woman 11, Seamstress)

Prayer, meditation and faith in God are common religious practices practised by some participants.

Oh it was even last minute that I realised that I would not even go through the normal birth. Erm but then erm ...Hm. I think... The only thing is I just prayed to God and told him everything is in his hands. That's all.. (Postpartum woman 1, Banker)

If you overthink the things that could go wrong, you'll end up losing your mind oh madam. For me I didn't (kisses teeth), I only prayed that. whatever was in that injection would just help me so I didn't overthink it. (Postpartum woman 5, Business woman).

One mother spoke about how her husband supported her in prayer and advised that professional could be helpful:

I was thinking and praying during my labour and delivery process, if everyone could adopt my method, it will be well with us, so if you need anything, you ask your husband and pray about it too, if don't depend on God, your heart desires will not be granted, also if you need something you can tell the doctor, there are people who do not ask anything and tell themselves they are afraid to ask the doctor, so if you need anything, simply ask the doctor or nurse.....finish. (Postpartum woman 8, Unemployed)

Other mothers collaborated the idea of some professionals being supportive in their journey to motherhood:

My doctor, the doctor is very good, he is the one who normally encourages me, even if I am going through a lot, having problem with my husband, he is someone who will advise me, do this you will be okay.... don't think about it, so that's the best thing that my doctor has done for me. (Postpartum woman 2, Cashier).

When I was 15 years, I was admitted here....so I befriended a certain midwife....so the other time I came, the Doctor diagnosed diabetes in pregnancy and said, if care is not taken I will not be able to deliver the child....so I called the midwife and explained everything to her, so she really supported me, called me and advised me on the things to do and the things not to do and .....my mother in law was also of help to me. (Pregnant woman 6, University student)

I would always recommend Dr. K.,, as for that one (dier).....he is one doctor.....he has been the one taking good care of me from my first child to this current one, he has always been there for me.... mmm....like.....I just get emotional about it. Dr. K., has been one of the sweetest doctors I have met. He has been so supportive, I lost a pregnancy last year...within a space of one year... (Laughs)... he called my partner that he wants us to try again and this [current pregnancy] is the result of us trying again....mmmm...so he has been there. (Pregnant woman 1, self-employed)

There was a time I came to the hospital and my doctor prescribed a certain medicine. And I told her, this time around, my money is finished. I can't buy it. So, she just asked me to sit down. Within a couple of minutes, she just brought me the drug. I'm still administering the drug, so is cool. (Pregnant woman 12, Seamstress)

Psychoeducation/counselling on mental health problems

Some mothers did not feel they were mentally prepared for their experience of labour and would have wished to receive timely psychoeducation/counselling on the process.

Me I don't know, because am a staff, I didn't really get any education on those kinds of things, but am sure if you are a staff or not, at least you should be able to go through the process, like they should counsel you from day one till the day you deliver and they should even let us know that labor is not just anything and that you will experience a lot of pains so you should prepare yourself psychologically, that you are going to experience that pain if you know that its painful, you will prepare yourself than just having it and you don't know what to do about it, so like dedication should be more timely...with everything concerning delivery during the process of pregnancy and after delivery (Postpartum woman 10, Nurse)

I think they should have a unit for counselling before and after the process. Yes, yes. They have to get a unit to talk to them, to, for them to be abreast with things that go on before and after the Caesarean section. Sometimes I think the consent forms some people even sign without even reading or understanding what is on the consent form. So it's best when they have people to talk to them prior before the um Caesarean section and after. (Postpartum woman 1, Banker)

Hmm, I think that something should have been done how to take care of ourselves. Normally, the way we think, because most of us are now having our first child, so the doctors should have advised us that, because it is your first time, yeah, there are so many complications. Maybe you'll be scared, erhm maybe when it is time for you to deliver, you'll having this scared feeling but it's normal. They should have addressed us on such things. That during that time, you won't be having this, you won't be panicking. (Postpartum woman 4, Fashion designe)

According to some of the participants, the uncertainty surrounding pregnancy can be addressed if healthcare professionals provide mothers with accurate information on pregnancy. One woman shared the insight she gained when the pregnancy related condition "pre-eclampsia" was explained to her:

So I was pregnant last year and that was my third pregnancy.....but with what I learnt is from erhm... 20 weeks of pregnancy, a woman can go through pre-eclampsia, pre-eclampsia is BP..... it is a pregnancy induced condition that occurs normally. So it made me learn a lot of things from it.....so I even asked what is the cause of it and when you read about it, the doctors do not know the cause of that Pre-eclampsia, it is something that occurs to pregnant women, where their blood pressure shoots up and down.....but lucky enough.....when I conceived again, because I was on medications, I am being monitored very well (Pregnant woman 1, self-employed).

Accessing vital information about being pregnant can be very empowering, one participant noted this when she spoke about the pregnancy school running in the Korle-Bu teaching hospital.

> *With this place (the Korle-Bu teaching hospital), they have this pregnancy school thing ongoing every second week in a month and every fourth week in a month. So, I think they are also being supportive, because, when you come, they will teach you a lot of things about diet, exercise, how to handle the baby, how to go about your daily activities and all that. And they even have a platform. So, when you are on the platform and you want to ask any kind of question, even when you are, you don't even come to the class, you can even ask the question straight on the platform and they are... (Pregnant woman 13, Launderer)*

One participant viewed that the pregnancy school would be a great avenue for disseminating mental health information to mothers.

> *I think.....they should address these [mental health issues] at the pregnancy school, because when you are pregnant, you will be asked to enroll in a pregnancy school, so they should get people that will talk to us during our pregnancy period.....yeah....personally that's what I think. (Pregnant woman 1, launderer)*

> *We are all seated here now they can organize mental [health] education classes at the OPD... ahaah.....something like that should be considered. They have provided us with television..... they can have English and Twi sessions.....teach on BP.....they should also teach us on the mental aspects. (Pregnant woman 3, Nurse)*

Inclusion of fathers/trusted companion in maternal care

In order to improve their mental health during delivery, some mothers viewed that having a trusted companion other than the health professional involved in the labour process would be helpful. Some participant advocated for partners to be involved in the care of their wives during and after pregnancy:

> *Okay what I can say is that, after childbirth, women get those challenges as a result of treatments they get from their husbands. So I would advise that they should be encouraged and mandated to follow us the pregnant women to the hospital because, some partners are very wicked. Sometimes you get very tired and when you ask for their help they refuse to help you. So you see you go through so much pains, deliver your baby and even after the delivery they still want to be intimate with you and some women won't accept that. So it makes the women feel tired and gradually become unattractive to the man anymore. So let's encourage the husbands to support their pregnant wives, while accompanying them to the hospital.....so that you can get all the support needed because you will feel pains in your heart if you are the one doing certain things he has to do. So please let them address this and advise them. (Pregnant woman 8, Caterer)*

In other narratives, some pregnant women recommended that partners join their wives in the labour room and to also attend "daddy's clinic" a male version of the pregnancy school the women attend.

> *It should be allowed for partners to enter the ward during the delivery process to be able to see how it's going..... (Pregnant woman 7, Seamstress)*

> *I have heard that at some hospitals they have daddy's clinic. So I suggest we should have a daddy's clinic here. They should give the men an opportunity to be involved because its [pregnancy] not only the issue of the women. It's an issue for both of them. (Pregnant woman 3, Nurse)*

For some pregnant women the accompanying person did not necessarily have to be the husband or

partner. They believed that the thought of having a close companion would provide a sense of hope and comfort.

> *Um for me, I think there were ... I know I've heard of certain places that when they are having those operations, and they even allow, they allow family members to be present for the process to go on. Yes. Maybe seeing the person, maybe your mum, your husband, your friend, your sibling, maybe seeing that person alone will give you some kind of encouragement or hope, yeah. (Postpartum woman 1, Banker)*

> *Like if your partner wants to be at the labor ward they should allow him to be there because when they around.....they can help you do some certain things like I said, the words he will even say will bring hope to you, yes, or a family member, not necessarily your husband but someone close that will give you words of encouragement.....yeah... and if they are not allowing that at least the health worker.....it shouldn't be the health worker, at least it should be someone who is close to you, yes. (Postpartum woman 10, Nurse)*

Compassionate care from healthcare professional

The quality of maternal health care services seems to vary widely, while some expressed satisfaction with the delivery services, others questioned the professional attitude of some staff, particularly nurses. Singing the praise of some health professionals, some participants shared the following accounts:

> *I gave birth to my first born here in Korle Bu, I liked the way I was treated.....but when I get home, people ask me and they.....think Korle Bu does not care well.....but I let them know that it is not like that anymore, because I was monitored well so I didn't fear when I came. So they should continue because the name of Korle Bu has travelled far. It is a good place. (Pregnant woman 8, Caterer)*

On the other hand, some mother viewed that health care workers needed to learn how to communicate in a sensitive empathetic manner towards clients:

> *Sometimes the nurses, some of the nurses they don't smile, some of them too are rude, some of them they don't know how to talk, but you have to endure..... They should talk to the nurses. You came, you have to do something to make us feel okay, like feel good. We shouldn't come here and then always we are angry and we are not happy. (Postparum woman 4, Fashion designer)*

> *During my first time, I was scared because I have never experienced it before because I didn't know what it is but what put me off the more is from nurses. How they talk to you... at least they should talk to you in a good way... because if they ask questions that's going to piss you off because you are going to the theatre because of CS and they are asking questions that will make you feel bad. (Postpartum woman 2, Cashier)*

> *Some nurses do not have patience for people....because when I took a friend to deliver.....the bad experience we got from a nurse was very appalling.....eheeh...so some nurses are the cause of pregnant women's fear of giving birth safely, however there are other nurses who are not like that.....because when I came for delivery, I was treated well.....so that is it...the nurses. (Pregnant woman 4, Bussiness woman)*

> *Oh when I was 4 meters dilated, one nurse came in, comforted me and reassured me that God will help me deliver safely. But another nurse also came in and was saying bunch of things I wasn't even listening to; like when I was crying out in pain, she would tell me I was making noise, but the other nurse would just tell me "Oh aunty Abby, take it easy". Most of the nurses motivated*

and reassured me but there was one who didn't do any of that. (Postpartum woman 5, Business woman)

Participants noted that healthcare professionals with good interpersonal relationship skills were able to connect with pregnant women in a therapeutic way that offered a sense of reassurance and confidence:

I would also recommend Dr. K., very much……because he has helped me…I think from my second pregnancy that's when I met him first……my third pregnancy and this one…so when I experience BP for the third one [current pregnancy]……..he told me that because of my previous encounter, it is possible that I might experience BP for this pregnancy….so he will give me medications and monitor my BP. And so truly……after giving me medications and monitoring……..I don't know what to do to please him because…..he has helped me…..he has always been there, when you call him, he answers….when you visit the clinic, he teaches you some things for you to understand very well. (Pregnant woman 3, Nurse)

For me, I think the doctors are very receiving, yes, they are very receiving. The way they talk to you, the ways they attend to you, they are very loving and very caring and that alone is a plus, you see, that alone is a plus. The way somebody receives you, sometimes makes you feel bad, when the person receives you in a- bad way, you feel bad. But when the person receives you well, you feel happy. So, the doctors here they are very receiving and they are good for me. (Pregnant woman 12, Seamstress)

Dealing with pregnant women requires tact and sensitivity, particularly when emotions are involved. Some participants shared their experience:

The doctor I met today was good, yeah, because, I was really angry. I didn't want to change my day, ah haa. When I entered, the way he started and made me laugh, I was- like, I was cool, my temper gone down, so. (Pregnant woman 13, Launderer)

And, the doctors also spoke to me in a calm way. You see… with the doctors, it is not everyone that can talk in a way to make you calm at heart. Yes… There are some people that do not know the way to talk in order to make your heart calm but, I got lucky. I had doctors that could talk nicely to me in order to make my heart calm. (Postpartum woman 9, Caterer)

During labour some participants note how some staff go the extra mile to make the experience less unbearable:

As for being in the theatre. My mind wasn't with them. My mind wasn't there. But then those there, all that I know that those they were um, they involve you like they communicate with you all the time so that you not be scared or something like that (Postpartum woman 1, Banker)

Hmm it's tough. You see there are some nurses who will console, help and teach you how to do some things like how one nurse advised me to lie on my left side, after I did she asked for me consent to getting the injection (Postpartum woman 5, Business woman).

As identified in the narratives above, health care professionals who showed empathy and encouragement received praised and considered to be supportive.

Improved maternal mental health care system

Based on their experiences, participants called for the improvement of services. For instance, some advocated for a review of the national health insurance coverage policy for pregnant women.

One of my problems is, as I am here in Kole Bu, health insurance is not used here. I don't understand because, when you go for antenatal anywhere else, health insurance is used. But here in Korle-Bu, health insurance is not used. I don't understand why it is not used here. Because all the children I have had, I used health insurance, for medicines, labs everything. Even going for lab, health insurance is used. The things it is doesn't cover, you are told it doesn't cover, then you pay. But here as far as you put you card down to the nurse, you required to pay money. But when you go to polyclinic that thing is not practiced. I don't know the sort of problem here that does allow health insurance to be used here. It really bothers me. They need to attend to it and do something about it. (Pregnant woman 11, Seamstress)

Others hoped the government could improve access to medications

General talk.....sometimes you go to other hospitals.....and they complain of shortage of medications that are very important for you to take.....all those things do not help us mentally..... unless you go about searching for these medications in different clinics and all of these do not help us. So, I think the government must try its best to.....that they should always have supplies available.....you shouldn't let supplies get finished. (Pregnant woman 1, Self-employed)

Some women also advocated for an increase in the healthcare professional workforce to reduce delays during treatment.

For me I think the doctors should me more. Yes, because sometimes we come and then we queue for a long time, and they will be like the doctors are attending to emergencies. And emergencies are rare, they need to be attended to. So, if the doctors are more, while some are attending to emergency cases, some will also be attending to us, so that we don't sit for a long time, for me. (Pregnant woman 12, Seamstress)

Lived Experiences Of Pregnancy And Having A Maternal Mental Health Disorder At The Community Level.

Narratives of poor maternal mental health during pregnancy and after birth

Similar to their peers interviewed in the hospital setting, women in the community shared that the period of pregnancy and after birth was fraught with physical/biological, social and psychological vulnerabilities, that could potentially affect a mother's mental health. For these women, physical complaints, miscarriages, a medical diagnosis, gestational complications were notable biological risk factors that contributed to poor mental health. Some initial symptoms reported by these women included feeling weird, feeling sadness, loss of interest and appetite and a sense of loneliness.

Biopsychosocial factors affecting maternal mental health:

Some participants mentioned that they had noticed their mental health began to deteriorate, in response to the presence of physical pregnancy complaints, as well as after receiving a diagnosis of ill-health. Consistent with this, one respondent mentioned that she felt depressed when she was informed that she could not deliver normally and would have to go through a Caesarean Section. She could not understand why others delivered normally and she had to go through CS. As a result of her cultural beliefs about pregnancy and norms of delivery, she felt less of a woman and viewed that she would become a laughingstock of the community.

I thought so much that I lost my appetite. I kept imagining what it will be like to cut open my stomach and remove my baby. Why can't I give birth normally like other women in my community? It means

I will not be counted among women who have given birth normally. They may even suspect I was unfaithful to my husband and that is why I cannot give birth normally. All these just made be become sad. I started isolating myself from my colleague women and will stay indoors the whole day, not eating or taking in little. I kept looking wondering if I could survive that day of the cutting of my stomach to extract the baby. It scared me and made me sad too. Even after I successfully delivered, this situation continued for quite some time. I had to be put on medication, which I took for a number of months. I feel better now though but I still go for review. [IDI 1]

A woman's interpretation of her pregnancy or delivery experience can cause a significant amount of mental distress. On the other hand, harmonious social relationships between expectant mothers and partners, husbands and parent in-laws seemed central to promoting good mental health, particularly, in the context of marriage. The accounts of both pregnant and post-partum women demonstrated that marital distress caused by a partner's irresponsible behaviour and attitude of alcoholism, financial and emotional neglect, during such a critical time, could negatively affected their psychological and emotional wellbeing. One pregnant woman shared her experience of dealing with a problematic husband:

My husband used to drink a lot. He was unemployed and money he got he will drink with it. If I complained about his behaviour, it would turn into a quarrel. There were nights I will leave our house and go to neighbours to sit there for a while till he sleeps, then I return. On many occasions, I slept hungry because my husband did not have much to give me and often got drunk too. [IDI, 3].

For some women who lived in extended family dwellings and closeknit neighbourly arrangements, derogatory references and gossip about their pregnancy experience, pregnancy delays and pregnancy loss, from persons within their social network, led to or exacerbated their mental ill-health, prior to becoming pregnant, during pregnancy and at post-partum. Sharing her account of a difficult pregnancy experience, one woman said:

I was often criticised by my sister and brother in-laws that I was craving attention and acting up so that my husband will keep me alone. It bothered me so much. They did not know I was suffering emotionally. I cried a lot and even pleaded with my husband to rent a room for us to move out of the family house to a place of our own. I was suffering inside but I got little support. (IDI 10)

Reflecting on the lived experience prior to becoming pregnant, which was characterized by a delay in conception, and followed by a miscarriage, a participant of FGD 1, noted that a delay in conceiving, could cause a significant amount of psychological stress.

Neighbours often gossiped that I was intentionally refusing to get pregnant. It was worse when I suffered a miscarriage. I endured so much mental torture. [FGD, 1]

The experience of poor pregnancy outcomes such as a miscarriage, put some women at risk of being accused of intentionally aborting a pregnancy, this false social impression was upsetting for the affected women. Sadly, miscarriage(s) were a reality for a number of the participants, one respondent, IDI 5 shared her experience of pregnancy loss, "After my first child, I had two miscarriages before this one [the child] that I am holding.

The Impact Of Having A Mental Health Problem/Disorder

For women with a lived experience of a mental health diagnosis, stigmatization and discrimination was a problem. Some respondents indicated that having a mental health disorder could affect intimate relationships and result in a reduced chance of receiving a marriage proposal, losing an existing marriage and poor conjugal relations. Similarly, the accounts of some women, friendships could end or become impaired, as described by two participants in the quotes below:

> *My husband had to remain resolute, if not he would have divorced me. His relatives kept saying he had married a mad woman and that could affect the family. They do not have madness in their family and his wife, that is me, is no one bringing it. [IDI, 6]*

> *I lost friends or associates. Initially, it looked like to pitied me but as time went on they would say behind me that I was mad, and people needed to be careful in their interactions with me. [IDI, 5]*

Barriers To The Provision Of Mental Health Care Services

Poor access to health facilities

Some respondents raised concerns about the traveling distance to the nearest mental health unit, and called for services to be closer them. One participant shared that:

> *We need the services in clinics here too. That is closer and within walking distance. To go to the Mental Health Unit at the [Bolgatanga] Regional Hospital, you have to pay for transportation, and sometimes buy something to eat before you return home. It is costly and we are poor virtually no means of earning income. [FGD, 2]*

Inadequate health infrastructure

Respondents also mentioned the lack of privacy during consultations wiht the mental health professional was a problem. A participant shared her concerns about privacy and confidentiality, she said:

> *There is no privacy when you go to the unit. We sit on benches and when it is your turn you go and sit on the chair opposite the nurse. As you speak, the others are listening. Sometimes, it is too noisy, and you are not able to speak calmly but raise your voice. Separate consulting rooms would have been best but that is all that the unit is made up of. [IDI, 8]*

The frequent stockout of psychotropic medicines (anti-depressants)

Owing to medicine stockout, women on treatment for MMHDs had to pay out-of-pocket at private pharmacies. A number of respondents indicated that on some occasions they had to travel into the Bolgatanga township to be able to buy the medicines. This was a costly venture causing a strain on their finances.

> *We used to get the medicines for free, especially when BasicNeeds-Ghana was providing them to the mental health units. Nowadays, when you go for review, they can ask you to go and have some tests done at the laboratory. When you return with the laboratory results, they go through the paper, ask you and few questions, and thereafter, you are given a prescription to go buy your medicines. [IDI 11].*

> *On occasions that they have medicines, you could be given medicines different from what you normally take and tell you they work the same way as what you have been put on. [FGD 2].*

Sociocultural factors

From the respondent accounts, sociocultural beliefs and health seeking behaviour patterns tend to affect the uptake of healthcare services. Some women who experienced mental illness during their pregnancy or postpartum, mentioned that it took time for them to seek help from a health facility, one participant shared that:

> *It took time before we went to the hospital. Initially people used to come to the house to pray for me, then my father in-law brought a local spiritualist who examined me and later some sacrifices were performed, and something worn around me. Finally, we went to the hospital, and I was taken to the psychiatric unit for attention. [IDI, 7]*

Existing Maternal Mental Healthcare Activities and Services In The Community Ghana

Formal maternal mental health services

Maternal mental health disorders were managed mainly from healthcare facilities. For the cross section of women interviewed in the community, most indicated that they attend the Bolgatanga Regional Hospital for treatment.

> *I was taken to the [Bolgatanga] Regional Hospital for treatment. a number of laboratory tests were conducted and then after, I was given medicines which I have since been taking. I have gotten well but I go for reviews at the psychiatric unit. [IDI 9]*

The treatment of MMHDs in health facilities was mainly done by mental health nurses (Community Psychiatric Nurses [CPNs], and Community Mental Health Officers [CMHOs]). The nurses indicated they consulted with psychiatrist(s) or psychologist(s) but made no referrals to them.

Most of the respondents indicated they were directed straight to the mental health unit for treatment based on what was noticed of their behaviour, while others were referred from the Maternal and Child Health and Welfare (MCH) clinics to the Mental Health Units (MHU). Other participants narrated that some mental health workers conducted home visits to review or follow up on defaulting clients, one participant mentioned:

> *The Community Mental Health Officer visits me to check on me, especially, when I miss my appointment. (FGD 1)*

Informal maternal mental health services

Some respondents narrated that in search of a remedy to their ailments, their families took them to traditional healers and spiritualists, one of these participants said that:

> *When I will not eat and remained indoors, not willing to speak to anyone, my people took me to the spiritualist. According to them they thought demons had taken possession of me and I needed to be delivered. The traditional healer said that I was possessed by tiisi ['spirits emerging from trees'] which wanted me to die and leave my baby. I was at the home of the traditional healer for a number of days taking various herbal concoctions [IDI, 11].*

According to some participant accounts, a mental illness connotes a spiritual calamity which affects the mother, and by extension the baby and thus required a spiritual intervention. Consistent with this belief, one respondent mentioned the case of a spiritualist who divined that a newly delivered baby was the cause of the mother's mental health situation, and had planned to kill her. After performing some rituals, the spiritualist claimed he had prevented death and saved both the mother and baby.

The pathway to seeking treatment did not always seem straightforward, some participants seemed to receive traditional or faith-based interventions and clinical treatments concurrently or subsequently to ensure a sense of maximizing all possible remedies. Participant IDI 11, after attending the camp of a spiritualist and observing no improvement, told of how she recovered when she started clinical treatment, see the quote below:

> *Kwame [community mental health officer at Sorkabiisi] visited my mother and advised that I be brought for further assessment. It was at the clinic that I was treated with medicines, and I got well. I also decided to attend church and gave myself to Jesus Christ. Now I believe no evil can harm me. I will never visit a healer! The medicines and Jesus have saved me. I am free. [IDI, 11].*

A number of respondents indicated that they also received some social support from churches, in addition to self-help support Groups (SHGs) and NGOs established in their local communities.

Some respondents shared how the churches they attended were equally helpful to them. So were self-help support groups that often worked in partnership with mental health professionals to facilitate counsel about their care, as reflected in the following quote:.

> *He (a community mental health officer) has also come to one of our SHG meetings to talk to us about ensuring that we maintain our mental wellbeing. He encourages us to promptly visit anytime we feel stressed/ depressed for early management is far important. [FGD, 1]*

Other respondents narrated that NGOs such as Basic Needs-Ghana have facilitated community projects to create awareness about maternal mental illness, screen and encourage affected persons to seek treatment. This was corroborated by a midwife at the Sumbrungu CHPS compound and the CMHO of the Sorkabiisi Clinic where the IDIs and FGDs were conducted, she said:

> *BasicNeeds-Ghana in 2016 between and 2018 supported awareness creation on maternal mental health. Psychiatrist outreach clinics conducted around that time included screening for mental illness among pregnant women and women had newly delivered. Some forms were also left at the MCH clinics for women attending antenatal to be screened. The project ended and we no longer get the forms. Occasionally we ask the questions and write on a piece of paper but having the screening form will have been best. [IDI, Midwife]*

Mothers' Perspective On Care Received

Gentle and compassionate care from healthcare professional

Respondents who received treatment for their MMHDs indicated they were generally satisfied with the services provided. Their satisfaction arose from the caring and understanding attitude of the healthcare workers,. Some participants stated:

> *The health workers were very patient. I was told that at the height of my condition, I was aggressive and made very insulting statement towards the nurses, but they were patient with me and took time to explain to my carer my situation. any time you go for review they take time to explain to you how to manage yourself and to avoid the triggers in order to keep well. [IDI, 3]*

Even though not frequent, Kwasi, (an CMHO) visits me to check on me, especially, when I miss my appointment. He has also come to one of our SHG meetings to talk to us about ensuring that we maintain our mental wellbeing. He encourages us to promptly visit anytime we feel stressed/ depressed for early management is far important. [FGD, 1]

Social support by a companion

A respondent with a lived experience of MMHD shared how a confidant was helpful in her journey of recovery. She notes how her confidant had shown genuine care and concern while she had been on admission:

One of my neighbours visited me often and will sit by me for hours even when I said nothing to her. As I recovered, I found her by me, and we bonded well as the days went by. We remain the best of friends. [IDI, 5]

Recommendations by Community Psychiatric Nurses, Community Mental Health Officers, Midwives and Community Health Nurses for Improving Maternal Mental Healthcare

Key recommendations for improvement included the deployment of human resources, well trained and competent in the management of maternal mental health conditions, adequate working space and logistics for outreach and home visits. Increased sensitisation and public education were also mentioned as key to ensuring effective identification, screening and diagnosis, and management of maternal mental health conditions.

Formalise education and the training of healthcare professionals

Respondents mentioned the need for staff to be trained on how to support women with problems of poor mental health.

The nurses and doctors have to be more involved in supporting women who experience mental ill-health. Now, it does not look like the nurses in our clinics can attend to such cases. They need such skills to be able to support one another. [IDI, 9]

Improvement in Healthcare Infrastructure.

Interviewed health providers highlighted the importance of an improved working space that would allow spacious seating spaces, as well as separate and secure consulting rooms to ensure patient privacy, confidentiality and comfort.

Assurance of privacy where you can express yourself is key. Right now, this is not the case. Yes, we may have mental health conditions, but our situations are different and unique and not others to also listen to our problems. [IDI, 4].

The need for transport logistics (e.g. motorcycles and pick-up vehicles) for community outreach and the consistent supply and availability of medications was also mentioned as crucial to help improve MMHs.

Improve the distribution of needed resources (human, structural, financial)

According to participant accounts, in order to improve access to maternal mental health services. Trained and competent healthcare workers should also be available in the CHPs compound, which is usually walking distance within the community. Participants viewed that the closer the services to members of the community, the higher the utilisation and patronage.

Interactions with the CPNs/CMHOs, midwives and Community Health Nurses (CHNs) manning the health facilities visited, revealed that task -sharing arrangements and collaborative care could be strategies to ensure that pregnant women and mothers receive timely and comprehensive mental health care .

Integrate maternal mental health services

To help with early identification of MMHDs, there were calls for health care service providers to publicize the screening of pregnant women and postpartum mothers at health facilities. Some participants also suggested that screening could be effective when integrated into the maternal and child health and welfare record booklets.

Public mental health awareness

Some participants shared that public education and awareness was an important medium to inform people and families about issues related to maternal mental health. The general view of respondents was that some efforts to create MMH awareness had occurred in past but such campaigns had not been consistent nor far reaching. The current observation of a low level of awareness and appreciation of maternal mental health issues, early identification and management seemed to be true for both healthcare workers and the general public.

> *We are fortunate to have had a durbar that was on maternal mental health, and we learnt about the mental ill-health conditions during pregnancy and postpartum. There was even a visit by mental health workers to screen pregnant women and newly delivered mothers. There are many more communities that have not been reached. [FGD 2].*

Perspectives Of Local Government Officials

In this study, Local Authorities (LAs) were engaged to gauge their appreciation of the maternal mental health situation, in their respective MMDAs. Among these officials, there was a fairly good understanding that psychological factors such as stress and anxiety were key contributors to the development of mental health disorders during pregnancy and immediately after delivery. Poverty, an ever-increasing number of teenage pregnancies and general economic distress were cited as other contributory factors. Further, the interviewed officials noted how pre-existing mental ill-health conditions could be exacerbated during pregnancy or immediately after childbirth. A few officials shared their thoughts on factors that contribute to the development of MMHDs:

> *People are finding things tough for them. For women they are more vulnerable and at risk of mental breakdown because of their care responsibilities. You find that more and more girls become pregnant at teenage, usually, they are unplanned, unprepared, and unwanted, and some of them even attempt to abort through unorthodox means but when they don't succeed they have to contend with the situation with all the psychological and emotional problems that come with such a development. [IDI 13].*

> *Some women already have some mental challenges which get worsened when they are pregnant due to the physical and, perhaps, hormonal challenges that come with pregnancy or care of the newborn baby. They need care and attention. [IDI, 11].*

Majority of the local government officials also acknowledged the existence of barriers, such as ignorance and illiteracy, and social stigma in limiting access or the utilisation maternal mental healthcare services. These key informants noted how maternal mental health disorders were a huge concern but little attention had been paid to the problem.

Much as the assembly recognises the need to respond to mental health and even supported the completion of the psychiatric unit at the Municipal Directorate, we are not ceased with matters of maternal mental health. This is the first time this aspect of mental health is raised. [IDI 14]

Care Needs Of Women At Risk Of Maternal Mental Health Disorders

According to the accounts of the local officials they perceived that woman at risk of suffering a mental illness during pregnancy or at postpartum required services that ranged from the provision of psychosocial support, careful monitoring of the pregnancy and the newborn, to proper feeding and nutrition, and adequate rest and the referral of cases to mental health units. These officials noted that psychological support, psychiatric services, family care and peer support were all important activities that should be made available in the MCH facilities.

Given the experiences and difficulties of some women living with MMHDs, participants also noted that creating a livelihood for at risk women was important to reduce stress and vulnerability during pregnancy and afterwards. They considered that a means to earning income was vital to ensure food and income security, and improve wellbeing of women:

When their basic necessities of life are addressed, they will have peace of mind to have the pregnancy to term and beyond. There will be less stress and depression and they will function. Should they still have clinical care needs for their mental illness they can meet the cost of quality services. [IDI, 13]

Some women need care and support, especially when the pregnancy is disturbing them or their newborn. In such situations, they need support which relieves them from their daily domestic chores and responsibilities. [IDI, 14].

Barriers to the provision of mental health care services at the district level.

The government officials noted a number of barriers that affected the provision of care, as listed below:

1. *Personnel and infrastructure inadequacies*
2. *Ignorance and stigma*
3. *Poverty and financial/ resource constraints*
4. *Inadequate data on the magnitude and burden of maternal mental health challenges*

The key potential facilitators to the provision of maternal mental health care services

i. *The increasing number of mental health personnel deployed to the district and lower levels of the healthcare system along with the establishment of community mental health units.*

ii. *Increasing recognition of the contribution of mental health conditions to maternal and child health outcomes*

iii. *Implementation of a maternal mental health project that ended a few years ago, served to raise awareness and supported provision of screening and management of diagnosed conditions.*

Key Suggestions On How MMDAs Can Support Screening, Management, And Clinical Services For Maternal Mental Health Conditions

MMDAs support to enhance screening and identification, and management, and clinical service for maternal mental health conditions that official enumerated were:

Provision of budgetary support for sensitisation and awareness

According to the participants, MMDAs will ensure that the Annual Activity Plan (AAP) which is extracted from the Medium-Term Development Plans (MTDPs) of each MMDA, includes budgetary support to create mental health awareness with a focus on maternal mental health disorders. The participants explained that it may require some amount of lobbying to ensure that is included.

Opportunities to lobby were discussed among officials. The presence of the regional chapter of the Alliance for Mental Health and Development, commonly referred to as the Mental Health Alliance, led by Basic Needs-Ghana at the national level, and also active in the Bono Region (and formerly covering the Brong-Ahafo Region), especially, in the Sunyani Municipal Area, will rally to lobby and advocate for such budgetary provision to help increase awareness of maternal mental health issues. The Municipal Planning Officer honours invitations the Mental Health Alliance extends to him and will work with the member organisations of the alliance, MIHOSO, the convenor of the alliance in the region to sustain the engagements to realise this assurance.

> *The regional mental health alliance works closely with us. The Planning Officer attends their meetings. We are constrained by resources, but he should ensure that the AAP has a mental health activity included with budgetary provision. With this information, it is necessary that is done. Improvements in maternal mental health will help improve maternal and child health. [IDI, 13]*

Support in the provision of healthcare infrastructures, such construction of CHPS compounds

Apart from national level awarded contracts for execution in the municipal area, the municipal assembly occasionally funds the construction of health infrastructure. There was recognition that the available infrastructure for provision of accessible and quality maternal mental health services were inadequate and needed to be substantially improved. In addition to poor health infrastructure, inadequate trained and competent healthcare personnel was a notable problem, especially at the district and lower levels of the health care system.

As part of efforts to improve maternal mental healthcare, government officials shared that the Municipal Assembly would endeavour to improve infrastructure across the 34 zonal areas. They viewed that with such a move, NGOs and other funders would be willing to assist to help improve the situation.

> *As per its mandate, the Municipal Assembly will continue to improve the health infrastructure, just as the other sectors like education, water and sanitation, and our markets. We here appeal to you to encourage your funders to consider supporting expansion of healthcare infrastructure to help improve maternal mental health care and maternal and childcare in general. [IDI, 15]*

Ensure the District Assembly Disability Fund (DADCF) is extended to vulnerable women at risk of maternal mental health conditions.

According to the participants, the DADCF was the surest source of financial assistance for income generation and secure livelihoods of vulnerable women and those experiencing mental health conditions during their pregnancy or postpartum. Over the years, the Disability People's Organisations (DPOs) had gained

greater control of the disbursement of this fund. Under the MMDAs Social Services Sub-Committees, the DPOs representatives consider and approve applications submitted for the awards of funds. The officials indicated it was possible to make a case for women living with mental illness during their pregnancy or at postpartum. The participants explained that currently applicants have been encouraged to request for material items which are procured and later distributed to the beneficiaries. According to the officials, items ranged from refrigerators and fridges, sewing machines and hairdressing and their accessories. The officials of the municipal assemblies assured that once the affected women applied, their request will be considered. Following the recognition of mental health and psychosocial conditions as disabilities women with MMHDs would be able to benefit from relief and social protect schemes targeted at persons with disabilities.

> *The disability common fund is now managed by the disability people's organisations with the support of officials of the Department of Social Welfare who make up the Social Services Committee chaired by an elected Assembly Member. Once their applications of the affected women come, they will be considered. Now cash is not provided but items of the venture you want to go into are procured for you and provided to you to start work. [FGD, 3].*

Summary of Qualitative Results

- The perspectives of respondents reflect the prevailing situation of maternal mental health in Ghana. Perinatal and postpartum periods are vulnerable times for the acute onset and recurrence of mental ill-health conditions.
- Maternal mental health disorders are highly prevalent in Ghana, the most common form being perinatal depression.
- The high priority placed on addressing reproductive, maternal, newborn and child health care interventions to improve their outcomes has paid very little attention to the important contribution and negative impact of maternal mental health to the realisation of RMNCH outcomes in Ghana. Significant majority of healthcare workers providing maternity service lack adequate knowledge on the conditions, are unfamiliar with available screening tools for the disorder, screen for the disorder and lack capacity for its management.
- There are no clear-cut national policy or management guidelines for the screening, early detection or management of MMHDs.
- There is gross limited access to maternal mental health care services in Ghana. Healthcare facilities lack the needed human resource, infrastructure and logistics including screening tools and consistent supply of medications for effective therapeutic interventions.
- There is a significant level of social stigmatisation at the community level against women who suffer MMHDs, and this negatively affects help and health seeking behaviour.
- Previous interventions at community level awareness creation and education on mental health problems during pregnancy and postpartum improved societal perception and health seeking among affected women which resulted in prompt reporting and therapy in the beneficial communities.
- Healthcare staff training (pre-service, in-service and refresher programmes), development of national policy for routine screening during pregnancy and postpartum, and management, provision of appropriate infrastructure and logistics including therapeutic agents are important recommendations for improving maternal mental health in Ghana.
- Increasing access to MMH care through the provision of transportation logistics (motor-cycles and vehicles) for outreaches by trained and adequately informed healthcare providers would enhance national coverage in the provision of MMH care including deprived locations where

poverty and low living standards contribute to elevated risks for MMHD.

- Local government authorities (MMDAs) can effectively support the drive for improving mental health through the provision of budgetary support for community/public awareness activities, provision of appropriate infrastructure including construction of CHPS Compounds, and the extension of the District Assembly Disability Fund (DADCF) to vulnerable women at risk of maternal mental health disorders.
- There is an urgent need for national policy that compels the various actors and implementing agencies to ensure comprehensive screening for and effective management of MMHDs in Ghana with MMHD management-related costs fully absorbed under the free maternal healthcare policy/NHIS coverage.
- The national situation depicted from this work requires the urgent doubling of efforts to improve mental health of pregnant women and newly delivered mothers in line with the objectives of the UHC that leaves no one behind, while safeguarding the total health and wellbeing of pregnant and postpartum women in Ghana.

Table: 4.24 Summary of Key Suggestions from Participants

S/N	THEMATIC AREA	SUGGESTIONS
1.	Education	■ Pre-service training for medical, midwifery, nursing, physician assistants, Community Mental Health Officers, Postgraduates in OBGYN, Psychiatry, Clinical Psychology, Nursing and Midwifery/Nursing
2.	Training	■ In-service training for personnel every 1-2 years,
3.	Screening Tools, Practices and Schedules	■ Set up a committee of mental health professionals to identify or develop a simple screening tool to identify common MMHDs
4.	Healthcare Service Structure	■ Expanding the delivery of evidence-based psychosocial therapies to women through CHWs, lay counsellors and other frontline health workers
5.	Policy	■ National policy needed by the Ministry of Health on MMH integration
6.	Maternal Health Record Book	■ Use as resource to record with MMH details. ■ Use of visuals to explain MMHDs
7.	Community Level Resources / MMDAs	■ Allocation of budgetary support for supporting women at risk, those affected and healthcare infrastructure to improve access
8.	Public awareness and education for Stigma reduction	■ Community durbars, mass media, electronic, social media drives to improve awareness and reduce stigma
9.	Task sharing/shifting	■ Training national service, traditional birth attendants, faith-based healers or traditional healers to conduct education and screening
10.	Mobile Technology	■ Health professionals to develop content for education or screening on digital platforms.
11.	Improve access to services and medications	■ Mental health professionals (e.g. Psychiatrists, Psychologists, Nurses) should be assigned to all health facilities across the country

05 — RECOMMENDATIONS FOR INTEGRATION OF MATERNAL MENTAL HEALTH IN GHANA

Based on the findings from this project's desk review, nationwide engagements of key stakeholders for primary data collection, and validation sessions, the integration of maternal mental healthcare has been unanimously and consistently recommended. The following have been recommended towards the integration of maternal mental healthcare into routine maternity care in Ghana:

1. Parliamentary Select Committee on Health

- Development of related laws and legislation for policy, Advocacy, Political commitment
- Lead in advocacy for passage of enacted laws and legislation related to maternal mental health
- Demonstrate political will and commitment for the prioritization of maternal mental health

2. Ministry of Health

- To lead policy development for improved equitable access and coverage for quality maternal mental health services in line with provisions in the universal health (UHC) coverage roadmap for Ghana
- To prioritize maternal mental health, promote and strengthen intersectoral collaborations and partnerships.
- Provide infrastructure (capital investment) to improve physical and geographical access.
- To demonstrate political will by advocating for resources (human, financial, infrastructure, therapeutics, health technologies, etc) for improving maternal mental health service

3. Non-Health Ministries, Departments and Agencies (Gender, Children and Social Protection, Education, etc)

- Promote gender main-streaming, equity, psychoeducation, people-centred and rights-based maternal mental health services.
- Support the provision of financial risk protection for the high-risk groups, the vulnerable and affected women.

- Strengthen social support services for the high-risk and affected women at the subnational levels. (District Assembly Common Fund, Lively Empowerment to Alleviate Poverty (LEAP))
- Support the review of curriculum for inclusion of maternal mental health at secondary and tertiary levels of education.

4. National Health Insurance Authority

- Facilitate the inclusion of screening, care and rehabilitation for maternal mental health disorder under the benefits package by the NHIS and other private medical insurance providers

5. Ghana Health Service

- Lead advocacy efforts towards integration and improvement of maternal mental health services into routine perinatal care
- Develop and adapt relevant standards, protocols and intervention `guides for maternal mental health service delivery at all levels of care
- Review the Maternal and Child Health Record Book to include screening tools for maternal mental health.
- Align maternal mental health services to the Network of Practice (NoP) concept and implementation arrangements
- Review existing referral policies to clearly define pathways for maternal mental health.
- Prioritize the mental health and wellbeing of all healthcare providers.
- Implement structured in-service training programmes, continuous professional development and refresher training (screening, treatment, counselling and psychotherapy, rehabilitation, referral, self-care models, etc) on maternal mental health for different cadre of healthcare providers
- Promote and strengthen comprehensive compassionate care during antenatal, delivery and postnatal periods
- Support the creation of enabling environment to promote family involvement and support during pregnancy, labour, delivery, and postpartum periods (labour companion)
- Develop monitoring and evaluation frameworks with specific indicators for the various levels of service delivery, aligned to global standards, and build capacity of Health Information Officers for timely data capture and reporting
- Promote the integration and synergy for the use of available resources at subnational levels to promote maternal mental health services.
- Provide adequate skills mix and equitable distribution of healthcare workers with capacity to deliver mental health services at all levels (Implement task-shifting policy where appropriate).

6. Mental Health Authority

- Prioritize maternal mental health in the review of Mental Health Act 846 (2012), and all other mental health related strategic documents
- Advocate for the establishment of mental health facilities to improve access and strengthen referral pathways for complicated maternal mental health disorders
- build the capacity of traditional healers for enhanced collaboration with orthodox facilities
- monitor and regulate activities of traditional healers and prayer camps in the area of maternal mental health

7. Teaching Hospitals, Quasi-Governmental Institutions, Faith-Based Providers, Public and Private Facilities

- Training and orientation of healthcare workers including community-based volunteers for the provision of maternal mental health services
- Provide continuous orientation for healthcare workers on the provision of client-centred and respectful care for promoting maternal mental health
- Provide the supportive environments and required logistics to promote client-centred, rights-based services (reduce stigma) and ensure privacy and confidentiality
- Strengthen integration and synergies among various Health Programmes for efficiency and effectiveness at facility levels
- Enhance analytics capacity at subnational levels for effective data use for decision making on maternal mental health issues.
- Train Quality Improvement teams to proactively identify MMH Services gaps and implement timely intervention in an effort to improve services at facility level
- Provide psychoeducation, stress management techniques, self-care strategies and life skills.
- Integrate routine screening and counselling services for maternal mental health during antenatal, pregnancy schools and postnatal clinics.
- Strengthen supportive supervision, clinical mentoring, and onsite coaching at subnational levels

8. Development Partners

- To advocate for improvement of maternal mental health
- Advocate for strengthened governance intersectoral collaboration and partnerships
- Provide technical assistance for the improvement of MMH:
  - development and adaptation of standards, guidelines and protocols,
  - development of monitoring and evaluation frameworks, facility level indicators
  - capacity development programmes for the improvement of MMH
  - resource mobilization efforts
  - support the development of training models for the Training Institutions
- Provide catalytic financial support for the piloting of maternal mental health interventions, evidence generation for scale up of maternal mental health services
- Promote and support research agenda for maternal mental health

9. Academic Institutions (Universities, - Medical Schools (OBGYN & Psychiatry, Paediatrics), Nursing & Midwifery Colleges, Allied Health Training Institutions)

- Inclusion of maternal mental health in training curriculum for medical, nursing, midwifery and allied health trainees
- Prioritize implementation research into maternal mental health to inform effective interventions
- Include maternal mental health module in postgraduate residency training in obstetrics/ gynaecology and psychiatry

10. Postgraduate Training Colleges (Ghana College Physicians and Surgeons), Ghana College of Nursing)

- Explore the possibility of creating a subspecialty training in maternal mental health for postgraduate fellowship training in Obstetrics/Gynaecology, Psychiatry, Nursing, Midwifery

11. Health Facilities Regulatory Authority -

- Include availability of minimum standards for maternal mental health services (infrastructure, standards, logistics and care environment) into checklist for accreditation of healthcare facilities

12. Professional bodies - SOGOG, Paediatric Society of Ghana, Ghana Registered Nurses & Midwives Association, Ghana Psychology Association, Psychiatry Society, Society of Private Practitioners, District Directors of Health, Medical Superintendents Association, Pharmaceutical society of Ghana,

- Organize CPDs on maternal mental health for members
- Awareness creation for public education on maternal mental health
- Advocate and actively promote the integration of maternal mental health services at the points of care

13. Professional Regulatory Bodies - MDC, NMC, MHA, GPC - Inclusion of MMH Modules for CPDs.

- Accreditation of CPD programmes on maternal mental health as a prioritized area

14. Media

- To drive a public advocacy agenda on maternal mental health issues in the Ghanaian society
- To lead awareness creation campaign nationwide on awareness creation on Maternal Mental Health using various channels of communication (print, radio, television, social media, etc)
- To prioritize agenda setting for discussions on MMH related issues (policy, service delivery, social support systems and structures) in collaboration with relevant stakeholders (ministry of health and its agencies, professional groups, faith-based organizations, religious entities, local government authorities, communities, civil society organisations, patient groups, etc)

15. Faith-Based Healers and Organizations

- Advocate for stigma prevention and reduction
- Creation awareness, support, promote screening,
- Strengthen collaboration with orthodox health facility

16. Traditional Leaders, Civil Society Organizations, Community-Based Health Groups

- Advocate for screening services in the community
- Support advocacy initiatives for awareness creation and stigma reduction
- Mobilize resources for promotion and provision of maternal mental health services Promote community members' service utilization, participation and ownership

17. Women With Lived Experiences

- Participate in community advocacy initiatives to promote:
  - early health seeking behaviour
  - stigma reduction campaign
  - peer-to-peer support
- Champions for promoting maternal mental health services at community level

S/N	KEY STAKEHOLDERS	ROLES & RESPONSIBILITIES
1.	Parliamentary Select Committee on Health	■ High level advocacy, ■ support for enactment of relevant laws and legislations
2	Ministry of Health	■ Development of relevant policies, ■ High level advocacy, ■ Capital investment ■ Inter-sectoral collaborations and partnerships
3.	Non-Health Ministries, Departments and Agencies	■ promotion of gender mainstreaming, equity, and psychoeducation, ■ people-centred and rights-based care ■ provision of financial risk protection for high-risk groups and affected women ■ Collaboration with UNICEF on the implementation of the Integrated Social Services (ISS) and SWIMS case management intervention ■ Curriculum review to include MMH at secondary & tertiary levels
4.	National Health Insurance Authority	■ Inclusion of MMH preventive & management services under benefits package
5.	Ghana Health Service	■ High level advocacy ■ Development of new and review of existing tools and guidelines ■ Alignment to NoC Concept and implementation ■ Prioritization of mental wellbeing of all healthcare workers ■ Capacity building programmes ■ improved data capture, reporting & analytics for decision-making ■ Strengthen comprehensive compassionate ■ Equitable healthcare worker distribution
6.	Mental Health Authority	■ Prioritize maternal mental health in the review of Mental Health Act and other related strategic documents ■ Advocate for the establishment of mental health facilities to improve access Strengthen referral pathways for maternal mental health disorders ■ build the capacity of traditional healers and promote collaboration with orthodox facilities ■ monitor and regulate activities of traditional healers and prayer camps

7.	Health Facilities Regulatory Authority	■ Include availability of minimum standards for MMHS (infrastructure, standards, logistics and care environment) into checklist for accreditation of healthcare facilities
8.	Teaching Hospitals, Quasi Government Institutions, Faith-Based, Private & Public health facilities	■ Train and orient healthcare workers including community-based volunteers for the provision of MMHS ■ Promote provision of client-centered and respectful care for MMH ■ Provide supportive environments and logistics to promote client-centered, rights-based services, ensure privacy and confidentiality ■ Strengthen integration and synergies among various Health Programmes for ■ Enhance analytics capacity at subnational levels for effective data use for decision making in MMHS ■ Train Quality Improvement teams to proactively identify MMH Services gaps and implement intervention to improve service at facility level ■ Provide psychoeducation, stress management techniques, self-care strategies and life skills. ■ Integrate routine screening and counselling services for MMH during antenatal, pregnancy schools and postnatal clinics. ■ Strengthen supportive supervision, clinical mentoring, and onsite coaching at subnational levels
9.	Development Partners	■ Advocate for improvement of maternal mental health ■ Advocate for strengthened governance, intersectoral collaboration and partnerships ■ Technical assistance for the improvement of MMH: ■ development and adaptation of standards, guidelines and protocols, ■ development of monitoring and evaluation frameworks, & facility-level indicators ■ capacity development programmes to improve MMH ■ resource mobilization efforts ■ support development of training models ■ Catalytic financial support for the piloting MMH interventions for scale up ■ Promote and support research agenda for MMH
10	Academic Institutions	■ Include MMH training curriculum for medical, nursing, midwifery and allied health trainees ■ Prioritize implementation research into MMH ■ Include MMH module in postgraduate residency training in obstetrics/gynaecology and psychiatry
11.	Postgraduate Training Institutions	■ Explore the creation of subspecialty training in MMH for postgraduate fellowships in Obstetrics/Gynaecology, Psychiatry, Nursing, Midwifery
12.	Health Regulatory Bodies	■ Accreditation of CPD programmes on maternal mental health as a prioritized area

13	Professional Societies & Associations	■ Organize CPDs on maternal mental health for members ■ Awareness creation for public education on maternal mental health ■ Advocate and actively promote the integration of MMHS at the points of care
14.	Media	■ Drive public advocacy agenda on maternal mental health issues in the Ghanaian society ■ lead awareness creation campaign nationwide through print, radio, television, social media, etc ■ Prioritize agenda setting for discussions on MMH related issues (policy, service delivery, social support systems and structures) in collaboration with relevant stakeholders
15.	Faith-based Healers and Organizations	■ Advocate for stigma prevention and reduction, ■ Creation awareness, support, promote screening, ■ Strengthen collaboration with orthodox health facility
16.	Traditional Leaders, Civil Society Organizations and Community-Based Health Groups	■ Advocate for screening services in the community ■ Support advocacy initiatives for awareness creation and stigma reduction ■ Mobilize resources for promotion and provision of MMHS ■ Promote community members' service utilization, participation and ownership
17.	Women with Lived Experience	■ Participate in community advocacy initiatives to promote: ■ early health seeking behaviour ■ stigma reduction campaign ■ peer-to-peer support ■ Champions for promoting maternal mental health services at community level

06 – CONCLUSION

Maternal mental health conditions is highly prevalent in Ghana with some documented evidence of its impact on maternal, newborn and child outcomes as well as long term growth and cognitive developmental sequelae.

Effective national leadership that promotes multi-sectoral collaboration and the adoption of a rights-based approach across all levels of care holds significant prospects for effective integration of maternal mental health services within the enhanced context of compassionate respectful maternity care that would improve quality as well as reproductive, maternal, newborn and child health outcomes in Ghana. The implementation of a pilot perinatal mental unit that educates, screens and provides appropriate therapeutic interventions to eligible women across selected primary, secondary and tertiary healthcare facilities would significantly enable learning and documentation of practical implantation challenges for redress prior to nationwide scaling up of the intended/proposed integration in Ghana. In this regard, a coordinated intensive hands-on observership attachment placement in a well-established system as pertains in the United Kingdom's mother and baby unit (MBU) for experiential learning should be useful for national level capacity building towards the integration. The World Health Organization (WHO) appears very well positioned with the needed capacity to lead with high-level advocacy, capacity building for institutions and providers, development of training guides, as well as piloting of the perinatal mental health units (PNMHU) for evidence generation towards national scaling up of integration.

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APPENDIX A

Table 1 displays the synthesised details of various research work done in Ghana on maternal mental health, key findings, and gaps identified to highlight areas for focus towards potential improvement.

NO	PUBLICATION, AUTHOR, YEAR	STUDY SETTING	STUDY DESIGN	KEY FINDINGS	CONCLUSION	RECOMMEN-DATION	STRENGTH	GAPS IDENTIFIED	REMARKS
1	Prevalence & predictors of Perinatal depression in Ghana. Sefogah PE et al 2020 (31)	Primary, secondary& tertiary healthcare facilities	Observational cross-sectional study using PHQ-9 & EPDS tools	Overall, 27.5% prevalence of perinatal depression. LEKMA (prim.) 8.6%, GARH (Sec) 31.6%, KBTH (Tertiary) 41.1% at 2wks; 13% preva-lence of suicidal ideation.	Perinatal depres-sion is common. Blood transfusion was associated. Understanding prevalence and Risk Factors necessary to aid policy and clinical management of PD.	nil	Examined PD across all 3 levels of healthcare in Ghana.	No routine screening was done, even among high-risk patients.	Routine screening is needed for at least high-risk patient groups based on set criteria.
2	Understanding Healthcare professionals' knowledge on PND among women in tertiary Hosp in Ghana – a qualitative study. Asare SF et al (2022) (32)	Komfo-Anokye Teaching Hospital -Tertiary	Qualitative explorative IDI of Healthcare workers	Ineffective communication, referral lapses of patients with perinatal depression High workload causes inability to meet patient's PND needs	Stigmatisation and lack of awareness caused delayed care and manage-ment of patients with perinatal depression.	Need to improve HCP's knowledge in perinatal depression and provide screening tools	The study focused on Healthcare professionals	Urgent need for capacity building for Healthcare profession-als	HCW training, (pre-service & in-service), provision of context-spe-cific screening tool

3	Barriers to addressing mental health issues in childbearing women in Ghana (Samuel Adjorlolo, Lydia Aziato) 2020 (33)	PHC: Nurses and Midwives in Health facilities randomly selected from the Greater Accra Region	Cross-sectional survey	Unavailability of mental health services in 77% of facilities, ■ lack of knowledge of mental health in women from different tribes (75.7%), ■ lack of a clear mental healthcare pathway (75.1%), heavy workload (74.1%) ■ lack of knowledge of mental health issues (74.1%).	The need for a systematic effort to restructure the healthcare delivery system, including equipping healthcare professionals with requisite knowledge, skills and competencies in maternal mental health,	Training and equipping healthcare providers with the tools in Mental Health	The study focused on healthcare professionals	Low knowledge Level of maternal mental health among healthcare workers and Inadequate MMH Services and Tools	Capacity building of HCW in MMH. Equipping Health Facilities to Provide MMH Services
4	Seeking and receiving help for mental health services among pregnant women in Ghana (Samuel Adjorlolo) 2023 (34)	ANC clients at selected Health Facilities in the Greater Accra Region	Cross-sectional	Diagnosis of medical conditions in pregnancy, partner abuse, low social support, sleep difficulty and suicidal ideation significantly predicted the initiation of help-seeking for mental health services by pregnant women. Fear of vaginal delivery and COVID-19 concerns predicted the provision of mental health support	The low prevalence of individual-initiated help-seeking (18.9%) implies that health professionals have a high responsibility to support pregnant women in achieving their mental health needs	Increased awareness of MMH and the ability to identify clients at risk of mental health issues for care	Experiences of Pregnant and postnatal Mothers on MMH seeking behaviors	Low prevalence of individual-initiated help-seeking for Mental Health Services among pregnant women	Need to increase the knowledge and capacity of HCW to detect women at risk of mental health problems during pre- & postnatal care

5	Mental health law in Ghana. (George Hudson Walker; Akwasi Osei. 2017) (35)	Desktop review: The implications of Ghana's Mental Health Act 2012 (Act 846) and progress since its passage	Historical Review of Mental Health in Ghana	Limited dissemination of the Mental Health Act Delays in the parliamentary process for the passing of the Legislative Instrument Poor access to patients in non-orthodox mental health facilities Inadequate financial resources for implementation of the MHA Inadequate human resources Inadequate infrastructure for mental healthcare provision	A well-resourced and functional Mental Health Authority will lead to improved Mental Heath Care in Ghana	A new system of decentralized mental healthcare provided within communities; regional and district mental health sub-committees will have a duty to ensure that multidisciplinary mental healthcare is available within existing medical services in every district	A systematic Review of Mental Healthcare from the Pre-colonial era and post-independence era to date touching on the legal framework, Service delivery and administrative/logistic constraints	Human resource, Infrastructure, Funding, Education/ Information/ Communication Constraints	Implementation of the Mental Health Act would improve integrated maternal mental health.
6	Improving access to mental health services in Ghana (WHO, Ghana) 2022 (36)	Quality Rights Initiative sponsored by the UK-FCDO & WHO	A national scale face-to-face and e-training of MH service providers, caregivers, teachers, police, social welfare staff, judicial service, persons with lived experiences	Education of mental health practitioners and the general public on access, respectful care and rights of mental health clients. Over 21,000 people trained since 2019. Change in attitude of trained Healthcare workers in the right direction observed.	The WHO Quality Rights Initiative is a truly innovative programme for transforming the lives of people with mental health conditions.	To increase the coverage of the Quality Rights Initiative to help train more people to improve access and quality of mental health care in Ghana	A multi-disciplinary training intervention	Inadequate access, and knowledge on mental health. Human rights abuse issues during care of mental health patients	There is a gap in access and knowledge among HCWs and the general public in Ghana about mental health

7	Effect of a lay counsellor-delivered integrated maternal mental health and early childhood development group -based intervention in Northern Ghana: a cluster-randomized controlled trial (J.N. Baumgartner et. al) 2021 (37)	Rural setting including facility and community-based interventions in Northern Ghana	Cluster-randomized controlled trial (cRCT)	In total, 374 participants were enrolled at baseline while pregnant with the index child, 19% endorsing moderate/severe depression. There were no significant effects of iMBC/ECD on PHQ-9 and ASQ: SE-2 scores. However, results favoured the intervention arm in most cases. iMBC participants were highly satisfied with the program but qualitative feedback from stakeholders indicated some implementation challenges.	Post-intervention depression levels were very low in both arms (3%).	Future research to examine the potential impact of women's groups on postpartum mental health	Robust study design to examine the important link between MMH and ECD in rural Ghana	High incidence of moderate to severe symptoms of depression (PHQ-9 10) particularly during pregnancy (19.8%) but less so during the early postpartum period (4.79%) and the extended postpartum period (3.01%)	HCW to improve on Skills to detect and manage Depression during antenatal, intrapartum and postpartum
8	Prevalence and Correlates of Depression Among Pregnant Women Enrolled in a Maternal and Newborn Health Program in Rural Northern Ghana: a Cross-sectional Survey (Margaret Lillie & John A. Gallis et. al) 2019 (38)	ANC Clinic based (facility) in Rural Northern Ghana	Longitudinal, cluster randomized control trial (cRCT)	19.7% of pregnant women had symptoms of moderate to severe depression (PHQ-9 score ≥ 10), with 14.1% suicidal ideation. Bivariate analyses revealed that lower hopefulness, moderate and severe hunger, experiences of emotional, physical, and/or sexual intimate partner violence (IPV), and insufficient social support from female relatives were associated with symptoms of moderate to severe depression.	Antenatal depression is associated with unmet basic needs and safety.	Perinatal mental health programming must take an ecological perspective and address personal, family, and community-level factors.	RCT - design Involved both quantitative and qualitative approaches	High Prevalence of Antenatal Depression. Social determinants of depression	A holistic approach needed to reduce the high antenatal depression in Ghana

9	"I just wish it becomes part of routine care": healthcare providers' knowledge, attitudes and perceptions of screening for maternal mental health during and after pregnancy: a qualitative study (Mary McCauley, Abigail Brown, Bernice Ofosu, Nynke van den Broek) 2019 (39)	Healthcare providers providing routine maternity care in Accra, Ghana.	Mixed Method - Study (qualitative and Quantitative)	Most healthcare providers are aware of the importance of maternal mental health and would be keen to help women who experience mental ill-health during and after pregnancy if resources were available to do so. An enabling factor was the suggestion of introducing a culturally appropriate mental health screening tool. However, compromised mental health was often considered a 'spiritual issue' and not routinely screened for by healthcare providers, nor requested by women. Barriers to the provision of quality maternal mental health care included lack of trained staff and lack of time.	Healthcare providers are aware of the problem of the lack of maternal mental health provision during and after pregnancy and are open to developing protocols to improve care.	Routine screening for maternal mental ill-health at antenatal clinics, reprioritization of workload, further training, and a change in the attitudes and practices of healthcare providers. Education to change the attitudes of healthcare providers, women and the wider community towards mental health is needed	Views of HCW, mixed method study	Lack of routine mental health screening at the ANC, low level of HCW education on Mental Health	Integrate MMH screening as part of routine ANC, Education of HCW on MMH
10	Psychosis risk among pregnant women in Ghana (Samuel Adjorlolo, Gwendolyn Mensah, Caroline Dinam Badzi) 2022 (40)	The antenatal setting of selected health facilities in Greater Accra and Central Regions of Ghana	Cross-sectional study design	54.2%, 27.3% and 18.5% of participants were at no/low, moderate and high risk for psychosis, respectively. A total of 44.4% of participants were not distressed by PLEs, whereas 32.2% and 23.4% were a bit/quiet and very distressed, respectively. Psychosis risk was elevated among pregnant women who were more concerned about the COVID-19 effects, scored high in suicidal ideation, depressive symptoms and sleep difficulties	The study showed that psychosis risk is present in pregnancy.	Screening for psychosis risk in pregnancy should be prioritized for pregnant women with behavioural maladies, including suicidal tendencies,depressive symptoms,sleep difficulties and heightened concerns about COVID-19	Structured standardized questions for psychosis were used for data collection	Unmet need for the diagnosis of Psychosis risk at the ANC in Ghana	Screening for Psychosis should be integrated at all antenatal and postnatal clinics for women

11	Association between maternal depression and child stunting in Northern Ghana: a cross-sectional study (Anthony Wemakor; Kofi Akohene Mensah) 2016 (41)	Child welfare clinics in the Northern Region of Ghana	Analytical cross-sectional study	Prevalence rates of child stunting and maternal depression were estimated at 16.1 and 27.8 % respectively in Northern Ghana. Mothers with depression when compared with those without depression tended to be younger, be currently unmarried, belong to the poorest household wealth percentile, and were more likely to have low birth weight babies. In an adjusted multivariate logistic regression model, children of depressed mothers were about three times more likely to be stunted compared to children of non-depressed mothers (Adjusted OR = 2.48, 95 % CI 1.29–4.77, p = 0.0011).	There is a high prevalence of depression among mothers in Northern Ghana which is associated with child stunting	Further research is needed to identify the determinants of maternal depression and to verify the link between maternal depression and child stunting.	Established a link between maternal depression and child stunting	Child stunting is strongly linked with Maternal Depression	Efforts should be made to identify and minimize / manage maternal depression
12	Towards Implementation of Context-specific Integrated District Mental Health Care Plans: A Situation Analysis of Mental Health Services in Five Districts in Ghana Woebong, B et al 2021 (Pre-print)	District level	Cross-sectional situational analysis	There was slow enforcement of the Mental Health Act 2012 (Act 846) at the district level. There were few available mental healthcare professionals with poor supervision and work structure.!!!	Mental health infrastructure across Ghana and other Low and Middle-Income Countries is poor. There are opportunities for strengthening mental health systems through interventions at the organization/ policy level, health facility, and community levels.	Urgent implementation of comprehensive district mental healthcare plans and training of Healthcare workers	Focus on Healthcare workers and healthcare leadership	Lack of mental healthcare plan	The development of a district mental healthcare plan to be integrated into existing primary healthcare services is urgently needed.

APPENDIX B

List of names of variables and their corresponding questions.

VARIABLE	QUESTION
Region	Please select the region where you work
Age	Age in years (at last birthday)
Sex	Sex
Profession	Your profession
Years in profession	Number of years in profession
Specialty	Area of specialty
Rank	Level of specialization/Rank of Provider
Ever managed MMH	Have you seen / been involved in the management of any maternal mental health disorder before?
Duration of last managed MMH case	How recent was the last case?
Outcome of case	What was the outcome of this case?
Severest form of MMH managed/seen	What is the most severe form of maternal mental health disorder you have ever seen or managed?
Commonest MMH at facility	Of the cases managed in the past, which one is most common in your facility?
Adequately knowledgeable	Did you feel adequately knowledgeable on what to do?
Adequately skilled	Did you feel adequately skilled on what to do?
First action taken	What was your first action taken?
Adequately trained to detect MMH	Do you generally feel adequately skilled/trained to detect mental health disorders among pregnant and postpartum women?
Education at ANC on MMH	Is the topic of maternal mental health covered during antenatal counseling / pregnancy school in your facility?
Clients encouraged to freely report MMH challenges	In your view, do healthcare providers encourage clients to freely report mental health challenges they experience during pregnancy, delivery and after delivery?
Actively look for MMH	Do you think healthcare providers actively look for maternal mental health disorders in pregnant and postpartum women in your facility?

Knowledge in identifying MMH	How do you rate yourself in terms of knowledge to identify patients at risk of and/or suffering from maternal mental health disorders in your facility?
Importance staff consider MMH	How important do you consider maternal mental health?
Ability to differentiate clients at risk	Are you able to tell which client is at an increased risk of developing maternal mental health disorder
MMH screening tool	Do you know of any maternal mental health screening tool?
Name any screening tool	Name the tool
Ever used screening tool	Have you ever used any of these tools for patient screening (not for research purposes)?
Name of tool used	Name the tool
Availability of checklist/tool	Is there a checklist or a screening tool for the identification of women at risk of mental health issues in your facility?
Used checklist/tool	Have you used this checklist /screening tool to identify women at risk of mental health issues in your facility?
Adequacy of tool	In your opinion, are these tools adequate?
Detailed management protocol/pathway for MMH	Are there clearly detailed management protocols or pathways in your facility to follow when mental health issues are detected?
Pathway/practice followed in mgt of MMH	What are the pathways / practice that you have frequently followed when women at risk of mental health issues are detected?
In-service training on MMH	Have you received any in-service training on management of maternal mental health disorders?
Effects on mother	What do you think are some of the effects of maternal mental health disorder?
Effects on infant	What do you think are some of the effects of maternal mental health disorder on the offspring?
Effects on family	What do you think are some of the effects of maternal mental health disorders on families?
Fathers' role	36. Do you think fathers have a role to play in improving maternal mental disorders?
HCP recommendation on father's role	What role might fathers play to improve maternal mental disorders?
Socio-culturally acceptable tool	What would you consider a socio-culturally appropriate screening tool in Ghana?
Recommendation for socio-culturally acceptable tool	Do you agree to the introduction of a socio-culturally appropriate screening tool in your facility (Ghana)?
Recommendation	What is your brief recommendation for improving maternal mental health in Ghana?


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