Perceptions and Understanding of Perinatal Mental Health Among Midwives in Cox's Bazaar, Bangladesh

Ambar Ahmed

A thesis

submitted in partial fulfillment of the requirements

for the degree of

Master of Public Health

University of Washington

2024

Committee:

Amritha Bhat

Deepa Rao

Program Authorized to Offer Degree:

Global Health

University of Washington

Abstract

Perceptions and Understanding of Perinatal Mental Health Among Midwives in Cox's Bazaar, Bangladesh

Chair of the Supervisory Committee:

Amritha Bhat

Department of Psychiatry and Behavioral Sciences

This qualitative study explores the perceptions and knowledge of midwives on perinatal mental health and the factors that act as facilitators and barriers to mental health promotion. Two focus groups were conducted with midwives practicing in Cox's Bazaar, Bangladesh. The participants were selected purposively from the partner NGO, HOPE Foundations' facilities. The discussions were recorded, transcribed and translated to English. Thematic analysis was conducted using Atlas.ti v24. Eight major themes were identified, organized into two broader categories: midwives' perceptions on their role as healthcare providers as it relates to mental health and the socioeconomic and cultural context and its impact on mental health. This exploration shed light on the midwives' attitudes towards and knowledge of perinatal mental health, the challenges they face in providing care to two distinct populations – the local Cox's Bazaar community and the Rohingya women residing in refugee camps in the region. Findings revealed positive attitudes towards mental health among midwives, along with an understanding of its multifaceted nature, yet significant gaps emerged in clinical knowledge and cultural congruency, particularly concerning the Rohingya community. Addressing these barriers is crucial for effective implementation of perinatal mental health interventions, with emphasis on the need for language

alignment, cultural sensitivity, and tailored training programs. Moving forward, targeted efforts are necessary to strengthen midwives' capacity in perinatal mental health care and address sociocultural factors influencing women's mental health, advancing more inclusive and effective healthcare delivery in Bangladesh.

Table of Contents

List of Acronyms

ANC	Antenatal Care
HIC	High Income Country
MHM-WA	Mental Health Matters Washington
LMIC	Low- and Middle-Income Country
PMH	Perinatal Mental Health
TT	Tetanus toxoid
TBA	Traditional Birth Attendant

Introduction

Maternal mental health conditions are frequent complications of pregnancy, however there is a vast gulf between the need and the resources available for mothers in the perinatal period, especially in lower- and middle-income countries (LMICs) and it is vital to close that gap to achieve health equity for all [1]. Almost 20% of people who give birth experience a mental health condition in the perinatal period, meaning during pregnancy and up to one-year post-partum [2]. Common conditions include anxiety, depression and somatic disorders, while death by suicide is a common cause of maternal mortality [3]. In Bangladesh, prevalence rates are 26% for postpartum depression, and [4], 18-35% for antenatal depression [5]. According to WHO estimates, there are 13 mental health workers per 100,000 population globally, with the majority being concentrated in countries classified as high-income. In LMICs, the number is at 3.8 per 100,000 [6].

Bangladesh has made significant strides as a nation to achieve maternal and child health objectives; however, perinatal mental health (PMH) care remains essentially non-existent [7]. This is due to a lack of infrastructure and investment in mental healthcare services as there are approximately 260 psychiatrists and 565 clinical psychologists serving the total population of 169 million [8]. Furthermore, despite WHO guidance for the integration of mental health services into routine antenatal care (ANC) [9], broad implementation has not been seen, and for Bangladesh specifically, many studies have highlighted the knowledge gap between availability and accessibility of mental health services, traditional beliefs, social taboos, and fear of discrimination which reduce health seeking behavior for mental health[7,10].

A collaborative effort between the HOPE Foundation for Women and Children of Bangladesh and Mental Health Matters Washington (MHM-WA), aimed to begin building the foundation for improving PMH. The HOPE Foundation facilities include a hospital for women, serving the Cox's

Bazaar district, with surgical capacity; a midwifery training center, birth centers staffed by one midwife in remote areas of the region, and a field hospital serving the Rohingya women, providing maternal and diarrheal care and conducting surgeries. As part of the larger effort to improve PMH, we conducted a needs and capacity assessment to determine how the MHM-WA training curriculum can be tailored for use by midwives at the HOPE hospital and clinics in Bangladesh to improve PMH promotion.

Numerous studies have demonstrated the benefits of applying culturally tailored health programs, such as lay health models, at the community level – particularly for physical conditions and disorders [11]. Culturally tailored peer mental health promotion strategies in India and African countries have proven to be effective at improving mental health outcomes, especially for women in the perinatal period [11,12]. Midwifery in Bangladesh was professionalized in 2017 with the establishment of the Directorate General of Nursing and Midwifery. Since then, midwives have increasingly expanded their provision of sexual, reproductive, maternal, neonatal, and adolescent health services each year, and approximately 80% of facility births in the country are attended by midwives[13]. Additionally, with HOPE operating within the refugee camp at Kutupalong, local Bangladeshi midwives are serving a population who have experienced systematic human rights abuses, forced displacement, targeted violence and oppression [14,15], without specialized training on engaging with vulnerable patient groups.

Thus, the project aims to work with midwives and other stakeholders at the HOPE Foundation for Women and Children of Bangladesh to determine needs, capacity, and strategies for tailoring and implementing a mental health promotion training for midwives to improve PMH outcomes among women receiving care from HOPE facilities.

Study Objective and Aims

The goal of this thesis is to explore the perceptions and knowledge of midwives on PMH and the factors that act as facilitators and barriers to mental health promotion in Cox's Bazaar, Bangladesh. This work will inform a larger project aimed at developing a culturally specific tailored training program for midwives for mental health promotion.

Methods

The research team travelled to Bangladesh to conduct the needs and capacity assessments. The research primarily focused on gaining insights into the complexities surrounding diagnosis, delivery of care and stigma around PMH and understanding the prevailing attitudes and cultural perspectives regarding mental health within Bangladeshi communities and of the midwives themselves.

Study Setting

Cox's Bazaar is a coastal district of Bangladesh, approximately 300 km from the capital, Dhaka. The population of 2,823,265 has a majority Bengali ethnicity (99.5%) with 14,861 people falling into ethnic minority groups, majority Muslim (94.5%), and has a slightly lower than national average literacy rate, 71.45% compared to 74% [16]. In 2017, nearly 700,000 people from Myanmar crossed the border into the region due to the ethnic cleansing of the Rohingya Muslims in Myanmar. As of 2022, there are upwards of 900,000 refugees in the camps in Cox's Bazaar, with 31% being females aged 12-59 [17].

Data collection spanned a three-week period in March 2023, at the HOPE Foundation for Women and Children's facilities. The interviews were conducted in and around the HOPE Foundation facilities in Cox's Bazaar. Interviews were also carried out at remote birthing centers within the

district, and focus groups were conducted at the HOPE Hospital in Cox's Bazaar and Ramu Field Hospital in the refugee camp, approximately forty minutes from the HOPE Hospital. The HOPE Foundation Hospital and Field Hospital serve two distinct groups; the first serves the local community of Cox's Bazaar, and the Field Hospital operates inside of the camp, serving the Rohingya population.

Study Population, Sample Size, and Sampling Criteria

Stakeholders integral to the exploration included midwives, healthcare providers, community leaders, and individuals from the community who had utilized services at the Hope Foundation's clinic for perinatal care. The selection criteria for focus groups comprised midwives actively engaged at HOPE Foundation for at least six months, while those in supervisory roles were excluded, to foster an environment of equitable participation, where participants feel comfortable sharing candidly. The midwives in the focus groups were purposively selected and were all of Bengali ethnicity from various districts, with one from an indigenous group local to Cox's Bazaar. 85% were Muslim, and two participants were Christian.

Data Collection

To initiate the data collection process, exploratory semi-structured interviews were conducted with key personnel, including doctors, individual midwives, the psychiatrist, the nurse head (matron), and other staff. These interviews, conducted at the hospital in Cox's Bazaar, birthing clinics in more remote areas of the region and the field hospital, formed the foundation for subsequent phases of the study. Based on the preliminary analysis of the six interviews by the project lead, focus group guidelines were formulated. Although not based on a specific theoretical framework, focus groups aimed to gauge midwives' knowledge and attitudes towards mental health. Two focus groups, each comprising 6 in-service midwives meeting the inclusion criteria, were conducted.

One group convened at the hospital in Cox's Bazaar, while the other took place at the field hospital within the Rohingya refugee camp.

Data Analysis

Codebook development: A mix of inductive and deductive coding approaches were used to develop the codebook. Starting with a set of deductive codes based on the research questions, the MATRIx framework [18] and interview guide, a small number of prospective codes, encompassing broad areas of interest that would be useful for coding were listed. The first coder, AA, thoroughly read the transcripts and completed an initial round of coding using the broad codes and developed inductive codes based on the transcripts. The broader categorical codes were then selected as code groups, and the inductive codes created were put into the relevant groups. The second coder, AS, then reviewed the first set of codes and provided feedback, including addition of new codes and refinement of existing ones. After review by both coders, the codebook was finalized.

Coding process: After the initial round of coding, the coders went back to individually code the same two transcripts with the list of codes, in an iterative process of reading, coding, and re-reading the transcripts. This process allowed us to merge some codes and delete ones that appeared less frequently or did not help answer the research question and establish consensus on the use of each code.

To establish reliability and consensus, the team the team worked closely to establish strategies and rules. Since the two coders were present at the interviews and focus group discussions, both had a firm grasp on the content of the transcripts and had a clear understanding of the direction of the analysis. Memos were used to highlight points of confusion in coding. We used consensus coding

to resolve differences in coding decisions, followed by calculating inter-coder reliability scores to ensure consistency.

Thematic analysis: In the late-stage analysis, the focus primarily centered on pattern recognition and understanding the nuances within two broad categories: midwives' conception of mental health and the socio-cultural context of Bangladesh around mental health. The use of the MATRIx framework (Figure 1) provided a structured approach to guide the late-stage analysis and systematic exploration of the multifaceted influences on PMH care. The initial pattern review involved a meticulous examination of the data, with particular attention to the frequency and importance of codes within these chosen categories. Code frequencies facilitated the identification of key themes, guiding the extraction of meaningful patterns within and across categories. To conduct the analysis, Atlas.ti was used to run queries and view code distribution and frequencies. Through this lens, the breakdowns of each level of the framework facilitated a nuanced interpretation, ensuring that the findings were not only descriptive but also illuminated the intricate interplay between midwives' conceptions, the socio-cultural context of Bangladesh, and the facilitators and barriers to accessing perinatal mental health care.

Positionality

The interviews were conducted by me, translating the questions posed by the project lead into Bangla. I am an educated, Bangladeshi-American woman, and I attained my higher education in Western countries, while my early education was in Bangladesh. While I have no personal experience with PMH, I have a deep understanding of the cultural context that surrounds pregnancy and motherhood in Bangladesh, as well as the attitudes and perceptions of mental health in the country. In terms of my experience, I used to work in public health research in Bangladesh, specifically in maternal and child health research, so I am accustomed to navigating the context of

maternal health in Bangladesh from a research perspective. In Bangladesh, class divisions are far more distinct than in the global north, and as such I hold a position of privilege over the interviewees, being from the capital city and having an international educational experience. Given the sensitivity of the topic of mental health, and how different prognosis and manifestations of illnesses are in Bangladesh and other global south countries compared to the mainline ideas of western countries, I was keenly aware of my responsibility in bridging the gap between the expectations of my US-team and the responses from Bangladeshi interviewees, and I intend to apply this sense of responsibility to ensure that I use my position of privilege to accurately portray the opinions expressed by the interview subjects in order to facilitate the success of this project.

Results

Table 1 describes the demographic characteristics of the participants. All were female, and between the ages of 20-30. The majority were Muslim, while 2 were Christian. 6 out of the 14 midwives were from districts outside of Cox's Bazaar.

Table 1: Demographic characteristics of midwife participants

Demographic Characteristics	**N (Total = 14)**
Age	
20<25	7
25>30	7
Religion	
Muslim	12
Christian	2
Ethnicity	
Native Bengali	13
Chakma	1
Locality	
Cox's Bazaar	6
Rest of the country	8

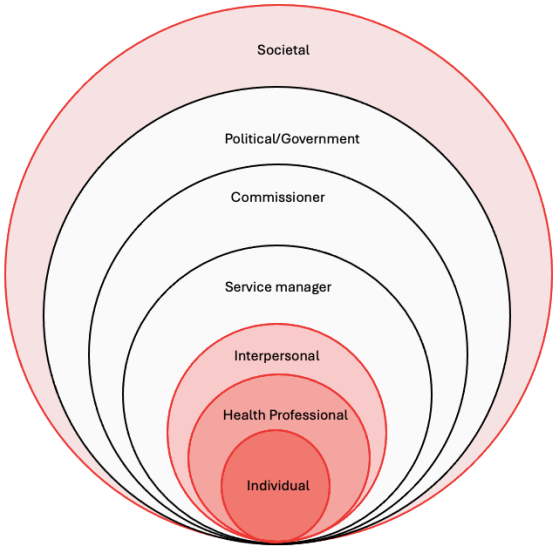

Figure 1:MATRIx Multi-level Model (17) highlighting focus on individual, health professional and societal aspects as relates to perception and knowledge of midwives on perinatal mental health

Figure 1 shows the MATRIx multi-level moder, with the specific levels used in this study societal, inter-personal and health professional and individual levels highlighted in red.

"That is what mental health means to me." – Midwives on their roles as health providers with relation to mental health

This section looks into the roles of midwives as primary healthcare providers within the realm of mental health. It explores their understanding, attitudes, and the challenges they encounter while addressing mental health issues among their patients.

<u>Theme 1: Midwives' attitudes reveal recognition of importance of mental health.</u>

Despite some variations in individual perspectives, all respondents held positive associations with mental health. When asked about their feelings towards the term "mental health," a unanimous

response from both focus groups was, "Positive, more positive." This overarching positivity was further emphasized through statements like,

"We have to take it positively, that their mental suffering exists, they need proper counselling from us," underscoring a proactive and supportive approach towards mental well-being." P3, FGD1

Midwives also emphasized the importance of approaching patients' mental health with sensitivity and empathy. The midwives acknowledged the importance to approach mental health challenges with positivity and to actively engage in providing necessary support and intervention.

"We can't say these things about the patients' mentality, why they do certain things or why they don't. We should try not to burden them with all these issues and give them a fresh mind, create a beautiful environment, give them hope, not worry about any reasons, and instill hope in them. That's what mental health means to me." P1, FGD2

Some respondents expressed disagreement with each other, particularly regarding the impact of group discussions on mental health. While most participants were of the opinion that group discussions on mental health, in essence, support groups, would provide an avenue for mental health support and prioritization of mental health, one participant argued that it may have the opposite of the intended effect and exacerbate existing issues.

Sub-theme: Midwives offered varying perspectives on how they view their own mental health

Participants were open about the types of mental health challenges they faced. However, there was a noticeable hesitancy among participants when discussing certain aspects of mental health. Some participants openly shared personal experiences of experiencing depression:

"We are trying, let me tell you, in our lives we face many obstacles, many challenges, but we will think positively about every challenge or problem. If we take it negatively, our life will be at risk, we will go in a negative direction" P5, FGD1

"If someone is depressed mentally, if they can share with someone nearby, someone closer, someone from the family then... That's what we do." P3, FGD2

One participant acknowledged the role of vicarious trauma, speaking about the mental challenges of providing care.

"Sometimes we ourselves experience depression. Because we work in the field of health, providing good service, it's a matter of pride and joy. When we are not able to do that, we experience depression. In our case, if any obstacles arise, we experience depression."

The study also shed light on the participants' coping strategies for mental health issues. Sharing problems with someone nearby was a common approach mentioned, with participants indicating that seeking advice from peers or family members was the initial step. Professional help, such as counselling, was considered when problems persisted or intensified, however none of the participants had actively sought professional help.

"If such a situation arises, I will first share with someone nearby. If there is any suggestion or solution from them, if it can be solved through their advice, then I will not go to a counselor. But if I can't find a solution even after talking to someone, then I am worried and I go towards negativity. In that case, of course, I will go to a counselor for my peace of mind and mental support." P5, FGD2

Theme 2: Midwives recognize multifactorial aspects of maternal mental health

When asked about the role mental health plays in the perinatal period, participants shed light on the influence of mental health on the experiences of pregnancy and motherhood. Midwives displayed recognition of multifactorial aspects of maternal mental health and spoke about various factors such as financial, physiological, external pressure and how they contribute to mental distress during the perinatal period. All expressed the importance of mental wellness during the period.

"What we see, a woman becomes pregnant, she's thinking then - where will I have my delivery, what will happen to me, my children, I have two from before, will I be able to raise three, can I feed them - then - they think will the baby be able to get breastmilk, how will my husband take it, what is the source of income, how will I raise them .... Then you see that even after delivery, now you have to raise the children, then there's another person in your household, costs are going up because of them, I mean they think about these things a lot. This is a type of mental shock." P5, FGD1

The discussions emphasized the direct impact of maternal mental health on the physical well-being of both the mother and the child. Stressors, such as abusive environments or lack of familial support, were identified as contributors to increased blood pressure and temperature fluctuations during pregnancy. Participants noted that inadequate mental support can manifest in physiological issues, potentially leading to complications during delivery.

"For instance, there are many situations where mothers who are facing numerous hardships and abuse from their mothers-in-law or by their husbands. This can lead to significant stress on the mother and may even cause her blood pressure to increase or decrease, or her temperature to rise or fall. Then we see, if they sit at home, we can't do anything, but if they come to us with the problems, we see that the baby's heartbeat is low or high. This type of problem happens a lot." P2, FGD2

A recurring theme was the recognition of the role of hormonal changes during pregnancy in affecting mental well-being. Participants acknowledged the need for emotional support during this period and emphasized the potential consequences, such as mental depression, if adequate support is lacking. Participants were particularly concerned about maternal mental health and its importance in a woman having a "beautiful pregnancy journey".

"*P1: Actually, during pregnancy, there are many hormonal changes that lead to significant physiological changes. It's quite common for the abdomen to enlarge and the breasts to feel heavier or fuller. These changes can sometimes affect a person's mental well-being as well. If someone understands that these changes are normal during pregnancy and can offer some love*

and support, it can make a difference. It's important for everyone to embrace and cherish the journey of pregnancy and provide emotional care when someone may be experiencing difficulties or discomfort. And everyone wants some pampering and love during pregnancy, so if they don't get that…

P4: they go into mental depression." FGD1

Sub-theme: Impact of mental health on child

On speaking on the importance of maternal mental wellness during the perinatal period, participants focused primarily on the impact it may have on the fetus as well as the impact on the child after birth.

"Mental health plays a significant role during pregnancy. If a mother doesn't receive proper mental support, the mental state she goes through can affect the child for a long time." – P3, FGD2

"Mental health during pregnancy is very important because whatever work the mother does during this time affects the child. The family, the environment, wherever she goes, from the very beginning, everyone's support will help her maintain good mental health." P1, FGD1

Theme 3: Midwives already provide a psychological support role in perinatal period, particularly at delivery.

During the discussions it became apparent that the midwives, to an extent, play a role already in providing psychological support during pregnancy and delivery. Despite lack of formal training, midwives generally find themselves in the position to have to provide mental support. Midwives employ a compassionate approach to alleviate the mental distress associated with labor pain. By emphasizing the positive aspects of childbirth, such as the imminent joy of holding a newborn, they aim to instill hope and reassurance in the mothers, fostering a positive mindset during a challenging period.

"*Mental support is present like this. Suppose a mother is experiencing labor pain, you say "You have been keeping a baby inside you for 9 months, today is your happy day, and one day you will endure a little pain, and then we will receive a beautiful gift, a lovely baby in our arms". All mothers are like that. The mother having her first baby may not understand, but we make them understand in this way." P3 FGD2*

Recognizing the interconnectedness of mental and physical well-being, midwives spoke about actively managing stress and tension during labor. They understand that a calm and supportive environment contributes to lower blood pressure and a smoother delivery process, showcasing a holistic approach to maternal care.

"When you are under tension, the mother can feel a lot of pain ... then if you are in tension, I am also in tension about you so that I can give you the gift of a good mother and baby." P3 FGD2

Midwives extend their role beyond labor, acknowledging the potential challenges mothers face post-delivery. Participants mentioned having to counsel family members, ensuring they provide the necessary support to new mothers, thereby contributing to maintaining good mental health during the crucial postpartum period.

"When a mother comes to us, we talk to her in a way that they don't feel any tension, like freely talking to them, being friendly. We talk nicely to them, so they don't feel any mental tension. It's good for their mental health. After delivery, many mothers experience depression, especially when others are busy with their babies. At that time, we counsel their family members well, so that they can support the mother and maintain good mental health." P2 FGD2

Sub-theme: Midwives facilitate psychological support through trust and relationship building

The midwives are facilitated in providing this type of psychological support by their ability to gain trust and build relationships with their patients and spoke on being passionate about serving their communities. Participants highlighted trust as a foundational element that significantly influences the dynamics of care. The ability of a patient to trust her midwife was seen as instrumental, leading not only to repeated visits but also to referrals from satisfied patients and their extended networks.

"Main thing is, the patient that believes and trusts me and has her delivery in my center, later on she brings all her relatives to my center. They see our work ethic and service and bring others to us." P2, FGD2

The discussion focused on the midwives' personalized and human-centric approach to care. They talked about the process of building trust, and the time it takes to integrate themselves into the community.

"From the patient side, we work personally. Personnel-wise, we visit mothers, provide counseling. We provide counseling for the deliveries of this month, but initially, when mothers arrive, they don't trust us. They think that hospital deliveries or deliveries in private hospitals are just business for doctors or institutions. That we are just here for their service, for the service of people they don't believe that." P3, FGD2

The reciprocal nature of community support was highlighted, indicating that the midwives' commitment to the community is met with reciprocal acknowledgment and appreciation.

"That's why when a mother comes from that area, we speak to them in a way that they don't feel any tension. We talk freely and friendly, like how we talk to our own mothers, and we provide them with the same kind of service. Then they come and say, "You have done so much for us, we like it here. We have received a lot of help here, which we didn't get in other places." So, we provide support based on the support from the community." P4, FGD2

"Actually, it's not that they don't understand that. Generally, people in Cox's Bazar are less educated, and many don't understand. But if you make an effort to explain, they do understand." P5, FGD2

Theme 4: Disconnect between midwives' perceived importance of mental health and ability to address it in their patients:

Participants offered diverse responses when asked about the meaning of the term mental health. While engaging in discussions about the meaning of "mental health," most participants provided insights into mental well-being in a broader context.

"I am studying when I'm young, what will I be when I grow up, mentally, or I have to get a good job, or have to take responsibility for my family. This type of mental, like thoughts or this internal thing that, no I have become established or now I am doing a good job, I am able to support my family, this is now a source of mental peace. Like if I could not do all that, then I would suffer from concerns about that."

While some participants emphasized the internal aspects of mental well-being, others highlighted the impact of external stressors, with financial status being the most frequently mentioned factor. The concept of "mental peace" emerged as significant, with participants expressing the belief that it enables progress in various life areas. Concerns about external stressors were prevalent, with one participant stating,

"A lot of different problems can arise. At the surface level, physically then mentally you can get disorders. From there a lot of people… financial status, from the family view, struggle and are committing suicide. You can see it in many hostels, many households. You see these types of situations all the time."

When participants discussed consequences of poor mental health, responses ranged from extreme outcomes like "becomes a mental freak" to suicide, malnutrition, depression, and anxiety. There was a tendency to focus more on severe outcomes such as psychosis and suicide, while perceiving depression and anxiety as addressable with support from family and the community.

Some participants expressed a lack of confidence when asked to define depression and anxiety, relying on common vernacular in Bangladesh, such as "tension.", and asking the interviewer to define the terms for them, with one participant stating, "*Depression means worry*," and another adding, "*If you have tension, then it's anxiety*."

Regarding their approach to patients exhibiting signs of mental illness, all respondents mentioned providing "counselling," and two noted referrals to the clinical psychologist employed at HOPE. While midwives mentioned counselling, none mentioned any guidelines or standardized methods, and their counselling was focused on the delivery period, and how to talk the mother through it.

"Then we have to make them understand that way, in their way, we have to counsel them, support them."

"Counseling … I do some counseling, plus the interpreters who are here they understand the language better so they can explain better so I take their help" P1, FGD1

The importance of mental health for leading a normal life was underscored, with one participant stating,

"A person staying healthy on the mental side is mental health. If they have mental illness they can't lead a normal life. And if they are healthy mentally then they can obviously lead a normal life."
P6, FGD1

Sub-theme: Challenges in providing mental health care in perinatal period:

Within the realm of perinatal care, midwives face numerous challenges regarding cultural subtleties, language disparities, and health-seeking patterns. These obstacles, as articulated by midwives in the Cox's Bazar region, highlights the complexities in providing PMH care.

Language barriers were brought up in both focus groups, however, the midwives working at the field hospital considered it a larger challenge. Most midwife participants self-described as being from "*out-districts",* and the dialect spoken in Cox's Bazaar is not well understood outside the region. The Rohingya language is similar to the local dialect, to an extent.

"I will first see that there is a difference in their language...the language of Rohingya there is some similarity, however, comparatively there is a lot of difference. I usually can't understand, that is the biggest challenge" P1, FGD 1

Another challenge identified by both groups was the health-seeking behaviors of both the locals and Rohingya populations. Participants all talked about the difficulties in getting women in the communities they work in to come to ANC visits and for facility deliveries.

"Actually, explaining things to them is our biggest challenge. Convincing them to come here is one of our challenges ... We truly try to keep to them here and provide care." P4, FGD1

Compounding the difficulties in convincing people to seek care at facilities during the perinatal period is the influence of traditional birth attendants (TBA) in this region specifically. According to the midwives, the TBAs operating within the Rohingya and rural Cox's Bazaar hold more sway over women than doctors in many cases. Healthcare seeking for delivery and ANC was also said to be lower among the Rohingya population than the host community. Midwives who practice at the facility within the refugee camps talked about how the patients usually did not have Tetanus Toxoid (TT) vaccines until they came to facilities in Bangladesh, despite many patients already having multiple children prior.

"The TBAs are Rohingya, they listen to the Rohingya TBAs more. Whatever those TBAs say, they give more priority to that." P7, FGD1

"If the TBAs are concerned, actually if they are concerned and aware, then if they, I mean, if they explained to the patients that you are being harmed with us, or I understand these things, but I don't know about these other things, the doctor will know better, so they give a lot of priority to what the TBA says so they'll go to the hospital more and they'll be more concerned in general" P1, FGD1

Fear around surgical procedures was also highlights as a reason why healthcare-seeking remains low according to some participants, while one participant mentioned that cost is a prohibitive factor for many patients.

"There's doctors on even this in Bangladesh?" – Socio-economic and religious/ cultural context on understanding of mental health

This section explores the broader socio-economic and cultural context around mental health and treatment of women in the perinatal period, and their impact on maternal health care delivery.

Theme 5: Societal factors impede midwives' care delivery

Concurrently engaging in discussions about the practical challenges inherent in delivering healthcare services, midwives also delved into the nuances of societal and structural factors that may impede the provision of mental health support. These encompassed prevailing social norms entrenched in the region.

Midwives were deeply cognizant of the fact that the patriarchal societal structure percolates every facet of maternal health, and provided numerous examples of how societal gender roles often act as impediments for women's mental health. Participants spoke on how societally; boys are given preference over girls, and how these issues are more prevalent in the Cox's Bazaar district compared to the rest of the country.

"Here, boys are more preferred. Meaning you have to have a boy. There is pressure on mothers, and their mental health remains compromised from the beginning." P3, FGD2

"If a computer or an ultra says it's a girl when they wanted a boy, then they start harassing the daughter in law from then on. But she has no hand in that." P2, FGD2

One participant highlighted how, at the onset of menstruation, girls are forced to stay at home.

"They are in mental depression, that even a few days ago I was hanging out with everyone now I'm not allowed to do that. Boys or girls, all of a sudden they are not allowed to meet anymore, can't go out of the house" P1, FGD1

Other examples included girls' education not given priority:

"But that a girl would be educated, be able to stand on her own two feet, that they should provide their daughters with that opportunity, they don't think like that. They don't understand the situations faced by these girls. But they spend a lot of money on marriages and dowry for these girls" P4, FGD2

Another factor brought up by participants in both focus groups was the challenges posed by early marriages, and the high instances of girls being married off in young adolescence, and the complications that arise from young girls becoming pregnant.

"But when a girl gets married at the age of 14, she is still mentally a child. She doesn't understand the responsibilities and challenges of motherhood at such a young age. When she becomes pregnant, things become chaotic…She fails to understand that a child is growing inside her, that

she should remain happy and have a healthy diet. She doesn't understand the peace she needs after giving birth or the peace she needs to provide to her child through breastfeeding. The child is in one place, and she is in another. It takes a long time for her to adjust to the idea of having a child. It's difficult to comprehend how to attain mental peace in such situations, as the opposite happens, and it becomes burdensome to roam around freely" P1, FGD2

"She doesn't understand at her age. There is an age for becoming a mother and an age for marriage. She doesn't have the appropriate age, and here, that age is not considered. They become mothers at an early age. This is the problem" P2, FGD2

Participants highlighted how religious beliefs deter women from adopting birth control methods. This spiritual concern acts as a significant barrier, influencing family planning decisions among women in the Rohingya community according to the midwives. Discussions also included how women were expected to keep having children as it is "God's will", and the mental pressure of not being allowed to take birth control methods. Most were of the agreement that the pressure came from husbands.

"Regarding methods [birth control], there is another thing which is that they don't want to take methods because if they die while having some method, then maybe they will not be accepted in the afterlife, for this reason, then it will remain, they can't take it out then." P1, FGD1

Theme 6: Familial dynamics usually has negative impact on individual women's mental health during perinatal period

The midwives were all in agreement that during the perinatal period, a woman requires a lot of support from her family members. They offered nuanced perspectives, exploring factors that play a role in the support women tend to receive, including the socioeconomic and educational status of the families,

"When a mother is pregnant, she has to maintain many things, like she can't lift heavy things, has to get a lot of rest, has to eat properly. But when her family doesn't give that support then the mother can't rest, has to do all the household chores, in that case the pregnancy journey is not beautiful. A pregnant mom of course needs a lot of help to keep her healthy mentally." P6, FGD1

"We face more challenges in terms of support from in-laws." P1, FGD2

The topic of having baby boy over a girl was brought up in relation to how the family's behavior can cause mental distress.

"Primarily, during delivery is when the family, the husband, mother-in-law, what do they do - when the mother comes for the delivery, they start stressing and badgering, that will it be a boy or not. If it's a girl, they get upset, if it's a boy they give a lot of priority. But if it's a girl, then they look down on her, maximum people, whether Rohingya or Bangladeshi, maximum families are like this." P5, FGD1

One participant shared a story of how support from family, due to their educational attainment, resulted in a positive outcome for a woman experiencing postpartum depression.

"I will give an example using my friend. She had a baby, but the family members were all busy with the baby. It was a boy, after some time, she fell into depression. She stopped breastfeeding the baby, and she even thought of killing herself. The family members were a bit educated and realized that she needed to see a counselor. After that, she recovered." P1 FGD2

Sub-theme: Getting buy-in from mothers-in-law would be a pivotal step to addressing women's mental health

While midwives were able to provide nuanced discussion on the roles of the family unit as a whole, as well as the husband, it was universally acknowledged that the influence of the mother-in-law is generally negative, particularly in the perinatal period. Due to the societal structure of this region, particularly in rural areas, women often lack autonomy, and after marriage generally have to follow the wishes of the mother-in-law.

"For instance, there are many situations where mothers who are facing numerous hardships and abuse from their mothers-in-law or by their husbands. This can lead to significant stress on the mother." P2, FGD2

Participants mentioned how the mother-in-law often has a hand in not providing sufficient nutrition, thus resulting in the women giving birth in a malnourished state. Similarly other maternal health concerns and checks are often ignored due to the mother-in-law not accepting the importance of it, such as ultrasounds and prenatal vitamins.

"After conceiving, the woman stays more at the in-laws' house … In that case, it is seen that if the mother-in-law is not good or if the husband is not supportive and cooperative, say you need an ultrasound. So, for the ultrasound, now the mother-in-law will say that we don't have time, or we don't need it back then, why are you feeling the need for it? And she told the husband that he didn't provide support. He's saying – 'more money is needed for expenses'?" P4, FGD2

"And the mothers will say, explain to my mother-in-law, to my husband. They'll take our hand and repeatedly ask us to explain, 'The family members don't understand. They don't let us eat well. Apparently if we take vitamins, the baby will be too big, they won't even let us touch vitamins.'" P1, FGD2

Facility births were also described as not given priority by mothers-in-law. Participants mentioned how despite medical advice and wishes of the women, the in-laws are uncooperative. Financial constraints, education levels and culturally held beliefs were brought up as justifications mothers-in-law gave.

"For example, a daughter-in-law who is educated about deliveries understands, but the mother-in-law or the grandmother doesn't believe it." P3, FGD2

"Their mothers-in-law say that if it's a normal delivery, it doesn't happen at the hospital; they had 5-6 children, and never needed a hospital. Why would the daughter-in-law need it? You can't make them understand." P4, FGD2

In one example, the midwife described how when a pregnant woman was displaying signs of mental distress, the midwife recommended a visit to the HOPE Foundation psychologist. The mother-in-law was dismissive of the concept, however the woman was open to speaking to a counsellor.

"Like a while ago I had a patient. She was suffering from depression a little. So I said, come to my center one day, at our center we do counseling on mental health. Then her mother-in-law started laughing like anything, saying "There's doctors on this even in Bangladesh?" Meaning there's doctors for mental health too. They really don't understand. Then when the lady came back, when I explained it to her, she believed me. She didn't take it negatively" P5, FGD2

One participant even shared her own fears of potentially having to move into her in-laws house. The pressure of having to conform to rules, and the loss of autonomy remained pervasive throughout the discussions.

"And I have a slight childish attitude, that if something doesn't go my way I get mad, it seems that my in-laws don't allow it in their house. If I take any wrong step regarding this, it can lead to a bad situation. It's like mental pressure for me, as I have been working for so many days, suddenly I have to go home. This is a mental pressure for several days, and it is taking my peace of mind that there is nothing I can do." P1, FGD2

Sub-theme: Husbands' roles perceived with more nuance than mother-in-law within familial dynamics

Husbands received more nuanced discussion from the midwives. While some described them in a similar vein to the mother-in-law, others offered perspectives on how a supportive husband can result in more positive outcomes for women's mental health.

"But when I was in Dhaka, people used to think differently. When a woman would come, pregnant and always smiling, rubbing her belly, we could understand her joy just by looking at her. And when we did the ultrasound, she would watch the monitor herself. She found joy in it, not caring whether it's a boy or a girl. She would see the baby, but it brought her a lot of happiness. And her husband would be next to her, close to her head. They have a mentality of having a child at an appropriate age. But here, I can't understand anything, just pressure." P1, FGD2

Theme 7: Societal stigma remains one of the largest challenges of provision of mental healthcare provision in Bangladesh.

Respondents offered nuanced perspectives on how mental illness is viewed in society in Bangladesh. While most agreed that most people in Bangladesh do not have positive associations with mental health, some argued that those who are more educated are usually more likely to recognize symptoms and seek professional help. Most were of the opinion, however that people in society generally tend to cause more harm to those experiencing mental health struggles than try and help.

"If a person becomes physically ill from a mental illness, society distances them more, they ask what their problem is, that person is considered sick, what will they do? They don't say anything good about them, they can't control themselves... from such a society, without providing support, they are left behind, that's why society's role is important, to put it simply." P4, FGD1

The prevailing sentiment expressed in the responses was that societal attitudes often contribute to exacerbating the struggles of those facing mental health issues rather than offering a supportive hand.

"And those who have problems, but they always stay silent, alone, they don't talk or laugh with anyone, then they stay silent, but then we need to provide support, tell us what problem you have, share it with us and we can do something, but actually this happens very infrequently. What ends up happening more so it that people will be like, 'oh they're in this situation', rather than helping they will push them in the opposite direction, that 'if you want to die, die.' I mean they'll never say the good things." P3, FGD1

"When it comes to discussing mental health, if someone goes to a counselor, they think they have gone crazy. Mental health means going crazy, they think that way, "Why did they refer me to a counselor". Some are positive, some are negative." P2, FGD1

The lack of resources surrounding mental health and general lack of awareness was brought up as a significant contributor to the pervasiveness of social stigma. However, some participants highlighted how education can work to overcome such stigma.

"People don't have access to mental health support, they don't know what mental health is." P3, FGD2

"I mean there's some people who take it negatively. Those of us who are educated, who understand, we take it positively." P5, FGD2

Theme 8: Midwives' opinions on Rohingya communities and their mental health reveal lack of cultural congruence on both sides

The midwives expressed sympathy towards the Rohingya while commenting on the cultural and religious differences between Rohingya and Bangladeshi populations. They expressed awareness of the disparities in lifestyle, education, and decision-making power.

"To put it simply, what happens is, we can do a lot if we want, in our own way, but they cannot. We can make decisions, earn money, in many cases, even pursue education, but they cannot do that. Now, when we feel unwell, we can seek medical help, but they cannot." P1, FGD1

The lack of autonomy the Rohingya people face due to being stateless and the mental health challenges that could result from that were commented on as well. Speaking on the mental health challenges of the population, one participant explained how the seemingly insurmountable challenges to meet their fundamental needs plays into the deteriorating mental health status.

"If I start talking about one aspect, you see, it's noticeable … among the Rohingya, some understand, some educated families are here ... They say there are so many young children, infants, here. Now we have come to this country, and if we say we want to go somewhere, where will we go? Where will we take so many young children? What will we do? If we don't return to our homeland, there are some who are doing well with these circumstances, but not everyone. They don't have this opportunity like us. That's why many of them are experiencing depression. What will they do with so many young children? Where will they go? How will they earn income?" P3,FGD1

On speaking on the practical challenges the Rohingya people face on being refugees constricted to the borders of the camps, two respondents mentioned that the patients who come to the hospital often come with a large group and are typically more dressed up. The midwives showed a level of awareness of the trauma experienced by refugees can manifest in actions that are atypical.

"If they come to the hospital they come in a very different way. You can see that they are ill, but when they come to the hospital, they dress up very nicely with makeup, because…they are going out somewhere they need to look nice." P1, FGD1

"When they come to the hospital… this is an outing for them so they dress up nicely. They can't go out much, which is why often, four or five people come with the patient, and we have to counsel them, that they can't eat the food on the bed. I mean they don't listen to us, this is what happens." P4, FGD1

Throughout the discussions, there was an evident gap in terms of cultural congruency between the midwives and the Rohingya patients, covering areas such as religion, family planning and medical knowledge. Midwives at the field hospital expressed how a lack of religious congruence impacted physical care delivery, despite the fact that majority of the midwives were hijabi-Muslims, with one respondent saying:

"A lot of the Rohingya say that … this sister is not very covered, I will not take care from her, the sister who is more covered I will take care from her." P3, FGD1

The midwives also spoke on the differences between cultures, expressing some surprise at the difference in healthcare seeking behaviors and medical knowledge of the patients, particularly as overall, Bangladesh performs well in maternal health indicators compared to neighboring countries. Multiple respondents commented on how low ANC visits, TT vaccinations and facility births were among the Rohingya women,

"There were no pregnancy related checkups there; they didn't know that you have to give TT vaccine. That they heard about after they came here. A lot of them gave it when - when the patient's condition gets really bad, is hospitalized, in that case if they know then they give one or highest two doses of TT vaccine, after having had 7-8 children.

"P3: All of them had home deliveries.

P4: They did not know anything about the TT vaccine when they first came here, now they are quite a lot more advanced after coming here."

Another point that was brought up frequently where the midwives felt there was a large gap between Bangladeshi patients and Rohingya patients was around family planning.

"In Bangladesh …people don't take children after two-three. In [the Rohingya's] case, I mean, it is not possible to explain to them that I already had four or had 5, I can't have anymore, it is a risk on my life and is harmful for the child" P8, FGD1

One area of focus was the difference in women's autonomy and decision-making capacity. The participants explained how male-dominated the Rohingya society is compared to Bangladesh, juxtaposing it with Bangladeshi women's autonomy and reproductive freedom. One point mentioned Bangladeshi women's opinions are valued, particularly in the case of family planning.

"Biggest difference is that here, the husband dominates, this is most common in their society. Whatever the husband says, goes." P6, FGD1

"In our Bangladesh, like no we won't have more children, we have to organize our household, raise our children, they don't have that. They are like if the husband says you can't take [birth control], I need more children, in their case it's like whoever has more children the more respect they have, this is what they think." P4, FGD1

A caveat to include here is that the study faces a limitation in that there is no direct input from the Rohingya perspective, and the results reflect the perceptions of the midwives who, by nature of their roles, act from a position of power over the Rohingya women. As such, every effort has been made to ensure the opinions mentioned can be corroborated with data from other verifiable sources.

Sub-theme: Cultural sensitivity training required and desired by midwives

Overall, given the multi-layered challenges faced in treating a refugee population, particularly with regards to mental healthcare, and the added layer of the challenges in providing perinatal mental healthcare, the midwives were all of the opinion they could benefit greatly from specific, cultural sensitivity training on this population, covering cultural differences, and familiarization with the general level of medical care Rohingya women used to receive prior.

"M: Did you receive any specific training for working with vulnerable groups? Did you receive any training for working with the Rohingya population?

All: No

M: So you didn't get any training. If you had the option would you have taken it?

All: Of course.

P2: Then it would be very easy for us. We wouldn't have to face as much then." FGD1

Another factor to underscore the importance of the training required is the fact that most of the healthcare workers working in Cox's Bazaar are recent transplants to the area. Respondents commented on how due to the presence of the refugee camps and the many international and local organizations operating in the region, there are more job opportunities.

"P4: From what I see, those of us who work here, we come here more from outside than locals. .

P5: Cox's Bazar has more job opportunities.

P3: Yes, here.

P2: Especially after the Rohingya influx, job opportunities have increased.

P3: But in our places, it's very limited. That's why we come here."

Table 2: Summary of findings

	Factors Identified in MATRIx Framework as Impacting PMH	**Findings from the study**
Individual Level Facilitators	i) Recognizing that something is wrong ii)Supportive family and friends iii) Previous positive experiences of mental health services iv) Previous mental health diagnoses/symptoms	Midwives identified education plays an important role in recognizing symptoms
		Midwives emphasized importance of husband and other family members creating equitable decision-making in households and its positive impact on PMH
Individual Level Barriers	i) Being socially isolated ii) Family and friends with negative perceptions about perinatal mental illness iii) Beliefs that services only offer medication iv) Family and friends with negative perceptions about perinatal mental illness v) Being from an ethnic minority group, or being younger	Midwives described how mothers are often isolated and do not receive adequate support from family members, during pregnancy and post-delivery
		Midwives mentioned dismissive nature of family members towards mental health.
		Midwives mentioned perception of mothers on mental health and the idea that they would be hospitalized if expressing any mental distress.
		Midwives described how their adolescent patients are not ready for marriage, and their young age makes it difficult to explain maternal healthcare considerations.

Health Professional Level Facilitators	i) Health professionals with valued characteristics (trustworthy, empathetic, kind and caring, with a genuine interest in women) ii) Health professionals having good knowledge and understanding of perinatal mental health iii) Health professionals making time to address perinatal mental health MC	Midwives confident in their ability to build trusting relationships with their patients. Midwives showing empathy and kindness towards patients during pregnancy and delivery.Midwives mentioning counselling their patients who experience "tension", offering consultations with HOPE psychologist
Health Professional Level Barriers	i) Health professionals' poor knowledge about services and referral pathways and perinatal mental health ii) Health professionals having low confidence about carrying out assessments iii) Inadequate provision of perinatal mental health training for health professionals iv) Lack of culturally sensitive care	Midwives admitted lack of clinical knowledge of mental health disorders. Midwives showing hesitation regarding the specifics of counselling provided. Midwives have not received any training on mental health Midwives displayed lack of cultural understanding of refugee population.
Interpersonal Level Facilitators	i) Previous development of a trusting relationship and rapport between health professionals and women ii) Women being able to communicate openly and honestly with health professionals	Midwives confident in their ability to build trusting relationships with their patients. Midwives showing empathy and kindness towards patients during pregnancy and delivery. Midwives mentioning counselling their patients who experience "tension", offering consultations with HOPE psychologist
Interpersonal Level Barriers	Language Barriers	Midwives face language barriers with Rohingya population. Midwives who are from different regions have some level of language barriers with patients who speak the local dialect
Societal Level Barriers	i) Stigma ii) Cultural beliefs about perinatal mental health Maternal norms to be a 'good mother' and a 'strong woman'	Midwives discussed the stigma around mental health, both in general society as well as specific to women in the perinatal period.

Discussion

This study set out to explore midwives' knowledge and attitude regarding PMH, as well as the wider societal issues that impact PMH. The findings included key facilitators, such as midwives' positive attitudes towards mental health, and revealed important gaps - the lack of clinical knowledge, and cultural incongruities with the refugee community. There is limited literature on healthcare providers' perceptions around PMH in Bangladesh, and all but one are limited to data from Dhaka, the capital, which has a higher quality of care available overall than in Cox's Bazaar. Furthermore, midwives have gained prominence in Bangladesh recently, and overall tend to have a lot more face-to-face time with patients [13], and to my knowledge, they have not been interviewed regarding their perception on PMH in Bangladesh, and so this study provides valuable insights for the future.

The results showed that the midwives have positive attitudes towards mental health and are able to recognize multifactorial aspects of maternal mental health, providing a solid foundation on which a PMH training program can be built. These findings align with previous work that assessed attitudes of midwives across HICs and found that they generally tend to have a positive attitude towards mental health problems [19,20]. Consequently, the results of this study highlight the emphasis midwives placed on viewing mental health as a crucial aspect of overall well-being, necessitating proper counselling and treatment, which is markedly different from other literature on the topic in Bangladesh. For example, one study looking at cultural attitudes towards postpartum depression in Dhaka found 50% of HCPs interviewed did not view postpartum depression as a health concern [21].

The midwives also displayed an innate understanding of the multifactorial aspects of PMH, describing physical, emotional, familial, financial and other external factors that can impact the mental health of perinatal women, and also the impact poor maternal mental health could have on the child. The social determinants of PMH issues identified by the midwives align with findings from other studies, based in Bangladesh and other South Asian countries [5,22–24]. Following the MATRIx framework (Table 2), the willingness of health providers to be open to talking about PMH is a key facilitator for healthcare provision. The findings of this study, in line with the broad body of literature on this topic, points to the midwives in the study fitting this specification This sentiment that bodes well for implementation of a mental health provision program, given the general lack of awareness of mental health in Bangladesh

Our results indicate that midwives may be best positioned to provide non-specialist PMH support within HOPE's facilities, given their ability to build trusting relationships with their patients, and aided by the fact that they currently fulfil the role of providing emotional support to some extent. Lay health worker led psychological interventions have been very successful in multiple resource-constrained settings. There is a growing body of literature that indicates PMH care delivery by non-specialists, including nurses and midwives is feasible and effective[25–28]. Participants in the study also emphasized the connection they feel to their patients, with mentions of how their ability to provide quality care impacts their own mental health. Additionally, the midwives working within the Cox's Bazaar communities emphasized their contribution to perinatal women's experience with outreach, empathy, and information as an explanation of how they build trusting relationships and rapport with patients, another key, high confidence facilitator identified in the MATRIx framework (Table 2). Within the scope of relationship building, midwives described how they provide support to women particularly through counseling at delivery. This is in line with the

literature, with one integrative review finding "most of the evidence of the effectiveness of midwife-led counselling comes from interventions for women with childbirth fear or those who experienced emotional distress at birth (rather than a diagnosed mental health problems)" [19], indicating the important role that midwives can play in supporting patients across the spectrum of PMH severity. To the best of my knowledge, midwives in Bangladesh have not been tapped for task-sharing to incorporate mental health care provision, however given the findings of this study and the lack of mental health resources in the country, this may become an effective strategy if implemented.

While the findings indicate some positives for PMH care by midwives, there remains a lot of challenges to address to bring this idea to fruition, such as the midwives' lack of knowledge and skills to address mental health issues, and lack of confidence in their ability to provide mental health support. A similar sentiment is found across literature from other countries – both LMICs and HICs, although most of the research is focused on HICs[19,20,29]. Despite interventions like the mhGAP and calls to integrate PMH into general maternal care[30], and global figures indicating high prevalence rates of perinatal depression, ultimately HCWs are simply not trained on mental health [7,21]. Our findings reflect the global reality as well, with the participants in the study being unable to define common mental health disorders. This leads into the lack of confidence, another key barrier, as well as a commonly cited reason in existing literature, as to why midwives are not able to provide mental health support[19,31–34]. The obvious conclusion to draw here is that any level of training will immediately increase the midwives' ability to identify and counsel those experiencing some level of perinatal mental distress, as evidenced in a study in Nepal [31] where midwives explicitly cited an increase in confidence after receiving maternal mental health training.

In contrast to other studies[19,32], midwives did not cite a lack of support from supervisor/administration as a factor impacting their ability to provide mental health services. While in most cases, the siloing of care delivery, and lack of knowledge of the referral pathway proved to be a barrier, for this study, the midwives seemed to be aware of the referral pathway, despite not utilizing the existing infrastructure at HOPE.

The sociocultural context of Bangladesh is an important consideration for PMH trainings. As is common in this area of the world, midwives spoke on the impact of stigma, cultural norms and family dynamics on women's mental health, and mental health in general. Stigma emerged as one of the main factors identified by midwives, speaking to how mental health of perinatal women is affected. This is well reflected in the literature on this topic, both within Bangladesh[5,7,35] and globally[18,32,36], which highlight the outsized role of stigma attached to mental health, and how that leads to lower healthcare-seeking, and overall worse outcomes for PMH. The findings of this study also focused on the role of family support, in particular the role of decision-makers in the household, the mother-in-law and husband. Midwives described the mother-in-law as a common figure who poses challenges to care delivery in the perinatal period; from limiting access to ANC, facility deliveries, to downplaying the consequences of mental health. Yet another factor that influences maternal mental health, highlighted in previously published literature [5,35,37], is the pressure, both internal and external, to have a boy child. Midwives spoke on how this pressure manifests in their patients and patients' families, recounting how behaviors of the families at delivery are positive if the child is a boy and how this can affect a mother's mental health.

Midwives were able to delineate the difference familial support can make in terms of a "pregnancy journey" as well, pointing out that when husbands are supportive during pregnancy, and equitable

family planning decision-making can take place, women tend to have better mental health. The role of education and locality in women's autonomy were highlighted as moderating factors as well. The differences between Cox's Bazaar and the rest of the country in relation to women and girl's freedom to move, pursue education, prevalence of child marriages was all brought up as contributing factors for poorer mental health of women in the perinatal period. Midwives highlighted the fact that child marriages placed girls in a position where they are not prepared for marital life or raising children; a finding supported by a study from India which found early marriage increases risk for suicidality and depression [38]. Due to a lack of studies, it was not possible to entirely verify the claim that such issues are more pervasive in Cox's Bazaar than the rest of the country, though the review of grey literature found one report from a local NGO that found child marriages had increased post-pandemic. Overall, the midwives stated that while managing family dynamics is one of the most challenging parts of their job, counselling family members accounts for a large portion of their practice.

The findings from this study highlight the gaps in providing PMH care for Rohingya women, particularly language barriers, cultural and medical knowledge incongruency between midwives and patients. The consensus from the broader body of literature on PMH finds demographic similarities and language alignment to be key facilitators for the acceptability and feasibility of care delivery [11,18,19]. In essence, caregivers speaking the same language as patients is important for ensuring acceptability [11]. The midwives identified difference in language as one of their main barriers to providing ANC, in line with the other studies. Previous studies have found specific idioms of distress used by Rohingya that may not translate outside their communities [39]. Other instances of incongruency between midwives and their Rohingya patients included a degree of surprise with regards to patients' knowledge of maternal health needs, with midwives expressing

surprise at the lack of TT vaccinations for women who had already had children, as well as beliefs around family planning and contraception. The midwives also noted, that from the patient side, there was reluctance to accept care from non-hijabi midwives. While it must be noted that this study did not directly engage with Rohingya women, there have been multiple studies that found contraceptive use among Rohingya refugees is hindered by socio-cultural and religious beliefs, including the misconception that Islam prohibits contraceptive use, a desire for larger families and lack of decision-making power regarding reproductive choices leaves women vulnerable to intimate partner violence and marital dissolution [40,41]. The midwives, overall, were able to identify certain specific psychosocial challenges faced by the Rohingya people, including the stress of "stateless lives" and what one study describes as the "daily stressors" refugees have to face, defined as "paucity of basic necessities such as food and shelter, overcrowding and unemployment" [15,39], and the inherent differences in these daily stressors experienced by the refugee population as opposed to the host community. However, they did not speak on the past traumas faced by the refugees, and expressed dissatisfaction with the fact that they were not given sensitivity or familiarization training prior to working with this vulnerable group.

Limitations

Limitations of this study include the small sample size, restricting the breadth of perspectives gathered. Additionally, focusing on a specific group of midwives means the findings may not be generalizable to the broader context of Bangladesh. There may also be social desirability bias in responses, influencing the accuracy of reported attitudes and experiences. Furthermore, the study did not directly engage with Rohingya refugees, thus missing their crucial perspectives on mental health care needs. Lastly, the study did not have independent coders, which may have lead to bias in coding.

Conclusion

Bangladesh has had marked success in improving some maternal health indicators, however, mental health has remained severely under addressed, and PMH has not been a national priority. This study is one of very few exploring perceptions of PMH in Bangladesh, and findings shed light on the perceptions and challenges surrounding PMH care among midwives in Bangladesh, particularly in the context of Cox's Bazaar and the Rohingya refugee population. While midwives exhibit positive attitudes towards mental health and demonstrate an understanding of multifactorial aspects of PMH, significant gaps exist in clinical knowledge and cultural congruency, particularly concerning the Rohingya community. The findings underscore the importance of addressing these barriers to effectively implement PMH interventions, emphasizing the need for language alignment, cultural sensitivity, and tailored training programs for healthcare providers.

Additionally, the study highlights the pivotal role of midwives in delivering non-specialist PMH support, indicating the potential for task-sharing initiatives to improve access to mental health care. Moving forward, targeted efforts are needed to strengthen midwives' capacity in PMH care and address sociocultural factors influencing women's mental health, ultimately working towards more inclusive and effective healthcare delivery in Bangladesh.

References

1. ACOG Committee Opinion No. 757: Screening for Perinatal Depression. *Obstet Gynecol*. 2018;132(5):e208-e212. doi:10.1097/aog.0000000000002927

2. Howard LM, Khalifeh H. Perinatal mental health: a review of progress and challenges. *World Psychiatry*. 2020;19(3):313-327. doi:10.1002/wps.20769

3. McNab S, Fisher J, Honikman S, et al. Comment: silent burden no more: a global call to action to prioritize perinatal mental health. *BMC Pregnancy Childbirth*. 2022;22(1):308. doi:10.1186/s12884-022-04645-8

4. Wang Z, Liu J, Shuai H, et al. Mapping global prevalence of depression among postpartum women. *Transl Psychiatry*. 2021;11(1):1-13. doi:10.1038/s41398-021-01663-6

5. Insan N, Forrest S, Jaigirdar A, Islam R, Rankin J. Social Determinants and Prevalence of Antenatal Depression among Women in Rural Bangladesh: A Cross-Sectional Study. *Int J Environ Res Public Health*. 2023;20(3):2364. doi:10.3390/ijerph20032364

6. WHO report highlights global shortfall in investment in mental health. Accessed November 14, 2023. https://www.who.int/news/item/08-10-2021-who-report-highlights-global-shortfall-in-investment-in-mental-health

7. Dutta GK, Sarker BK, Ahmed HU, et al. Mental healthcare-seeking behavior during the perinatal period among women in rural Bangladesh. *BMC Health Serv Res*. 2022;22(1):310. doi:10.1186/s12913-022-07678-z

8. Islam MdR, Rahman MS, Qusar MS. Community-based decentralized mental health services are essential to prevent the epidemic turn of post-Covid mental disorders in Bangladesh: A call to action. *Health Sci Rep*. 2022;5(4):e734. doi:10.1002/hsr2.734

9. *Guide for Integration of Perinatal Mental Health in Maternal and Child Health Services. Geneva: World Health Organization; 2022.*

10. Nuri NN, Sarker M, Ahmed HU, Hossain MD, Beiersmann C, Jahn A. Pathways to care of patients with mental health problems in Bangladesh. *Int J Ment Health Syst*. 2018;12(1):39. doi:10.1186/s13033-018-0218-y

11. Mendenhall E, De Silva MJ, Hanlon C, et al. Acceptability and feasibility of using non-specialist health workers to deliver mental health care: Stakeholder perceptions from the PRIME district sites in Ethiopia, India, Nepal, South Africa, and Uganda. *Soc Sci Med*. 2014;118:33-42. doi:10.1016/j.socscimed.2014.07.057

12. Nadkarni A, Weobong B, Weiss HA, et al. Counselling for Alcohol Problems (CAP), a lay counsellor-delivered brief psychological treatment for harmful drinking in men, in primary care in India: a randomised controlled trial. *The Lancet*. 2017;389(10065):186-195. doi:10.1016/S0140-6736(16)31590-2

13. Begum F, Ara R, Islam A, Marriott S, Williams A, Anderson R. Health System Strengthening Through Professional Midwives in Bangladesh: Best Practices, Challenges, and Successes. *Glob Health Sci Pract*. 2023;11(5):e2300081. doi:10.9745/GHSP-D-23-00081

14. Sudheer N, Banerjee D. The Rohingya refugees: a conceptual framework of their psychosocial adversities, cultural idioms of distress and social suffering. *Glob Ment Health*. 2021;8:e46. doi:10.1017/gmh.2021.43

15. Riley A, Akther Y, Noor M, Ali R, Welton-Mitchell C. Systematic human rights violations, traumatic events, daily stressors and mental health of Rohingya refugees in Bangladesh. *Confl Health*. 2020;14:60. doi:10.1186/s13031-020-00306-9

16. *Bangladesh Bureau of Statistics (2022) Population and Housing Census 2022: Preliminary Report, Statistics and Informatics Division. Ministry of Planning. Government of the People's Republic in Bangladesh.*

17. Document - Joint Government of Bangladesh - UNHCR Population Factsheet as of October 2023. Accessed November 14, 2023. https://data.unhcr.org/en/documents/details/104687

18. Ayers S, Coates R, Easter A, et al. Conceptual frameworks of barriers and facilitators to perinatal mental healthcare: the MATRIx models. *BJPsych Open*. 2023;9(4):e127. doi:10.1192/bjo.2023.510

19. Coates D, Foureur M. The role and competence of midwives in supporting women with mental health concerns during the perinatal period: A scoping review. *Health Soc Care Community*. 2019;27(4):e389-e405. doi:10.1111/hsc.12740

20. Noonan M, Doody O, Jomeen J, Galvin R. Midwives' perceptions and experiences of caring for women who experience perinatal mental health problems: An integrative review. *Midwifery*. 2017;45:56-71. doi:10.1016/j.midw.2016.12.010

21. Williams A, Sarker M, Ferdous ST. Cultural Attitudes toward Postpartum Depression in Dhaka, Bangladesh. *Med Anthropol*. 2018;37(3):194-205. doi:10.1080/01459740.2017.1318875

22. Patel V, Rahman A, Jacob KS, Hughes M. Effect of maternal mental health on infant growth in low income countries: new evidence from South Asia. *BMJ*. 2004;328(7443):820-823. doi:10.1136/bmj.328.7443.820

23. Insan N, Forrest S, Jaigirdar A, Islam R, Rankin J. Social Determinants and Prevalence of Antenatal Depression among Women in Rural Bangladesh: A Cross-Sectional Study. *Int J Environ Res Public Health*. 2023;20(3):2364. doi:10.3390/ijerph20032364

24. Zahidie A, Jamali T. An overview of the predictors of depression among adult Pakistani women. *J Coll Physicians Surg--Pak JCPSP*. 2013;23(8):574-580.

25. Wang TH, Pai LW, Tzeng YL, Yeh TP, Teng YK. Effectiveness of nurses and midwives-led psychological interventions on reducing depression symptoms in the perinatal period: A systematic review and meta-analysis. *Nurs Open*. 2021;8(5):2117-2130. doi:10.1002/nop2.764

26. Clarke K, King M, Prost A. Psychosocial Interventions for Perinatal Common Mental Disorders Delivered by Providers Who Are Not Mental Health Specialists in Low- and Middle-Income Countries: A Systematic Review and Meta-Analysis. *PLOS Med*. 2013;10(10):e1001541. doi:10.1371/journal.pmed.1001541

27. Asadzadeh L, Jafari E, Kharaghani R, Taremian F. Effectiveness of midwife-led brief counseling intervention on post-traumatic stress disorder, depression, and anxiety symptoms of women experiencing a traumatic childbirth: a randomized controlled trial. *BMC Pregnancy Childbirth*. 2020;20(1):142. doi:10.1186/s12884-020-2826-1

28. Elias A, Seward N, Lund C. Predictors, moderators and mediators of psychological therapies for perinatal depression in low- and middle-income countries: a systematic review. *Camb Prisms Glob Ment Health*. 2024;11:e10. doi:10.1017/gmh.2024.3

29. Hauck YL, Kelly G, Dragovic M, Butt J, Whittaker P, Badcock JC. Australian midwives knowledge, attitude and perceived learning needs around perinatal mental health. *Midwifery*. 2015;31(1):247-255. doi:10.1016/j.midw.2014.09.002

30. Maternal mental health. Accessed May 1, 2024. https://www.who.int/teams/mental-health-and-substance-use/promotion-prevention/maternal-mental-health

31. Mahato PK, van Teijlingen E, Simkhada P, et al. Qualitative evaluation of mental health training of auxiliary nurse midwives in rural Nepal. *Nurse Educ Today*. 2018;66:44-50. doi:10.1016/j.nedt.2018.03.025

32. Xiao X, Ma H, Zhu S, Li Q, Chen Y. The perceptions and attitudes of obstetric staff and midwives towards perinatal mental health disorders screening: a qualitative exploratory study in Shenzhen, China. *BMC Nurs*. 2023;22(1):313. doi:10.1186/s12912-023-01475-7

33. Lasater ME, Beebe M, Gresh A, Blomberg K, Warren N. Addressing the Unmet Need for Maternal Mental Health Services in Low- and Middle-Income Countries: Integrating Mental Health Into Maternal Health Care. *J Midwifery Womens Health*. 2017;62(6):657-660. doi:10.1111/jmwh.12679

34. Rahman A, Waqas A, Nisar A, Nazir H, Sikander S, Atif N. Improving access to psychosocial interventions for perinatal depression in low- and middle-income countries: lessons from the field. *Int Rev Psychiatry*. 2021;33(1-2):198-201. doi:10.1080/09540261.2020.1772551

35. Edhborg M, Nasreen HE, Kabir ZN. "I can't stop worrying about everything"—Experiences of rural Bangladeshi women during the first postpartum months. *Int J Qual Stud Health Well-Being*. 2015;10(1):26226. doi:10.3402/qhw.v10.26226

36. Pokharel A, Philip S, Khound M, et al. Mental illness stigma among perinatal women in low- and middle-income countries: early career psychiatrists' perspective. *Front Psychiatry*. 2023;14:1283715. doi:10.3389/fpsyt.2023.1283715

37. Gausia K, Fisher C, Ali M, Oosthuizen J. Magnitude and contributory factors of postnatal depression: a community-based cohort study from a rural subdistrict of Bangladesh. *Psychol Med*. 2009;39(6):999-1007. doi:10.1017/S0033291708004455

38. Aggarwal S, Francis KL, Dashti SG, Patton G. Child marriage and the mental health of adolescent girls: a longitudinal cohort study from Uttar Pradesh and Bihar, India. *Lancet Reg Health - Southeast Asia*. 2023;8. doi:10.1016/j.lansea.2022.100102

39. Elshazly M, Budosan B, Alam ANM, Khan N, Ventevogel P. Challenges and opportunities for Rohingya mental health and psychosocial support programming. *Intervention*. 2019;17:197. doi:10.4103/INTV.INTV_49_19

40. Islam M, Habib SE. "I don't want my marriage to end": a qualitative investigation of the sociocultural factors influencing contraceptive use among married Rohingya women residing in refugee camps in Bangladesh. *Reprod Health*. 2024;21:32. doi:10.1186/s12978-024-01763-8

41. Khan MN, Islam MM, Rahman MM, Rahman MM. Access to female contraceptives by Rohingya refugees, Bangladesh. *Bull World Health Organ*. 2021;99(3):201-208. doi:10.2471/BLT.20.269779