

Healthcare professionals and pregnant and post-natal women's perceptions of interprofessional collaboration in a maternity care facility: A qualitative study from Botswana

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Abstract

Objective: To explore the perceptions of healthcare professionals and pregnant and post-natal women regarding interprofessional collaboration in a maternity care setting in Botswana, a low-to-middle-income country in Sub-Saharan Africa.

Design: A descriptive qualitative design using in-depth interviews with forty participants, including healthcare professionals and women in maternity wards. Data were transcribed and thematically analysed.

Setting: Antenatal, delivery and post-natal maternity wards in a referral hospital that provides basic and specialist care in Botswana.

Participants: We interviewed 13 pregnant and post-natal women and 27 healthcare professionals in the maternity care wards.

Findings: Participants perceived several interrelated factors that influenced the delivery of interprofessional collaborative care. Interpersonal factors such as poor communication, disrespectful behaviours and inadequate teamwork practices prevented interprofessional collaboration. Other barriers to collaboration included lack of understanding of each other's roles and responsibilities, ineffective coordination of resources, hierarchical power struggles and poor collaborative leadership.

Key conclusions: Effective interprofessional collaboration remains elusive in this maternity care setting. Healthcare systems in low-to-middle-income countries may benefit from interventions for healthcare professionals to learn and practice interprofessional collaborative care.

Keywords: Interprofessional collaboration; Education, Maternity care setting, Teamwork

Introduction

Maternal and neonatal mortality remains a challenge in low and middle-income countries (LMICs), particularly in Sub-Saharan Africa (Nakweya, 2019; World Health Organization et al., 2023). In 2020, an estimated 800 women died from pregnancy and childbirth-related factors daily, of which 70% of global deaths occurred in Sub-Saharan Africa (World Health

Organization et al., 2023). In LMICs, millions of deaths have been attributed to poor-quality care in facilities (Kershaw et al., 2019; Maphumulo and Bhengu, 2019; National Academies of Sciences, Engineering, and Medicine, 2018). Maternal mortality has specifically been associated with human-related preventable factors, including poor teamwork and collaborative practices (Blondon, and Chenaud, 2022; Rosen et al., 2018); poor coordination of resources (Madzimbamuto et al., 2014; Rosen et al., 2018), inappropriate planning, limited access to healthcare services (Mahmood et al., 2018; World Health Organization et al., 2023) and shortage of resources including skilled personnel (Lumadi and Matlala, 2019; Siman and Brito, 2017; World Health Organization et al., 2023).

Internationally, many health systems are trying to address the human-related preventable factors associated with high morbidity and mortality. Interprofessional collaboration (IPC) is an innovative approach to address poor healthcare outcomes, including maternal and neonatal deaths (Schot et al., 2020; Sangaleti et al., 2017; World Health Organization, 2010). Interprofessional collaboration happens when multiple healthcare professionals (HCPs) from different backgrounds meet, interact, work and learn together, and collaborate with clients and their families to deliver comprehensive woman-centred care based on the best available evidence (Reeves et al., 2016, 2017; World Health Organization, 2010). Interprofessional collaboration has many benefits, including improved woman's safety, coordination and utilisation of resources and healthcare services, reduced healthcare costs and improved satisfaction (Lutfiyya et al., 2019; Mahmood et al., 2018; Will et al., 2019). Successful uptake of interprofessional collaboration and education (IPC/E) in clinical care settings is often hampered by ineffective facilitation and poor support for IPC/E initiatives (Davies et al., 2016; Grymonpre et al., 2021). Studies recommend that HCPs receive interprofessional education (IPE) to gain IPC competencies (Reeves et al., 2016; World Health Organization, 2010), such as improving communication and teamwork (Reeves et al., 2017).

Many high-income countries have embraced IPC/E as a practical tool for delivering quality woman-centred care and strengthening organisational performance (Lutfiyya et al., 2019; Mahmood et al., 2018). Despite the benefits of interprofessional collaboration and education (IPC/E), only some LMICs have formal policies supporting IPC/E (Reeves et al., 2016, 2017). One such LMIC is Botswana in Sub-Saharan Africa, which needs better-structured interventions to facilitate and support IPC/E. In Botswana, 99.8% of women give birth in health facilities, where most deaths occur (Botswana, Statistics, 2021; Sinvula and Insua, 2015). A possible solution to reducing maternal mortality in LMICs, Botswana in particular, may be developing and implementing IPC/E interventions that are contextually and culturally suitable (Reeves et al., 2016; World Health Organization, 2010). Before developing an IPC/E intervention, policymakers and managers should explore the existing IPC/E practices in a specific setting. In this article, we report on the perceptions of HCPs and pregnant and post-natal women regarding existing IPC practices in Botswana's hospital-based maternity care facility.

Theoretical framework

This study was guided by the Canadian National Interprofessional Competency Framework (CNICF) (CIHC, 2010), which requires the establishment of positive IPC relationships to achieve safe, woman and family-centred care and quality health outcomes (Schot et al., 2020; Sangaleti et al., 2017; World Health Organization, 2010). We chose the CNICF (CIHC, 2010) to guide our study during the data analysis and discussion phase. The framework describes the essential competencies for effective interprofessional collaborative practice (Smilski and

Parrot, 2019). The six essential IPC competency domains (CIHC, 2010; Smilski and Parrot, 2019) include (1) team functioning, (2) interprofessional communication, (3) role clarification, (4) woman/client/family/community-centred care, (5) interprofessional conflict resolution and (6) collaborative leadership. The framework provides competency statements and descriptors that are detail specific and measure behavioural indicators used to determine the presence or absence of competency. These behavioural indicators include knowledge, attitudes, abilities, values, behaviours, and judgement.

This inductive and deductive descriptive research employed CNICF (CIHC, 2010) components during data analysis to provide common IPC language found in literature and help summarise and reduce the data by aiding in identifying the concepts and data that may be useful (Bingham et al., 2022). In conclusion, employing the framework in deductive analysis ensured that findings were analytically sound, rigorous, and presented in an organised form (Bingham et al., 2022).

Research methodology

Design

This design was a qualitative descriptive study that explored participants' perceptions of existing IPC in a maternity healthcare facility in Botswana (Creswell and Creswell, 2017; Kim et al., 2017). Our analysis was underpinned by the CNICF (CIHC, 2010). The consolidated criteria for reporting a qualitative (COREQ) study guided our reporting (Booth et al., 2014).

Setting

We conducted this study in the antenatal, delivery and post-natal maternity wards of a referral hospital in Botswana that provides basic and specialist care. Botswana is a middle-income country in southern Africa. Approximately 116 women are attended to daily in these maternity wards. Care is provided by a team of HCPs ($N = 140$) which includes midwives ($n = 82$), healthcare auxiliaries ($n = 18$), medical doctors ($n = 23$) and medical students ($n = 4$), psychologists ($n = 6$), social workers ($n = 4$) and dieticians ($n = 3$).

Participants

The target population included HCPs working full-time in maternity wards for at least six months. We recruited 35 healthcare professionals, of which 27 consented to participate. We purposively included women 18 years and older who are the beneficiaries of collaborative care, have experience receiving care in the maternity wards, and were admitted to the antenatal or post-natal wards for at least 48 h. We excluded women in labour. Twenty-one ($n = 21$) women were recruited, and 13 agreed to be interviewed.

Ethical considerations

The Faculty of Health Science Research Ethics Committee approved the study, University of Pretoria (122/2020). The Ministry of Health, Health Research and Development Committee in Botswana and the selected hospital permitted the study—all HCPs and women who volunteered to participate signed informed consent.

Data collection

The authors developed the interview questions, including: 'Please tell me about the current inter-professional collaborative practices in your unit?' followed by probing questions. The interview question for women was, 'Tell me how healthcare professionals work together to ensure you receive good care?'. This question was also followed by probing questions.

The first author (MM) collected the data through face-to-face interviews, allowing participants to freely share their experiences and perceptions (Creswell and Creswell, 2017). The interviews were audio-recorded with permission from the participants. Pilot interviews with two HCPs and three women were conducted to determine if participants understood the questions. The interviews lasted 20 to 60 min and took place between the end of October 2020 and mid-February 2021. The authors rephrased interview questions for women for clarity.

After making minor amendments to the interview guide, HCPs and women were approached, and if they agreed to participate, we arranged a suitable time and date to conduct the interviews. The interviews took place in office rooms in the hospital. We asked HCPs to share their experiences of current IPC in the maternity wards.

The unit managers identified women who met the inclusion criteria and then informed them about the study and its importance. Once women volunteered to participate, we contacted them for permission to interview them. Using a privacy screen at the women's bedside, we conducted interviews at a time that suited them. Women were asked to share how HCPs worked together to ensure good care for women in the maternity wards.

Data analysis

We used an inductive followed by a deductive data analysis approach. As Bingham et al. (2022) suggested, we sorted the themes deductively according to the IPC competency domains described in the CNICF (CIHC 2010). We started with a six-step process using Braun and Clarke's (2006) six-phase thematic analysis framework. In phase 1, we ensured a deeper understanding of the transcription and making meaning of the data by reading and re-reading the transcripts to identify emerging codes (Bingham et al., 2022; Creswell and Creswell, 2017;). During phase 2, we generated themes by organising and grouping emerging codes according to patterns. The second (CF) and third (TH) authors re-coded the data to enhance rigour. After generating the themes, phase 3 followed, where we clustered the themes that communicated something specific about the research question into broader themes (Bingham et al., 2022; Braun and Clarke, 2006). During the fourth phase, we reviewed and modified the themes to examine if they made sense, and subthemes were generated if data supported such extension. In the fifth phase, the authors discussed the data and reached a consensus on the themes of this study. The final phase entailed refining the themes to make sense of the identified themes. We critically examined themes and subthemes to appreciate how they interacted and how the subtheme related to the central theme. Throughout the analysis, we immersed ourselves in the data and extracted direct quotes from the transcribed audio recordings to point to data that is representative of the findings (Bingham et al., 2022). Consequently, supporting themes with direct quotes allowed us to conduct an unbiased inductive analysis (Bingham et al., 2022; Saldaña, 2021) and added depth to the reported findings (Bingham et al., 2022).

After reaching a consensus, we used a deductive approach to reorganise our findings into the CNICF (CIHC, 2010). Deductively, matching data/themes to the CNICF framework helped us understand findings in relation to existing literature and theory of IPC practice, thereby enhancing our findings' rigour. We then concluded our analysis by producing a data analysis report guided by the CNICF framework (CIHC, 2010).

Findings

We interviewed 27 HCPs and 13 women. Some HCPs chose not to participate, citing heavy workload. Eight women chose not to participate because they felt too tired or feared being victimised by HCPs. Participants' demographic information is summarised in Table 1.

Table 1. Demographic information of the participants ($N = 41$).

Participants	Count (%)	Gender	
		Male count (%)	Female count (%)
Healthcare professionals	27 (68)	2 (10
Midwife	12	2	10
Medical doctor	5	3	2
Psychologist	4	2	2
Social worker	2	0	2
Dietician	1		1
Healthcare auxiliary	3	1	2
Women	13 (32)	0	13
Pregnant	4	0	4
Post-natal	8	0	8
	Sub-total: Count (%)	8 (20)	32 (80)

The emerging themes were organised according to the six IPC competency domains described in the CNICF framework (CIHC, 2010) and are presented in Table 2.

Table 2. Domains and related themes.

CNICF framework domains	Themes
Team functioning	<ul style="list-style-type: none"> • Desire and value effective teamwork and collaboration • Varied levels of team cohesiveness • Attitudes influencing effective interprofessional collaboration. • Relational interactions • Shortage of resources
Interprofessional communication	<ul style="list-style-type: none"> • Patterns of interaction • Ineffective information sharing
Women, family, and community centeredness	<ul style="list-style-type: none"> • Fragmented healthcare delivery • The desire for woman-centred care
Role clarification	<ul style="list-style-type: none"> • Role ambiguity results in conflict and delays the delivery of quality care.

	<ul style="list-style-type: none"> • Power struggle as a source of interprofessional conflict and job dissatisfaction
Interpersonal conflict resolution	<ul style="list-style-type: none"> • Interpersonal conflict resolution
Collaborative leadership	<ul style="list-style-type: none"> • Leadership

The findings are presented and supported by quotes from the participants. Each quote is identified by the participant's discipline and the number allocated to the HCP or woman during the interview.

Domain 1: team functioning

Team functioning refers to the collective ability of team members to respect and value effective teamwork to develop and maintain healthy work relationships.

Desire and value for effective teamwork and collaboration

Participants shared a common desire to improve collaboration and teamwork to promote quality care and client satisfaction. Collaboration was described as *'good but needed reinforcement to make it more appealing to all customers, including patients [women]* (Social Worker 1). One of the psychologists pointed out that if the midwife informed them [psychologists] about a woman requiring care, *'we would come immediately to see the patient [women] and then book the patient [women] as an outpatient case'* (Psychologist 2). A woman reflected, *'I wish to see our health care professionals working happily together. It is rare to find a Doctor and a Midwife working together with smiles on their faces or even having to chat and laugh...'* (Woman 1)

Varied levels of team cohesiveness

Healthcare professionals disclosed varying levels of team cohesiveness. Some midwives and doctors could work as team members, while other healthcare professionals complained of weak working relationships. Team cohesiveness was noted when one midwife stated that *'...Our relationship with the doctors is okay because when we are together, we work as a family to an extent where the doctors can even check the vital signs, prepare the patients' [women's]bed...'* (Midwife 5).

In contrast, many HCPs perceived that the teamwork could have been better if other disciplines recognised them and frequently met to engage in shared decision-making to ensure the timely delivery of service. *'It is very difficult to find us meeting with other midwives, but we only meet when a doctor has to check on patients [women] in the wards. That is when we can chat about a patient [woman]; otherwise, there is no time to meet anywhere to talk about these patients [women]'* (Midwife 2). Although the midwives acknowledged that good working relationships with doctors existed, *'the problem is the social workers, dieticians, and the psychologists'* that *'stopped attending the morning meetings'* (Midwife 5)

Attitudes influencing effective interprofessional collaboration

Disrespectful behaviours that hindered effective teamwork, communication and IPC were prevalent in the hospital. Some disrespectful behaviours included *'a midwife just burst out your issue in front of other patients [women] forgetting that we also have rights that need to be protected'* (Woman 7). Another woman indicated that *'Health care professionals, especially midwives, do not have respect for us. They [HCPs] are always furious at us and lack compassion. They [HCPs] also do not have time to help us because they take much of their time on the internet and cell phones.'* (Woman 6). HCPs, undermining women and colleagues, authoritative behaviours, and delayed response to women's needs. The disrespectful behaviour extended to the HCP as *'I [midwife] realised that our interpersonal skills are not acceptable because of toxic relationships, to the extent that doctors sometimes ask to be allocated to partner with midwives who are friendly and willing to assist them'* (Midwife 6). A midwife pointed out that they *'should be treated like human beings and with respect. When we feel that the doctor or psychologist is undermining or ill-treating us, we are also quick to retaliate. When we [midwives] retaliate, who suffers? It is the patient [woman]'* (Midwife 6).

Relational interactions

A serious challenge in healthcare professionals' relationships with each other and women was linked to negative interactions, leading to poor service delivery and dissatisfied women. *'There is not much interaction amongst us [healthcare professionals]. This poor interaction negatively impacts the quality of care rendered to patients [women]'* (Social worker 2). *'Sometimes because of poor communication and poor collaboration, referrals are delayed, and at times patients [women] are referred to us, but when one [social worker] makes follow up to the ward, you will find that midwives are not readily available to show you where the patient [woman] is, we [social workers] end up at times going back to our offices without seeing the women'* (Social worker 2).

Women were frustrated with poor interactions between them and HCPs, *'we [women] are always shocked by midwife's responses, to the extent that we [women] keep on asking each other and wondering if we [women] are safe to be cared for by midwives who do not know what is in our cards [women's records]'* (Women 2).

Shortage of resources

Participants mentioned the shortage of staff as one of the reasons why some HCPs, like *'social workers and psychologists, are not readily available in the ward'* (Midwife 4) to enable them to work collaboratively with other team members. One woman mentioned, *'There must be more staff to help us. I think there is a staff shortage because sometimes staff take too much time to arrive at a patient [woman] for assistance...'* (Woman 4).

In addition, inadequate and inappropriate physical space was perceived as challenging *'because of a lack of resources and undermining our [psychologist] profession, sometimes we [psychologists] go to the ward to see patients [women]; when we [psychologists] get there, you find that there is no room for us to provide psychotherapy to our patients [women]. Sometimes we [psychologists] are given the midwives' or doctors' room to use, and people will be coming in and going as they please, thus invading patients' [women's] privacy'* (Psychologist 2).

Domain 2: interprofessional communication

Responsive, respectful, and transparent communication is essential to promote collaborative practice.

Patterns of interaction

Participants perceived interactions as leader-centred. Although HCPs are supposed to work as equal partners in care, midwives and doctors dominate interactions, hindering communication, collaboration, and teamwork. Midwives were particularly dominant, while other professional groups demonstrated submissiveness. Other HCPs declared that being undermined by midwives made it difficult for them to collaborate effectively. *'This thing of them seeing themselves [midwives] as superior is not sitting well with us [healthcare auxiliary] who are junior; the doctors are okay, but the midwives are the ones that have too much attitude and look down too much upon others, this is not good at all because when you get to work, and someone does not treat you well obviously you are not going to work well...'* (Healthcare auxiliary 1). *'Midwives and doctors are arrogant; they do not want to recognise us [dietitians] as part of the team, that is why they [midwives and doctors] never invite us to their meetings...'* (Dietician 1). Women stated that HCPs *'do not know how to talk to patients [women] properly. When we [women] tell them our [women] problems, they [HCPs,] listen and not take any action towards them'* (Woman 1).

In-effective sharing of information

Delayed feedback, information sharing, and unclear communication structures have resulted in woman's dissatisfaction with care. A woman (4) noted that *'I [woman] have been referred here for a scan, but it is almost seven days now, and nothing has been done, yet no one is giving me an explanation as to why they [HCPs] take long to send me [woman] out for scan...'* Another woman (5) shared, *'I have been admitted here, and yet I do not know why I am in the hospital. Nobody has explained why I was referred here; all I know is that I was told that the hospital would deliver my baby. I don't even know what to say to my relatives.'*

HCPs also complained of limited structured IPC communication tools to facilitate collaboration. Face-to-face interactions are minimal, *'our [HCPs] main communication is that we write on the patient's [woman's] chart; when the doctor arrives, he checks the book and continues with the patient's [woman's] treatment. We work together with the doctor only when we bump into each other in the ward; otherwise, we use the book [women's records] to communicate with him'* (Midwife 3); *'The only form of communication is the referral letters and telephone calls when the midwife reminds us about a patient [woman] we didn't see'* (Medical doctor 1).

Domain 3: woman, family, and community centeredness

For interprofessional collaboration to work, shared decision-making is essential.

Fragmented healthcare delivery

Some women expressed positive views of the services rendered, but many participants viewed that care was fragmented and not personalised to 'women's needs. *'Today, what the midwives*

do is just to help us deliver our babies, and after that, they do not care about the health of the mother and her other needs' (Woman 3)

Healthcare professionals highlighted that care was fragmented because HCPs preferred to work in silos or failed to integrate the expertise of other professional groups into woman's care. For instance, *'as dieticians, we are supposed to co-manage or work closely with doctors so that our dietary plan and education are based on the patient's (women's) diagnosis and the medication she is taking. But in our case, we never created a platform where we could work together and agree on one standard care plan for a patient [woman]* (Dietician 1)

The desire for respectful women-centred care

Participants preferred a healthcare environment where different HCPs, women, family members, and other community members, such as pastors, were involved in women-centred care. For women, family members can help with small tasks, calm pregnant women during the labour period and assist with caring for a newborn while the mother is recovering after giving birth. Some women expressed the need to be involved in decision-making. One woman narrated, *'Even us women, we should be involved in all communication that concerns our health'* (Woman 2)

Similarly, HCPs expressed, *'to enhance collaboration, we need a platform where we can meet face to face or at least virtually because of the current scourge (COVID-19), to discuss patient [woman] issues, plan together and evaluate the outcome of our performance together. If we cannot come together, having a workspace in the cloud would enable us to interact and discuss the patient [woman]. A shared workspace would help us understand how each discipline contributes to the care of women.* (Psychologist 4)

Domain 4: role clarification

Understanding and recognising each other's roles and responsibilities is emphasised to achieve optimal women-centred care.

Role ambiguity results in conflict and delayed delivery of quality care

The role of midwives appeared to be clearly defined, but other HCPs stated that their roles and responsibilities were unclear. *'There are no clear roles mainly for the Health Care Auxiliary because you find them wanting to do duties they are not trained to perform; they [Healthcare Auxiliary] even do what they are not supposed to do. They forget that we [Midwives] are the ones who are supposed to show them what to do'* (Midwife 2).

HCPs complained that, as a team, they seem not to understand the roles of other professional groups, as some disciplines are poorly integrated into women's care activities. *'Sometimes patients' [women's] discharges are delayed or deferred just because I [medical doctor] have to be doing even the simplest job that midwives could have done'* (Medical doctor 2). One patient [woman] said, *'I have also observed that social workers and psychologists are not utilised to provide counselling services. Maybe the midwives should be taught the role that other health care professionals play in our care'* (Woman 7)

Power struggles cause interprofessional conflict and job dissatisfaction

Participants highlighted socio-cultural differences such as age, years of experience and remuneration packages among HCPs as factors influencing hospital power imbalances. *'The age difference between young doctors and experienced midwives was probably why some doctors found it challenging to ask assistance from the midwives'* [Midwife 5]. *'The other sad part is that midwives tend to ill-treat doctors, especially young doctors. For example, right now, they are three midwives per shift in this ward, and they cannot assist with checking temperature and blood pressure. Because I [doctor] want to diagnose women using all the data available; I [doctor] end up having to check vital signs so that I [doctor] can manage my patient [woman] well'* (Medical doctor 2). The woman's perspective was that 'what I [woman] am seeing is competition among midwives and doctors. Some see themselves as being better than others, making it difficult to work as a team [Woman 7]. The difference in the remuneration package was also a source of conflict as evidenced by statements such as *'...some midwives will be reluctant to assist because they feel we [medical doctors] are being paid more and they say why should we (Midwives) work when we are not paid'* (Medical Doctor 1).

Domain 5: interpersonal conflict resolution

Participants are convinced that their inability to manage conflict is one of the reasons why there are misdirected anger, insubordination, and silo practices in the hospital. HCPs explained, *'Our relationship with midwives is not good, which has led to some doctors doing all the work to avoid unnecessary conflict'* (Medical doctor 1); *'Right now, this hospital is managed by junior doctors. So, you can imagine the hostility between midwives and doctors in the entire hospital. I [medical doctor] have learned that to survive in maternity wards, you have to talk less and make friends with midwives in the ward; otherwise, they will stop helping you...'* (Medical doctor 2)

Domain 6: collaborative leadership

Participants linked weak collaborative leadership to poor IPC practice. They advocated for leadership practices that instil mutual trust and respect. Managers should promote relationship building, nurture role modelling and coaching staff on IPC, and resolve conflicts as they arise. *'Right now, doctors do not see eye to eye with midwives, yet nobody is taking that responsibility to identify the issue and put measures to improve our relationships'* (Medical Doctor 1). Women observed that *'midwives appear disorganised and not knowing what they are supposed to do, so the best way to handle these issues would be to teach healthcare workers [HCPs] how to work in an orderly manner and as a collective'* (Woman 8)

Participants highlighted the need for IPC champions and IPC-competent leaders to support, coordinate and monitor IPC/E interventions. For example, one HCP highlighted that *'we [HCPs] cannot achieve collaboration without the involvement of leaders, they talk teamwork, yet they are failing to provide structures that can facilitate us [HCPs] to work as a collective'* (Medical doctor 1). In addition, *'we also need department managers who have good coordination and supervision skills to monitor and coordinate activities between departments'* (Dietician 1).

Discussion

We explored HCPs and women's perceptions of IPC in a maternity ward in Botswana. Participants acknowledged the importance of IPC in the maternity wards, which depends on effective team functioning (Bisbey and Salas, 2019; McGuier et al., 2021). This study reveals mixed feelings regarding the quality of interprofessional collaboration in maternity care wards. Poor teamwork was highlighted as a concern which impeded IPC. Despite a desire to work as a team, the participants shared that existing teamwork negatively impacts service and client outcomes (Madzimbamuto et al., 2014; Rosen et al., 2018). Ineffective team functioning affected performance (McGuier et al., 2021), resulting in delayed treatment (Rosen et al., 2018), fragmented care (Rosen et al., 2018), fear, anger and frustration among HCPs and women (Melkamu et al., 2020; Behruzi et al., 2017). In addition, poor teamwork affected HCPs' performance (McGuier et al., 2021), increased their workload (Galleta-Williams et al., 2020) and conflict (Tosanloo et al., 2019; Behruzi et al., 2017), which reduced their motivation (Rosen et al., 2018) and may contribute to leaving the profession (Galleta-Williams et al., 2020). IPC processes embrace the domains of woman-centred and respectful maternity care and teamwork, which are linked to quality maternal and child health outcomes (Afulani et al., 2018; Shakibazadeh et al., 2018). IPC processes should be addressed in Botswana's maternity care setting to achieve quality healthcare outcomes (Bollen et al., 2019; Reeves et al., 2017).

Our study concurred with studies which revealed that stressful healthcare environments result from the following but are not limited to rigid workplace hierarchy and power imbalances, poorly resolved workplace conflicts, unclear roles and responsibilities, poor staffing levels and shortage of resources. All these produce tensions, hence cultivating a culture of persistent disrespectful behaviour and resistance to collaboration. (LaGuardia and Oelke, 2021; O'Connor et al., 2016; Steihaug et al., 2016). Disrespectful behaviour toward colleagues and women *'not only violates women's rights to respectful care, but can also threaten their rights to life, health, bodily integrity, and freedom from discrimination'* (World Health Organization, 2014, p1). An encounter with disrespectful colleagues impairs an individual's cognitive functioning leading to unsafe practices, medical errors, procedural violations and consequently, adverse health outcomes (*ISMP Medication Safety Alert! Acute Care edition*, 2022). Disrespectful and dominant behaviour appears to be prevalent among midwives, which contradicts previous studies where doctors were viewed as the most dominant and disrespectful HCPs (Grissinger, 2017; Melkamu et al., 2020). Midwives are the backbone of maternity-care settings (Lumadi and Matlala, 2019). Therefore, they must demonstrate respect towards other team members to ensure that women receive dignified, respectful and rights-based care (John et al., 2020; Mohammadi et al., 2018; World Health Organization, 2014).

In clinical settings, structured IPC interventions are needed to facilitate teamwork and collaboration, which includes training, team strategies and tools, and organisational restructuring (Buljac-Samardzic et al., 2020). In our study, participants reported an absence of structured IPC interventions, with face-to-face interactions only happening during chance meetings at the women's bedside. A lack of structured IPC interventions also prevents HCPs from meeting and discussing women's treatment plans, primarily when staff shortages and HCPs are unevenly distributed across clinical settings. In our study, HCPs relied on referral letters and telephone conversations to communicate with other HCPs, such as social workers, psychologists, and dieticians. Effective IPC is challenging to implement in settings with staff shortages (Lutfiyya et al., 2019; Rawlinson et al., 2021). However, Shrader et al. (2016) recommend that to accommodate staff shortages' impact on communication, structured IPC

interventions could include electronic platforms to conduct meetings or engage in shared decision-making (Shrader et al., 2016).

Appropriate, accurate, timely coordinated information sharing is essential for quality health care (Street et al., 2020; Avery et al., 2012). The absence of information sharing may lead to delayed treatment, woman dissatisfaction and increased adverse events related to healthcare outcomes (Street et al., 2020; Avery et al., 2012). In our study, poor information sharing was associated with power imbalances and role ambiguity. Power imbalances were created by various social and cultural factors, with older HCPs dominating younger HCPs, rather than assuming a mentorship role. Power imbalances perpetuate conflict, silo mentality, insubordination, unequal allocation of job responsibilities and questioning others' value or capability in healthcare systems (Rawlinson et al., 2021; Tang et al., 2018; Walton et al., 2020). Abuse of power may also result in dominant team members, such as midwives (this study), assigning tasks to junior team members that are beyond their scope of practice, creating role ambiguity (Schot et al., 2020). Clear delineation of roles and tasks is a core component of effective IPC (Chen et al., 2021; Reeves et al., 2017).

Effective IPC also depends on the availability of a safe workspace (Romijn et al., 2018), which was raised as a concern in our study. A safe workspace promotes face-to-face interactions, free self-expression, and shared decision-making (Hasan et al., 2018; Mohammadi et al., 2018). A safe workspace includes the physical and emotional space to communicate without fear of being judged (Hasan Tehrani et al., 2018). A safe working environment where women can communicate freely without losing their right to privacy preserves woman's dignity (Moridi et al., 2020), which translates to respectful woman-centred care (Afulani et al., 2018; Shakibazadeh et al., 2018)). Privacy in an overcrowded setting is integral to respectful maternity care, as it gives women a sense of security, comfort and dignity (Moridi et al., 2020). In our study, women indicated that their privacy and confidentiality were violated because there was no privacy in the wards, and HCPs would speak loudly in front of clients. In clinical settings, HCPs and senior team members should provide leadership through role-modelling ideal behaviour, such as respecting women's rights and compassionate care, to encourage the same behaviour in junior team members (Hasan et al., 2018).

Leadership is integral to IPC, especially when resolving conflict (Walton et al., 2020). In our study, HCPs voiced unresolved disputes and management's inadequate engagement in conflict resolution. Healthcare leaders in clinical settings are often challenged by complex problems when dealing with different professional groups, which hampers conflict resolution (Figueroa et al., 2019). Strong leadership is required to resolve conflicts between individuals and interprofessional groups (Figueroa et al., 2019; Reeves et al., 2017) for IPC to transpire.

Strengths and limitations

This qualitative study focussed on one maternity care setting in Botswana, exploring HCPs' and women's perception of IPC. We interviewed a variety of HCPs and women, revealing multiple perspectives. The deductive data analysis showed that the findings aligned with the CNICF framework (CIHC, 2010). The HCPs interviewed in our study were not equally represented across disciplines due to a limited number of social workers, dieticians and psychologists. Unequal representation limits validity and transferability to all maternity care settings (Johnson et al., 2020; Creswell and Creswell, 2017). We collected data during the COVID-19 pandemic, which may have affected the direction of the findings.

Conclusion

We explored women's and HCPs' experiences of IPC in a maternity care setting in Botswana and interpreted our findings in line with the CNICF framework (CIHC, 2010). This study reveals mixed feelings regarding the quality of interprofessional collaboration in maternity care wards. Most participants expressed dissatisfaction with interprofessional collaborative care practices, specifically relating to team functioning, respectful behaviours, communication, woman-centredness, role clarification, conflict resolution, resource availability, workload and leadership. Person-centred collaborative practice ensures that women receive the best care and are involved in informed decision-making, ultimately minimising adverse health outcomes. Intensifying the in-service and pre-service training of HCPs by integrating interprofessional collaboration is needed to enhance respectful maternity care. Equipping staff with competencies for collaborative practice was suggested. Future research is required, for example, to develop a work-based IPE training programme and tools for monitoring IPC specifically for maternity care settings in low-to-middle-income countries. Acknowledging the benefits of IPC, structured IPC interventions should be implemented to develop IPC practice for respectful maternity care and consequently improve women's health outcomes.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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References

- Afulani, P.A., Diamond-Smith, N., Phillips, B., Singhal, S., Sudhinaraset, M., 2018. Validation of the person-centred maternity care scale in India. *Reproduct. Health* 15, 1–14.
- Avery, M.D., Montgomery, O., Brandl-Salutz, E., 2012. Essential components of successful collaborative maternity care models: the ACOG-ACNM project. *Obstet. Gynecol. Clin. North Am.* 39 (3), 423–434.
- Behruzi, R., Klam, S., Dehertog, M., Jimenez, V., Hatem, M., 2017. Understanding factors affecting collaboration between midwives and other health care professionals in a birth centre and its affiliated Quebec hospital: a case study. *BMC Preg. Childb.* 17 (1), 1–14.
- Bisbey, T., Salas, E., 2019. Team dynamics and processes in the workplace. *Oxford Research Encyclopedia of Psychology*. <https://doi.org/10.1093/acrefore/9780190236557.013.13>.

- Bingham, A., Witkowsky, P., 2022. Qualitative analysis: deductive and inductive approaches. In: Vanover, C, Mihas, P, Saldaña, J (Eds.), *Analysing and Interpreting Qualitative Data: After the Interview*. SAGE Publications, pp. 133–146.
- Blondon, K., Chenaud, C., 2022. Using an interprofessional lens to analyze serious adverse events in a teaching hospital: an analysis with the TeamSTEPPS® framework. *Health (N. Y)* 14 (12), 1199–1209.
- Bollen, A., Harrison, R., Aslani, P., Van Haastregt, J.C.M., 2019. Factors influencing interprofessional collaboration between community pharmacists and general practitioners—a systematic review. *Health Soc. Care Commun.* 27 (4), e189–e212. <https://doi.org/10.1111/hsc.12705>.
- Booth, A., Hannes, K., Harden, A., Noyes, J., & Harris, J. (2014). COREQ (consolidated criteria for reporting qualitative studies). <https://doi.org/doi/10.1002/9781118715598.ch21>.
- Botswana, Statistics. (2021). Botswana maternal mortality ratio 2019.
- Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. *Qual. Res. Psychol.* 3 (2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>.
- Buljac-Samardzic, M., Doekhie, K.D., Van Wijngaarden, J.D.H., 2020. Interventions to improve team effectiveness within health care: a systematic review of the past decade. *Hum. Resour. Health* 18 (1). <https://doi.org/10.1186/s12960-019-0411-3>.
- Chen, S., Wang, W., Cheng, J., Teng, D., 2021. Activating the benefit of diversity through team role clarity and implicit coordination. *Small Group Res.* 52 (4), 379–404. <https://doi.org/10.1177/1046496420958131>.
- Canadian Interprofessional Health Collaborative (CIHC). (2010). A National Interprofessional Competency Framework. Retrieved 27/10/2022 from <https://phabc.org/wp-content/uploads/2015/07/CIHC-National-Interprofessional-Competency-Framework.pdf>.
- Creswell, J.W., Creswell, J.D., 2017. *Research design: Qualitative, quantitative, and Mixed Methods Approaches*. Sage publications.
- Davies, N., Fletcher, S., Reeves, S., 2016. Interprofessional education in maternity services: is there evidence to support policy? *J. Interprof. Care* 30 (6), 812–815. <https://doi.org/10.1080/13561820.2016.1217833>.
- Figuroa, C.A., Harrison, R., Chauhan, A., Meyer, L., 2019. Priorities and challenges for health leadership and workforce management globally: a rapid review. *BMC Health Serv. Res.* 19 (1) <https://doi.org/10.1186/s12913-019-4080-7>.
- Galleta-Williams, H., Esmail, A., Grigoroglou, C., Zghebi, S.S., Zhou, A.Y., Hodkinson, A., Panagioti, M., 2020. The importance of teamwork climate for preventing burnout in UK general practices. *Eur. J. Public Health* 30 (Supplement_4), iv36–iv38.

Grissinger, M., 2017. Disrespectful behaviour in health care: its impact, why it arises and persists, and how to address it—Part 2. *Pharm. Therapeut.* 42 (2), 74. [https://www.ncbi.nlm.nih.gov/pubmed/35265230/](https://www.ncbi.nlm.nih.gov/pubmed/35265230).

Grymonpre, R.E., Bainbridge, L., Naismith, L., Baker, C., 2021. Development of accreditation standards for interprofessional education: a Canadian Case Study. *Hum. Resour. Health* 19 (1). <https://doi.org/10.1186/s12960-020-00551-2>.

Hasan Tehrani, T., Seyed Bagher Maddah, S., Fallahi-Khoshknab, M., Ebadi, A., Mohammadi Shahboulaghi, F., Gillespie, M., 2018. Respecting the privacy of hospitalised patients: an integrative review. *Nurs. Ethics.* <https://doi.org/10.1177/0969733018759832>, 096973301875983.

ISMP Medication Safety Alert! Acute care edition, 2022. The survey suggests disrespectful behaviours persist in healthcare: practitioners speak up (yet again) – Parts I and II. February 24, 2022 ; 27 (4), 1–5. March 10, 2022; 27(5):1-5. <https://psnet.ahrq.gov/issue/survey-suggests-disrespectful-behaviors-persist-healthcare-practitioners-speak-yet-again>.

John, M.E., Duke, E.U., Esienumoh, E.E., 2020. Respectful maternity care and midwives' caring behaviours during childbirth in two hospitals in Calabar, Nigeria. *Afr. J. Biomed. Res.* 23 (2), 165–169.

Johnson, J.L., Adkins, D., Chauvin, S., 2020. A review of the quality indicators of rigor in qualitative research. *Am. J. Pharm. Educ.* 84 (1), 7120. <https://doi.org/10.5688/ajpe7120>.

Kershaw, C., Williams, M., Kilaru, S., Zash, R., Kalenga, K., Masoli, F., Shapiro, R., Barak, T., 2019. Audit of early mortality among patients admitted to the general medical ward at a district Hospital in Botswana. *Ann. Glob. Health* 85 (1).

Kim, H., Sefcik, J.S., Bradway, C., 2017. Characteristics of qualitative descriptive studies: a systematic review. *Res. Nurs. Health* 40 (1), 23–42. <https://doi.org/10.1002/nur.21768>.

LaGuardia, M., Oelke, N.D., 2021. The impacts of organisational culture and neoliberal ideology on the continued existence of incivility and bullying in healthcare institutions: a discussion paper. *Int. J. Nurs. Sci.* 8 (3), 361–366.

Lumadi, T.G., Matlala, M.S., 2019. Perceptions of midwives on shortage and retention of staff at a public hospital in Tshwane District. *Curationis* 42 (1), 1–10.

Lutfiyya, M.N., Chang, L.F., McGrath, C., Dana, C., Lipsky, M.S., 2019. The state of the science of interprofessional collaborative practice: a scoping review of the patient health-related outcomes based literature published between 2010 and 2018. *PLoS One* 14 (6), e0218578. <https://doi.org/10.1371/journal.pone.0218578>.

Madzimbamuto, F.D., Ray, S.C., Mogobe, K.D., Ramogola-Masire, D., Phillips, R., Haverkamp, M., Montana, M., 2014. A root-cause analysis of maternal deaths in Botswana: towards developing a culture of patient safety and quality improvement. *BMC Preg. Childb.* 14 (1), 231. <https://doi.org/10.1186/1471-2393-14-231>.

Mahmood, M.A., Mufidah, I., Scroggs, S., Siddiqui, A.R., Raheel, H., Wibdarminto, K., Wahabi, H.A., 2018. Root-cause analysis of persistently high maternal mortality in a rural district of Indonesia: role of clinical care quality and health services organisational factors. *Biomed. Res. Int.* 2018 <https://doi.org/10.1155/2018/3673265>.

Maphumulo, W.T., Bhengu, B.R., 2019. Challenges of quality improvement in the healthcare of South Africa post-apartheid: a critical review. *Curationis* 42 (1), 1–9.

McGuier, E.A., Kolko, D.J., Klem, M.L., Feldman, J., Kinkler, G., Diabes, M.A., Wolk, C.B., 2021. Team functioning and implementation of innovations in healthcare and human service settings: a systematic review protocol. *System. Rev.* 10 (1) <https://doi.org/10.1186/s13643-021-01747-w>.

Melkamu, E., Woldemariam, S., Haftu, A., 2020. Inter-professional collaboration of nurses and midwives with physicians and associated factors in Jimma University specialised teaching hospital, Jimma, South West Ethiopia, 2019: a cross-sectional study. *BMC Nurs.* 19 (1) <https://doi.org/10.1186/s12912-020-00426-w>.

Mohammadi, M., Larijani, B., Emami Razavi, S.H., Fotouhi, A., Ghaderi, A., Madani, S.J., Shafiee, M.N., 2018. Do patients know that physicians should be confidential? Study on patients' awareness of privacy and confidentiality. *J. Med. Ethic. Hist. Med.* 11, 1-1. <https://pubmed.ncbi.nlm.nih.gov/30258551>.

Moridi, M., Pazandeh, F., Hajian, S., Potrata, B., 2020. Midwives' perspectives of respectful maternity care during childbirth: a qualitative study. *PLoS One* 15 (3), e0229941.

Nakweya, G. (2019). Sub-Saharan Africa tops maternal deaths globally. *SciDevNet*. Retrieved 31/05/2022 from <https://www.scidev.net/sub-saharan-africa/news/sub-saharan-africa-tops-maternal-deaths-globally/>.

National Academies of Sciences, Engineering, and Medicine, 2018. Health and Medicine Division; Board on Health Care Services; Board on Global Health; Committee on Improving the Quality of Health Care Globally. *Crossing the Global Quality Chasm: improving Health Care Worldwide*. Crossing the Global Quality chasm: Improving Health Care Worldwide.

O'Connor, P., O'Dea, A., Lydon, S., Offiah, G., Scott, J., Flannery, A., Byrne, D., 2016. A mixed-methods study of the causes and impact of poor teamwork between junior doctors and nurses. *Int. J. Qual. Health Care* 28 (3), 339–345. <https://doi.org/10.1093/intqhc/mzw036>.

Rawlinson, C., Carron, T., Cohidon, C., Arditi, C., Hong, Q.N., Pluye, P., Gilles, I., 2021. An overview of reviews on interprofessional collaboration in primary care: barriers and facilitators. *Int. J. Integrat. Care* 21 (2), 32. <https://doi.org/10.5334/ijic.5589>.

Reeves, S., Fletcher, S., Barr, H., Birch, I., Boet, S., Davies, N., Kitto, S., 2016. A BEME systematic review of the effects of interprofessional education: BEME Guide No. 39. *Med. Teach.* 38 (7), 656–668. <https://doi.org/10.3109/0142159x.2016.1173663>.

Reeves, S., Pelone, F., Harrison, R., Goldman, J., Zwarenstein, M., 2017. Interprofessional collaboration to improve professional practice and healthcare outcomes. *Cochr. Datab. System. Rev.* 2018 (8) <https://doi.org/10.1002/14651858.cd000072.pub3>.

- Romijn, A., Teunissen, P.W., De Bruijne, M.C., Wagner, C., De Groot, C.J.M., 2018. Interprofessional collaboration among care professionals in obstetrical care: are perceptions aligned? *BMJ Qual. Saf.* 27 (4), 279–286. <https://doi.org/10.1136/bmjqs-2016-006401>.
- Rosen, M.A., Diaz-Granados, D., Dietz, A.S., Benishek, L.E., Thompson, D., Pronovost, P.J., Weaver, S.J., 2018. Teamwork in healthcare: key discoveries enabling safer, high-quality care. *Am. Psychol.* 73 (4), p433.
- Saldaña, J., 2021. The coding manual for qualitative researchers. *The Coding Manual For Qualitative Researchers*, pp. 1–440.
- Sangaletti, C., Schweitzer, M.C., Peduzzi, M., Zoboli, E., Soares, C.B., 2017. Experiences and shared meaning of teamwork and interprofessional collaboration among health care professionals in primary health care settings: a systematic review. *JBIC Datab. Syst. Rev. Implement. Rep.* 15 (11), 2723–2788. <https://doi.org/10.11124/jbisrir-2016-003016>.
- Schot, E., Tummers, L., Noordegraaf, M., 2020. Working on working together. A systematic review of how healthcare professionals contribute to interprofessional collaboration. *J. Interprof. Care* 34 (3), 332–342. <https://doi.org/10.1080/13561820.2019.1636007>.
- Shakibazadeh, E., Namadian, M., Bohren, M.A., Vogel, J.P., Rashidian, A., Nogueira Pileggi, V., Madeira, S., Leathersich, S., Tunçalp, Ö., Oladapo, O.T., Souza, J.P., 2018. Respectful care during childbirth in health facilities globally: a qualitative evidence synthesis. *BJOG: Int. J. Obstetr. Gynaecol.* 125 (8), 932–942.
- Shrader, S., Kostoff, M., Shin, T., Heble, A., Kempin, B., Miller, A., Patykiewicz, N., 2016. Using Communication Technology to Enhance Interprofessional Education Simulations. *Am. J. Pharm. Educ.* 80 (1), 13. <https://doi.org/10.5688/ajpe80113>.
- Siman, A.G., Brito, M.J.M., 2017. Changes in nursing practice to improve patient safety. *Rev. Gaucha Enferm.* 37.
- Sinvula M., Insua M. (2015) Botswana Maternal Mortality Reduction Initiative. Final Report. Published by the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project. Bethesda, MD: University Research Co., LLC (URC).
- Smilski, A., Parrott, M., 2019. Interprofessional competency frameworks in education. *MedEdPublish* 8 (56), 56.
- Steihaug, S., Johannessen, A.-K., Ådnanes, M., Paulsen, B., Mannion, R., 2016. Challenges in achieving collaboration in clinical practice: the case of Norwegian Health Care. *Int. J. Integr. Care* 16 (3). <https://doi.org/10.5334/ijic.2217>.
- Street Jr, R.L., Petrocelli, J.V., Amroze, A., Bergelt, C., Murphy, M., Wieting, J.M., Mazor, K.M., 2020. How communication “failed” or “saved the day”: counterfactual accounts of medical errors. *J. Pat. Exper.* 7 (6), 1247–1254.

Tang, C.J., Zhou, W.T., Chan, S.W.C., Liaw, S.Y., 2018. Interprofessional collaboration between junior doctors and nurses in the general ward setting: a qualitative exploratory study. *J. Nurs. Manage.* 26 (1), 11–18. <https://doi.org/10.1111/jonm.12503>.

Tosanloo, M.P., Adham, D., Ahmadi, B., Foroshani, A.R., Pourreza, A., 2019. Causes of conflict between clinical and administrative staff in hospitals. *J. Educ. Health Promot.* 8.

Walton, V., Hogden, A., Long, J.C., Johnson, J., Greenfield, D., 2020. Exploring interdisciplinary teamwork to support effective ward rounds. *Int. J. Health Care Qual. Assur.* 33 (4–5), 373–387. <https://doi.org/10.1108/ijhcqa-10-2019-0178>.

Will, K.K., Johnson, M.L., Lamb, G., 2019. Team-based care and patient satisfaction in the hospital setting: a systematic review. *J. Pat.-Center. Res. Rev.* 6 (2), 158–171. <https://doi.org/10.17294/2330-0698.1695>.

World Health Organization (WHO). (2010). Framework for action on interprofessional education and collaborative practice. <https://www.who.int/publications/i/item/framework-for-action-on-interprofessional-education-collaborative-practice>.

World Health Organization (WHO), UNICEF, UNFPA, The World Bank Group and the United Nations Population Division, (2023). Trends in Maternal Mortality: 2000 to 2020 WHO, Geneva, 2023. Available at <https://www.who.int/reproductivehealth/publications/maternal-mortality-2000-2020/en/>.

World Health Organization, (2014). The prevention and elimination of disrespect and abuse during facility-based childbirth: WHO statement (No. WHO/RHR/14.23). World Health Organization.