Original Article

Nurses' and Midwives' Experiences of Participating as Mentees in a Clinical Mentorship Program in Rwanda: Benefits and Challenges

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Abstract

Background
Evidence suggests that clinical mentorship enhances the competence and professional development of nurses and midwives, thereby improving patient outcomes. However, there is limited knowledge of their experience with mentorship programs in Rwanda and similar resource-limited contexts. This study aimed to explore the benefits and challenges faced by nurse and midwife mentees in a clinical mentorship program in Rwanda.

Objectives
The study aimed to understand the specific benefits and challenges mentees experienced in the Training, Support, and Access Model (TSAM) mentorship program.

Methods
An interpretive phenomenological design was used to conduct 28 in-depth interviews with nurse and midwife mentees in selected health facilities in Rwanda. Audio recordings were transcribed and translated into English, and NVivo software was used to organize the data and conduct thematic analysis based on Crist and Tanner's framework.

Results
The analysis revealed three primary themes: 1) developing professional competencies, highlighting new knowledge acquisition and enhanced clinical skills, 2) perceptions of the mentorship process, which included mentorship insights and improvement suggestions, and 3) experiences of support, challenges, and coping strategies.

Conclusion
The findings substantiate the critical role of mentorship in enhancing professional competencies and advancing clinical practice. The insights gained on support mechanisms, challenges encountered, and effective coping strategies underscore mentorship as a dynamic tool for fostering professional development and resilience among nurses and midwives. This study articulates the multifaceted nature of clinical mentorship in nursing and midwifery.

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Background

High maternal mortality ratios (MMRs) and neonatal mortality rates (NMRs) highlight critical global health challenges that necessitate ongoing efforts to enhance health outcomes for mothers and their newborns. [1] Approximately ninety-five percent of maternal deaths occur in low- and middle-income countries (LMICs).[2] In Rwanda, the MMR has declined from 1,071 in 2000 to 259 per 100,000 live births by 2020. This progress in maternal health has also had a favorable impact on newborn outcomes, with the NMR falling from 44 in 2000 to 19 in 2020.[3] However, many neonatal deaths continue to be associated with care-related issues and preventable causes such as birth asphyxia and pneumonia.[4, 5] Research indicates that nurses' and midwives' insufficient knowledge and skills regarding maternal and neonatal care contribute to these poor health outcomes. [5] Nurses and midwives play a vital role in maintaining care systems in numerous LMICs, often serving as the first point of contact for pregnant women, particularly in rural settings.[6]

The challenges associated with delivering high-quality maternal and neonatal care in LMICs are complex and multifaceted. A significant issue is the inadequate competencies among nurses and midwives. [7] Research indicates that these healthcare professionals must engage in continuous professional development (CPD) after their initial licensure to uphold their competency levels and provide evidence-based, high-quality care.[8] Continuous professional development, particularly through on-site clinical mentorship, enables nurses and midwives to enhance their skills while caring for patients.[9] Research indicates that in resource-limited settings, clinical mentorship programs yield positive outcomes, including enhanced knowledge, skills, and self-efficacy among health professionals in the delivery of maternal and neonatal care.[10,11] These programs have also been associated with improved patient outcomes, including reduced mortality rates among mothers and newborns.[12,13] However, a gap remains in understanding the perceived benefits and barriers faced by nurses and midwives participating in clinical mentorship programs in LMICs.

The limited opportunities for CPD among health professionals in Rwanda prompted the Training, Support, and Access Model (TSAM) project to establish a clinical mentorship program. This initiative aimed to enhance the skills and knowledge of nurses, midwives, and other health professionals providing maternal and newborn care in selected health facilities in Rwanda. Despite its importance, there is limited understanding of the program's implementation from mentees' perspectives, and research on mentorship programs in East Africa remains scarce. It is crucial to understand how this mentorship affected nursing and midwifery practice and the quality of client care.

The Training, Support, and Access Model (TSAM) for maternal, newborn, and child health in Rwanda was a $10.5 million initiative funded by Global Affairs Canada from 2016 to 2020. In collaboration with Canadian universities and local Rwandan partners, the project aimed to reduce maternal, neonatal, and child mortality rates in the northern and southern provinces through CPD training and a structured in-service mentorship program. Launched in June 2017 at five district hospitals in the northern province, the project expanded in May 2018 to encompass five additional district hospitals in the southern province. Local health professionals who completed workshops to enhance their mentorship skills served as mentors. The TSAM project involved gynecologists, obstetricians, pediatricians, midwives, and nurses providing mentorship to staff nurses and midwives over six months.[14]

This study examined the perceived benefits and challenges experienced by nurses and midwives who participated as mentees in Rwanda's TSAM clinical mentorship program, thereby filling a gap in the literature on CPD and mentorship for nurses and

midwives in Rwanda and similar LMICs. This study aimed to address the following research question: What benefits and challenges do nurse and midwife mentees in the TSAM clinical mentorship program in Rwanda face? In what ways did mentorship influence the professional competencies of nurses and midwives, as well as the quality of care they provided? Additionally, how have facilitators and barriers shaped mentees' experiences? This paper presents findings on the perceived benefits and challenges of participating in the TSAM clinical mentorship program among nurses and midwives in selected district hospitals in Rwanda.

Methods

Study design and setting

We conducted this study using an interpretive phenomenology design.[15] As a research methodology, interpretive phenomenology facilitates a deeper understanding of the meaning of an experience from the perspectives of those who currently live with the phenomenon or have experienced it.[16] This study was conducted in five selected district hospitals in Rwanda's northern and southern provinces, where the TSAM mentorship program was implemented under the Ministry of Health's direction. The hospitals in the northern region included Byumba District Hospital in Gicumbi District, Rutongo District Hospital in Rulindo District, and Nemba District Hospital in Gakenke District. In the southern region, the hospitals involved were Kinazi District Hospital in Ruhango and Kabgayi District Hospital in Muhanga District. The specific hospital units included in this study were the labor and delivery, neonatology, and pediatric units.

Study population and eligibility criteria

Participants included nurses and midwives who had participated in the TSAM mentorship program and were willing to participate. Participants who were on leave or not providing direct patient care were excluded from this study. Furthermore, individuals who were not on leave but were unavailable during data collection were excluded from the study.

Sample size and sampling procedures

We recruited participants by advertising the study at staff meetings at their district hospitals and through word of mouth. Prospective participants contacted the researcher through phone or email. The snowball sampling method was also used, whereby participants invited their colleagues to contact the researcher for participation. A total of 120 mentees participated in the TSAM mentorship program. The sample comprised 28 nurses and midwives, with 12 from the south and 16 from the north.

Data collection instruments, procedures, and quality control

A semi-structured interview guide was created based on the study's research questions and a thorough review of relevant literature. This guide was developed by the primary author, a graduate student and experienced nurse from Rwanda, in collaboration with her supervisory team, which possesses extensive expertise in qualitative research and nursing education. The team formulated open-ended questions to elicit rich, meaningful perspectives from participants. Data collection took place between August and October 2019. In-depth individual interviews were conducted by a research assistant, an experienced midwife, and a graduate student with prior qualitative research experience. The research assistant received training in qualitative interviewing techniques, ethical research practices, informed consent procedures, and confidentiality.

Interviews were conducted in locations chosen by the participants, such as private rooms in healthcare facilities or at home, to ensure privacy and comfort. Throughout the data collection process, the researchers engaged in reflexivity by reflecting on their positionality and maintaining reflexive notes. Data collection was stopped upon reaching data saturation at the 28th interview. The interviews were conducted in Kinyarwanda,

audio recorded with participants' consent, and lasted approximately 45 to 90 minutes. The audio recordings were transcribed verbatim and subsequently translated into English by the primary author, who is fluent in both languages. All audio and textual data were securely stored on password-protected computers, accessible only to the research team. Participants did not receive any form of honorarium.

Data processing and analysis

Thematic analysis in this study followed the framework of Crist and Tanner.[17] The framework consists of five phases. Phase one, early focus and lines of inquiry, involves the researchers immersing themselves in the data by reading transcripts and listening to audio recordings multiple times to understand participants' lived experiences.[17] NVivo 12.7 software assisted in organizing the data and identifying initial codes.[18] Phase two, central concerns, exemplars, and paradigm cases, involved an iterative process to identify key themes and significant cases. Exemplars represent common meanings in participants' narratives, while paradigm cases are compelling examples that invite deeper interpretation.[17] Phase three, shared meanings, refers to the commonalities in participants' stories after analysis, when themes began to emerge. Member checking with participants was conducted to confirm the identified themes. During phase four, final interpretations, the research team reached a consensus on the themes by reviewing narrative summaries and field notes. The fifth and final phase, dissemination of interpretation, concluded with the public dissemination of study findings through research reports and publications.[17]

Rigor

Recognizing the importance of rigor in qualitative research, we applied Koch's four criteria of rigor in interpretive phenomenology: credibility, dependability, transferability, and reflexivity.[19] To ensure credibility in this study, we conducted in-depth interviews with open-ended questions, allowing participants to share their stories. To ensure data accuracy, we compared the transcriptions to the audio recordings and made any necessary corrections. In addition, we confirmed our interpretations through member checking. Although in-person member checking was preferred, travel constraints and the COVID-19 pandemic made this difficult, so we resorted to phone interviews. Phone interviews lasted for 15 to 30 minutes.

Dependability in interpretive phenomenology refers to the documentation of all steps in the decision-making process throughout the study.[20] We ensured dependability by documenting the steps taken in this study, thus creating a complete audit trail. We ensured transferability in this study by conducting an in-depth analysis of participants' viewpoints and engaging in iterative interpretation within the research team. The goal was to accurately portray participants' experiences within the emerging themes, to inform similar contexts. A detailed description of the study context, including the setting, participant characteristics, and data collection methods, is provided to enable readers to assess the transferability of the findings.

Reflexivity in interpretive phenomenology is crucial for researchers to recognize how their assumptions, beliefs, and experiences may influence the interpretation of data.[21] In this study, we ensured reflexivity by consistently reflecting on our experiences and values related to mentorship. We kept personal, reflexive diaries to document how our perspectives might shape our interpretation of participants' experiences. We aimed to focus our interpretations on participants' viewpoints. Our objective was to foreground participants' viewpoints, allowing their lived experiences to guide the emergence of key themes. The primary author, having received mentorship throughout her professional journey, consciously chose to set aside her own experiences to create space for participants' voices, thereby enriching understanding of their unique perspectives on mentorship.

Ethical considerations

This study was approved by Western University (Project ID: 111866) and the University of Rwanda (File No: 359/CMHS IRB/2019), in line with the Declaration of Helsinki. Participants volunteered to participate and signed informed consent forms. We obtained written permission from administrative district officials to conduct the study after presenting the ethical approval. Letters of permission were provided to district hospital officials for further authorization to interview nurses and midwives. Privacy and confidentiality were observed. Participant privacy and confidentiality were upheld throughout the research process by obtaining informed consent and conducting interviews in private settings. All audio recordings and transcripts were de-identified and securely stored on password-protected computers, accessible only to the research team. Findings were presented in aggregate form, using anonymized quotations to protect participants' identities. In accordance with Western University's guidelines, the research data will be destroyed seven years after the study's completion.

Results

Participants' profile

The study comprised 28 participants, including 16 registered midwives and 12 registered nurses. The gender distribution favored females, with 23 participants identifying as female and five as male. The age range of participants spanned from 29 to 54 years, suggesting a relatively experienced group with diverse professional backgrounds. Regarding educational qualifications, 23 participants held an advanced diploma, whereas the remaining five held a bachelor's degree. Participants were recruited from various hospital units: 14 from labor and delivery, 12 from neonatology, and two from pediatric units. Regarding professional experience, 11 participants had between one and five years of service, 12 had six to 10 years, and five had more than 11 years of service. Regarding exposure to mentorship under the TSAM program, eight participants attended three to five sessions, 12 attended six to 10 sessions, seven attended 11 to 15 sessions, and only one attended 16 or more sessions.

Themes	Sub-themes
Developing professional competencies	Acquiring new knowledge and skills and refining existing competencies
	Enhancing clinical decision-making abilities
	Improving intra/interprofessional collaborative practice skills
Perceptions of the mentorship process	Insights about the meaning of mentorship
	Recommendations for enhancing mentorship outcomes.
Experiences of support, challenges, and coping strategies.	Presence of support
	Challenges and strategies employed to navigate obstacles

Theme 1: Developing professional competencies

Sub-theme 1: Acquiring new knowledge and skills and refining existing competencies

Nurses and midwives participating in this study have reported that the TSAM mentorship program has enabled them to acquire and update their knowledge. Providing competent care is a core value of professional nurses and midwives. This aligns with the code of ethics for nurses developed and revised by the International Council of Nurses (ICN) in 2021, which specifies that *"nurses carry personal responsibility and accountability for ethical*

nursing practice, and for maintaining competence by engaging in continuous professional development and lifelong learning."[22, p.12] The findings from this study have highlighted the importance of enabling post-graduation in-service learning opportunities for staff nurses and midwives, particularly in resource-limited settings. The following participant has indicated that in their story:

> "*My knowledge has increased about Helping Baby to Breathe. We learned this technique while learning to manage the first minute of a newborn's life, a period known as the golden minute. This learning reminds me that helping a baby breathe requires special attention. I learned this technique in such a way that I mastered it*" (MDHLD03).

Participants noted that the TSAM mentorship program helped them develop essential skills to provide better care for mothers and their babies. Many revised incorrect techniques, allowing them to unlearn faulty routines and adopt current, evidence-based procedures. As a result, they have enhanced the care offered to families, as one participant shared: *"… I thought I should proceed by the vaginal touch to verify if what she was saying was true. The mentor told me that vaginal touch is forbidden in case of premature rupture of membranes; I was told that it is better to use the speculum to check if the membranes had really ruptured."* (MDH2LD27).

Sub-Theme 2: Enhancing clinical decision-making abilities

Clinical decisions by staff nurses and midwives are crucial for care outcomes in Rwandan district hospitals. Nurses and midwives handle various responsibilities, including patient reception, initial assessments, and determining the need for doctor consultation. In Rwanda, nurses and midwives are often the first point of contact for pregnant women in labor and delivery units. They work in various clinical units providing a wide range of neonatal and maternal care in Rwandan health facilities. Nurses and midwives monitor labor, conduct uncomplicated deliveries, and provide postpartum care. It is not unusual for mothers and their babies to be discharged without a doctor's examination if no complications are detected, especially in rural district hospitals. Many nurses and midwives who participated in this study reflected on their experiences of the TSAM mentorship program as an opportunity that enhanced their ability to make timely, comprehensive clinical decisions across simple, non-urgent, urgent, and complex clinical situations presented by mothers and newborns. Often, participants in this study recalled saving their clients' lives through newly acquired clinical decision-making skills. One participant put it this way:

> *"…A mother came from a health centre… sometime back, before the mentorship program, a mother could come transferred from a health centre due to PPH [post-partum haemorrhage], bleeding with suspicion of cervical tear; we used to keep her waiting until the doctor was ready because we thought it was only the doctor who could decide about what must be done. But since I participated in the TSAM mentorship program, since we learned enough through this program and got the knowledge and boosted our confidence … based on what we had learned, we treated her…"* (MDH6LD03).

The previous narrative illustrates how participants have enhanced their clinical decision-making skills, enabling them to apply competencies effectively in critical client situations. As noted by participants in this study, these skills have played a crucial role in saving patients' lives. In addition to improving nurses' and midwives' clinical decision-making, this example underscores the importance of mentorship in promoting autonomous nursing and midwifery practice.

Making the right clinical decision often requires nurses and midwives to advocate for specific care that other members of the interprofessional healthcare team are licensed to provide. One participant in this study noted that their advocacy skills improved after engaging in

the TSAM mentorship program:

"Before mentorship, we did things in routine ways. But today, we follow the protocols. And some doctors might not know the protocols. So, when we are with such a doctor, we must take the lead. We remind such doctors of the protocols we learned through mentorship. We try to share ideas. For example, if a doctor prescribes something that does not comply with the protocol, I may advise them to review it and warn that what is written does not comply with it. All these are done based on the knowledge I got from mentorship" (NDH7N08).

This example showcases the courage of nurses and midwives in advocating for their clients. It emphasizes the role of mentoring programs in empowering these professionals. In resource-limited settings, many nurses and midwives face structural barriers, including unsupportive policies, fear of rejection, and power imbalances that hinder effective advocacy.

Sub-Theme 3: Improving intra/ interprofessional collaborative practice skills

This study defines mentorship as a relationship in which a more experienced professional (mentor) supports a less experienced professional (mentee) in their professional development. The TSAM mentorship program encouraged interactions among mentors and mentees from the same or different professions, such as nurses mentoring nurses or midwives and physicians mentoring each other. These relationships allowed mentees to develop essential skills, making mentorship effective and applicable in practice.

The thematic analysis has revealed several inter- and intraprofessional collaborative skills that mentees have developed through their participation in the TSAM mentorship program. The main skills identified by participants in this study include teamwork, supported by mutual respect and trust between mentees and mentors; effective inter- and intraprofessional communication; and shared leadership.

Teamwork and sharing knowledge and experience were seen as an important part of the mentorship experience, as one participant shared: *"We worked as a team. We shared knowledge. We talked about everyone's experience. We tried to harmonize it to get what is good that would help*" (NDH1N11). Similarly, another participant shared how the mentor would support their learning with feedback as they were working together: *"Because we worked together, the mentor was monitoring my performance. The mentor proposed corrections where I missed and congratulated me where I did well"* (MDH2LD30). Another participant reflected on how they successfully collaborated with their mentor while managing a life-threatening case: *"One day, there came a mother. We monitored the labor and the mother gave birth without any problem. But after delivery, the PPH [post-partum haemorrhage] occurred. We searched together what could cause that haemorrhage and fixed it"* (MDH4LD21).

Theme 2: Perceptions of the mentorship process

Sub-Theme 1: Insights about the meaning of mentorship

For many participants in this study, the meaning of mentorship was closely tied to its value in their professional development. Participants emphasized the importance of mentorship within their familiar work environment, as mentors came to them rather than the traditional approach of seeking training opportunities outside their health institutions. This important aspect of in-service mentorship allowed participants to deepen their knowledge and skills, apply newly acquired competencies immediately, network with experienced mentors, and earn a living while providing patient care. Reflecting on what mentorship meant for them as a nurse, one participant stated:

"Mentorship was a great opportunity for me as I worked with experienced nurses and physicians who mentored us, and I learned a lot from them. I could continue to receive their support even after the mentorship had ended. Everyone who participated in this program can attest to the significant

improvement they experienced, both as individuals and as professionals; we all grew substantially. It was really a good opportunity for our careers" (NDH5NP16).

Providing CPD opportunities for nurses and midwives enhances the quality of healthcare. Mentorship not only benefits mentees but also enhances patient care. Participants in this study noted that gaining and refining skills through TSAM mentorship positively impacted the quality of care. One participant shared their thoughts on the meaning of mentorship: *"As I improved my knowledge, in the same way, I improved the quality of the service I provide to mothers and their children..."* (NDH1N11).

Sub-Theme 2: Recommendations for enhancing mentorship outcomes

Nurses and midwives in this study suggested improvements to mentorship, including better communication, greater access to equipment, longer mentorship duration, expanding the program to all staff, offering monetary incentives to mentees, and revising the mentorship program's content areas.

Better communication

Effective communication among all parties involved in planning and delivering mentorship activities is crucial for enhancing participants' experiences. If mentors had coordinated in advance with health facilities, staff would have been better able to organize mentees' schedules to facilitate their attendance at mentorship activities. This participant put it this way:

"The first change to suggest is to communicate on time. If a mentorship is to be established, it would be better to communicate beforehand and set the monthly schedule. Many times, they [mentors] communicate in the middle of the month. Some staff members may be on leave, making it difficult to have mentees for three successive days. It requires planning successive night shifts for those who are not mentees. It is difficult for the hospital..." (NDH5N18).

Access to equipment

Participants emphasized the importance of providing proper equipment and materials in the mentorship program. Many expressed that access to mannequins and other resources would enhance learning outcomes, allowing mentees to practice procedures before working with actual patients. Most participants also voiced concerns about the risk of making mistakes on patients without prior practice in a controlled environment. The following quote captures this point:

"Second, it is to prepare enough materials for teaching. During mentorship, we used only the materials we had in our service. There are many materials we don't have. For example, if we had an infusion pump, we would learn how to use it. So, it would be better if all the materials used in our hospital were made available during mentorship so we could learn how to use them" (NDH5N18).

Another participant shared the importance of learning using mannequins before practicing on actual patients for the mastery of the procedures and limiting mistakes: *"For example, it is rare to have the coincidence of learning about managing the fetal distress and find the case in the hospital. It would help to have mannequins for practical exercises"* (MDH5PP19).

Longer mentorship duration

Participants expressed concerns about the limited time available with their mentors, which hindered their ability to develop proficiency in clinical procedures. The TSAM mentors typically visited their assigned district hospitals for three consecutive days, once per week per month, for an average of six months. Many participants suggested that increasing the time spent on mentorship would be beneficial. One participant said, *"The challenge was the little time mentors spent with us. When they came, they used to spend three days. They used to come at least once a month. The three days they used to spend with us were insufficient"* (NDH5NP16).

Furthermore, participants would want mentorship to be included in their regular workloads. Reflecting on the need to have regular mentorship, one participant stated:

> *"The mentorship should be made regular. For mentorship to occur after three or four months is quite long. The mentorship should be regular to benefit mentees who must be focused until completion. The mentorship should be planned and not happen in an unexpected and unplanned way"* (MDH4LD22).

Expanding the program to all staff

Participants emphasized the importance of involving staff nurses and midwives in mentorship, noting that all healthcare professionals should engage in mentorship to ensure optimal client care. They stressed the need for ongoing CPD beyond initial license registration, given the rapid evolution of healthcare knowledge. Many participants viewed mentorship as essential for bridging the gap between outdated and new evidence-based practices. One participant reflected on this: "*The mentorship would not be selective; instead, it would be inclusive…it would be better if all healthcare professionals learned together to gain the same level of knowledge"* (NDH2N29).

Offering monetary incentives to mentees

Some participants believed that offering monetary incentives to mentees could enhance their experience in mentorship activities. For example, the following participant has expressed the need to pay mentees or provide refreshments: *"I would suggest mentees could receive a financial motivation when they participate in mentorship. You know, money contributes to improved life welfare"* (NDH5NP16). *"You know, the mentorship can be mentally and physically consuming. So, there is a need for refreshments to restore energy. I mean to be provided at least water… to be given something to compensate for the consumed energy"* (MDH2N24).

Nurses and midwives in the TSAM mentorship program volunteered without compensation. While many felt fortunate to enhance their skills, some noted that financial incentives could have improved their experience: *"Another challenge was about the financial support. As it was, we had to sacrifice ourselves; we didn't ignore that we were seeking knowledge, but we wished if it had been possible to provide a per diem to mentees"* (NDH5NP16).

Revising the Content Areas of the Mentorship Program

Many participants felt that the mentorship did not cover topics more relevant to their practice. Specifically, in maternal care, participants expressed a desire for more guidance on pregnancy monitoring, echography, and abortion management. One participant summarized it this way:

> *"If it were in my hospital, I would focus on the management of abortion… the management of abortion cases is still a problem in our hospital. One person in the OPD [Outpatient Department] treats such a case normally. However, you may find a client hospitalized for a whole week for that problem. This is an exposure to infection. It is also a waste of time; instead of being in the hospital, the client would be at home doing other things"* (MDH2LD27).

For labor and delivery care, participants mentioned labor monitoring, delivery, and the prevention and treatment of neonatal asphyxia as the primary content topics they would add to the TSAM mentorship program. Other topics participants would wish to see in future mentorship activities included postpartum care, family planning, infection control, and managing PPH. One participant explained that point as follows: *"I would emphasize PPH because I have seen many complications, many challenges are related to inappropriate management of PPH, which would worsen the situation of the expectant mother"* (MDH6LD03).

Mentees' additional topics for neonatal care include neonatal resuscitation, care for preterm babies on Continuous Positive Airway Pressure (CPAP), prevention of hypothermia, management of hypoglycemia, and treatment of jaundice.

One participant highlighted the need to focus on neonatology: *"I would emphasize the neonatology area. Normally, nurses do not know much in this area. Nurses often only have the basic knowledge"* (NDH4N25).

Theme 3: Experiences of support, challenges, and coping strategies

sub-theme 1: Presence of support

Mentees experienced support from their mentors, colleagues, and institutional administrative staff.

Support Received from Mentors. Participants shared how their mentors supported their learning through tangible actions, such as providing professional guidance and advocating for necessary resources. Mentors also provided emotional support, making mentees feel ready to learn. By using facilitation, advocacy, and role modeling, mentors enhanced mentees' learning experience. One quote reflects the sentiments of many regarding the mentors' support:

> *"The first is the attitude of our mentors. They did not come with a complex of superiority…our errors were corrected gently by showing the model to be imitated. Mentors also helped with the work organization, the hospital setting, and how we receive patients…Mentors helped us get the necessary materials from the administration. This enabled us to improve the quality of our service"* (MDH5N17).

Support Received from Colleagues and Institutional Administrative Staff. The TSAM mentorship occurred in hospital units where nurses and midwives balanced patient care with mentorship activities. This could cause challenges due to heavy workloads and urgent care needs, affecting mentees' availability for mentorship. Mentees noted that their colleagues supported them by being flexible with schedules, helping to ease some of the pressure. One participant said, *"We managed to ask for arrangements from our colleagues and exchanged shifts. Instead of working at night, I could be facilitated to work during the day to be available for mentorship. This arrangement could be done at the level of colleagues"* (MDH7LD04).

Speaking of the support they got from their colleagues, another participant observed: *"Other persons who supported are my colleagues at work. I learned with my colleagues, and we revised together; that way, we did not forget anything because all was done in a team"* (NDH1N11). Participants also shared how their institutional administrative staff facilitated a positive experience during mentorship activities. The institutional support related to flexible schedules and the availability of materials and equipment needed for mentorship activities, to name a few. For example, one participant stated: *"Every time when mentors came, we were made available for mentorship. It is the hospital administration that gave us the permission" (NDH1NP14).*

Sub-Theme 2: Challenges and strategies employed to navigate obstacles

Participants generally found the TSAM mentorship professionally satisfying and helpful in improving their competencies in caring for mothers and newborns. Nonetheless, mentees faced challenges while simultaneously participating in mentorship activities and fulfilling work obligations. One participant summarized their experienced challenges as follows:

> *"The challenge was when we had to work during the day and night because of staff shortage. Another challenge was when a mentee had to manage mentorship and the hospital's routine work simultaneously… Another challenge was the insufficiency of materials"* (NDH2N29).

Shortage of staff

Participants in this study identified staff shortages as a major challenge. The shortage of nurses and midwives meant mentees struggled to fully engage in TSAM mentorship activities because of their regular duties. However, this difficulty prompted mentees to become creative and assertive in delivering client care. One participant noted how they would step in to receive recommendations meant for an unavailable doctor:

"…It could happen that the generalist doctor who would be mentored in neonatology was moved to another service…That was a challenge, and sometimes his/her presence was necessary, but the doctor would not be available. So, I became the only one to be mentored during the session, and I had to address the recommendations aimed at the doctor and the recommendations aimed at myself as a nurse…" (NDH7N06).

Insufficiency of equipment and materials

Participants noted the shortage of essential materials and equipment, such as resuscitation supplies, as a significant challenge that could hinder the quality of care they provided. One participant put it this way:

"The challenge is to have many children when we have insufficient materials. For example, many children need assistance breathing when we don't have enough materials and must borrow them from various sources. For example, we do not have proper materials to do CPAP, …it is quite challenging" (NDH1N11).

Nonetheless, some participants shared that they tried to think outside the box and devised creative ideas to address the shortage of materials. One participant said, *"The first challenge is the lack of materials for some procedures. In this case, we find another alternative from our own"* (MDH7LD05).

Lack of protected time to learn

Lack of protected time to learn, as experienced by participants in this study, was also a reflection of a shortage of staff and high numbers of clients: *"We sometimes could be overwhelmed by so much work. The problem was only that we could get tired because of too much work. Sometimes we had a big number of patients to treat"* (NDH1N26). In addition, participants in this study have shared how they had trouble finding time to participate in mentorship activities since they were still required to provide regular client care: *"I was challenged when mentors came the day I had a night shift. You understand, I had to work during the day and night"* (NDH1N10). Learning in clinical settings after a night shift can be stressful and pose safety risks.

Discussion

The aim of this study was to explore the experiences of staff nurses and midwives who participated as mentees in the TSAM program at selected health facilities in Rwanda. Specifically, the study aimed to identify the benefits and challenges perceived by nurses and midwives involved in the program. The key findings reveal several benefits for nurses and midwives, including the acquisition of new knowledge and skills, refinement of existing competencies, enhanced clinical decision-making, and improved collaborative practice skills within and across professional groups. However, participants also voiced several challenges, such as staff shortages, inadequate equipment and materials, and a lack of protected time for learning through mentorship. Additionally, participants offered several suggestions for enhancing future mentorship programs. These included fostering better communication among hospital administrators, mentorship program leaders, mentors, and mentees; increasing access to necessary equipment; extending the duration of mentorship; broadening participation to include all staff nurses and midwives; providing financial incentives for mentees; and revising the mentorship program content to better align with the scopes of practice and the contextual needs of patients.

The increase in knowledge and skills that participants discussed as a result of participating in the TSAM mentorship program aligns with the findings of several previous studies evaluating the effects of mentorship programs on healthcare providers in resource-limited settings.[23-26] A mentorship program focused on Emergency Obstetrics and Newborn Care (EmONC) competencies, designed for frontline healthcare workers, including nurses and midwives in three rural Eastern Uganda districts, for example, was shown to improve neonatal and maternal competencies among participants and resulted in improved outcomes for mothers and their babies.[24]

Similarly, a study evaluating the effects of a mentorship program on neonatal CPAP knowledge and skills in a resource-limited setting in Malawi found that participants improved their knowledge and skills regarding CPAP, and more neonates were saved by using these machines following the mentorship.[27] A mentorship program delivered to nurses in Nepal also yielded similar results. As a result of the mentorship in Nepal, nurses' knowledge and skills for neonatal resuscitation have been enhanced. [25]

The design and focus of a cascade mentorship in Uganda were comparable to those of the TSAM mentorship.[24] For example, both mentorship programs used central-level mentors to train local mentors in maternal and neonatal care topics, including postpartum hemorrhage and neonatal resuscitation. Local mentors then provided in-person, on-site mentorship to health workers in their facilities in both mentorship programs. Additionally, both mentorship programs focused on enhancing the maternal and neonatal care competencies of health professionals in rural health facilities.[24] On the other hand, the mentorship program in Malawi was based on peer mentors assisting their colleagues in strengthening their knowledge and skills in practice.[27] The findings from the three mentorship programs, however, are similar in showing an increase in mentees' competencies.

A notable finding from this study, which was not consistently reported in other studies, particularly in the context of East African countries, is the impact of the TSAM mentorship program on the clinical decision-making of staff nurses and midwives (as shown in Table 1). Participants in this study consistently reported that their ability to make timely clinical decisions, often in life-threatening situations, was enhanced after participating in the TSAM mentorship program. This enhanced clinical decision-making has enabled staff nurses and midwives to provide better care for mothers and babies in their care, as many participants in this study shared.

Clinical decision-making in nursing practice, used interchangeably with clinical judgment in nursing practice, refers to "an inter¬pretation or conclusion about a patient's needs, concerns, or health problems, and/or the decision to take action (or not), use or modify standard approaches, or improvise new ones as deemed appropriate by the patient's response"[27, p. 204]. This definition shows that making the right clinical decision at the right time is primordial for better client outcomes. The ability to make sound and timely clinical decisions was very accurate in this study, as participants shared how they were able to enact life-saving actions for mothers, especially those presenting with pregnancy-related complications such as post-partum hemorrhage due to cervical tears that a nurse or midwife could manage with the right competencies and without waiting for a doctor or other professional to help. In their concept analysis, Johansen and O'Brien emphasize the importance of knowledge and experience as key attributes in decision-making in nursing practice.[28] The TSAM mentorship program has enabled nurse and midwife mentees to acquire knowledge, skills, and experience, thereby enhancing their clinical decision-making abilities. Enhancing clinical decision-making is essential in this study because, in Rwandan district hospitals where this study was conducted, nurses and midwives provide a wide range of maternal and neonatal care services, including labor monitoring, deliveries, and neonatal care.

Structural workplace conditions

The findings from this study confirm what other studies have identified regarding the structural conditions that influence nurses' and midwives' experiences of mentorship programs in resource-limited settings. [29] The thematic findings from this study highlighted heavy workloads, staff shortages, insufficient equipment and materials, and a lack of protected time to learn as roadblocks to mentees' full engagement in mentorship activities. A study conducted in Ghana, Mozambique, Rwanda, Tanzania, and Zambia examined mentorship programs for

health professionals, including nurses and midwives. Mentees who participated in those programs faced challenges such as high client volumes, limited human resources, insufficient mentoring time, and a lack of materials.[28] Likewise, in a study conducted to evaluate the experiences of mentors and mentees participating in a mentorship program designed to enhance reproductive, maternal, and newborn health services in a rural region of Tanzania, financial constraints, staff shortages, limited time, and the lack of institutional managers' support were among the most cited challenges to mentoring.[10] Similarly, nurses and midwives who participated in a mentorship program in the rural eastern province of Rwanda have highlighted the lack of necessary equipment and materials as barriers to using the knowledge and skills they acquired through the mentorship.[29]

Study strengths and limitations

To the best of our knowledge, this study was the first to use an interpretive phenomenological design to explore the experiences of nurses and midwives regarding the benefits and challenges of participating as mentees in Rwanda's TSAM clinical mentorship program. The findings shed light on the contextual factors that influence in-service mentorship programming in resource-limited settings, particularly considering high patient-to-nurse ratios and shortages of equipment and materials. A comprehensive understanding of the experiences of nurses and midwives participating in the TSAM mentorship program provides valuable insights into the limited body of knowledge on their professional development in LMICs after initial licensure. However, the study's limitations include its small sample size, a common constraint in qualitative research, and the small number of district hospitals involved. While the findings may offer useful perspectives for similar contexts, they cannot be generalized to Rwanda's broader national landscape, nor can they be applied to regional or global settings. Future robust studies, such as longitudinal studies and randomized controlled trials, are essential to more definitively establish the causal effects of mentorship for nurses and midwives on maternal and neonatal outcomes. These research designs can provide more data on the effectiveness of mentorship programs and their impact on healthcare quality and patient outcomes in maternal and neonatal care settings.

Study implications

Although constrained by the small sample size inherent to qualitative studies, the findings highlight the importance of ongoing professional development and mentorship for nurses and midwives in resource-limited settings. Key recommendations include establishing standardized yet flexible mentorship frameworks, enhancing support systems in healthcare institutions, and focusing on decision-making scenarios through simulations and case discussions. Collaborative mentorship strategies should be promoted to strengthen interprofessional collaboration among healthcare providers, thereby improving patient-centered care and patient outcomes. Additionally, mentors need training in both technical skills and interpersonal support to build effective relationships with mentees. Policymakers are urged to anticipate challenges and allocate the necessary resources, including time, equipment, and financial incentives, to sustain mentorship programs for nurses and midwives.

Conclusion

This study demonstrated that nurses and midwives who participated in the TSAM mentorship program in Rwanda acquired new knowledge and skills, enhanced their clinical decision-making, and improved their intra- and interprofessional collaboration. On the other hand, challenges for nurses and midwives participating in this program included heavy workloads, staff shortages, insufficient equipment and materials, and a lack of protected time to participate. The findings of this study suggest that hospital administrators can play a crucial role in creating workplace environments that foster positive experiences for staff nurses and midwives participating in clinical

mentorship programs. Sufficient funding and institutional support are essential to maximizing the effectiveness of these mentorship programs. Furthermore, additional research is necessary to investigate and quantify the impact of mentorship programs on nurses' and midwives' performance and on the quality of care provided to clients.

Consent for publication
Not applicable

Availability of data and materials
Upon reasonable request, deidentified original data transcripts can be provided to the reader.

Competing interests
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Authors' contributions
YK conceived the study, developed the study protocol, conducted data collection and analysis, and wrote the manuscript. YBM, SR, and RGB contributed to the manuscript's design, data analysis, and writing. All authors read, provided substantial comments, and approved the final manuscript.

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