Relationships Matter in Quality Maternal Care: Qualitative Findings from a Community Health Center in Jakarta, Indonesia

by

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Thesis submitted in partial fulfillment of
the requirements for the degree of
Master of Science in the Duke Global Health Institute
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ABSTRACT

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Abstract

Background: Indonesia's transitioning health system must contend with improving the quality of maternity care to further reduce national maternal mortality rates. This study aims to investigate the provision of maternity care in a primary health center in Jakarta, Indonesia to determine components of quality care. Methods: We conducted individual, in-depth qualitative interviews with 31 pregnant (n=23) and postpartum (n=8) mothers and held two focus group discussions with 10 midwives in a community health center to examine attitudes and perceptions of quality maternity care. We used an applied thematic approach to analyze data and then mapped emergent themes to the WHO QMNC framework. Results: Participants across both groups most frequently referenced the provider/client relationships, more than physical or human resources, as the main determinate to perceptions of quality care. Factors such as establishing trust, creating a close bond and effective communication were all seen as indicators of strong interpersonal relationships. Additionally, socioeconomic, religious and cultural factors also played a significant role in the provision of care; yet, was not fully captured in the definition of quality care. Conclusions: Interpersonal relationships are critical components to the provision of quality care. Community-level interventions aimed at further fostering these relationships are important in strengthening the capability of the health system to provide safe, effective and high quality maternity care.

Dedication

This thesis is dedicated to the women in my life who lead by example.

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1. Introduction

Reducing the maternal mortality rate (MMR) worldwide is recognized as part of the United Nations' third Sustainable Development Goal (SDG). With more than 200 million pregnancies occurring each year, the health of women during and after pregnancy has a great impact on the health system as a whole. The major causes of maternal mortality and morbidity are direct obstetric complications therefore; interventions aimed at ensuring all births be managed by a trained health professional are widely accepted as health professionals have the skills, tools and knowledge to mitigate the threat of negative health outcomes during emergency obstetric care.

Indonesia has a population of over 69 million women of reproductive age and struggles to reduce national MMR in order to achieve SDG 3. The national government has taken many steps over the past three decades to reduce MMR, including interventions that aimed to increase the number of midwives and improve access to health care facilities as well as launching free health insurance schemes. Perhaps Indonesia's largest campaign to reduce MMR was the village midwife program. The government first launched the village midwife program in 1989 with aims to place a skilled birth attendant or midwife into every one of Indonesia's villages (1). Within ten years, over 96% of the population had access to more than 50,000 village-based midwives placed across the country (1,2). During this time, the MMR steadily decreased; from 390 deaths to 228 deaths per 100,000 live births, respectively (3,4). Since 2007,

however, the MMR has rapidly increased until the rate was reported at 305 deaths per 100,000 in 2015. Current MMR estimates range across the literature, but it remains a cause for concern as MMR in Indonesia is among the highest in Southeast Asia region (5,6). These rates are also disconcerting because the targeted interventions expanded the number and availability of midwives, leading more women to seek maternal and delivery care from skilled professionals in clinical settings, but were unable to substantially curb the rate of maternal deaths. Data from the 2017 Indonesia Demographic Health Survey (DHS) reflects this paradigm. Nearly all women (98%) who had a live birth within the study period received some antenatal care from a skilled provider and 77% of women received the WHO recommended four antenatal care visits (7). Additionally, 74% of live births within the study period occurred in a health facility and 91% of live births were delivered with the assistance of a skilled provider (7). Postpartum care follows similar trends with 87% of women who had a live birth received a postnatal check by a health provider within two days of delivery (7). Data suggests Indonesian women are practicing safer pregnancy behaviors, such as seeking antenatal care from skilled professionals and delivering in a health facility, yet MMR remains high. The quality of this care then becomes an important consideration in the provision and experience of maternity care.

1.1 WHO Quality of Care Framework

The WHO recognizes quality of care as a critical component in reducing maternal

mortality. In Indonesia, the number of births in health facilities and with skilled professionals has increased while maternal mortality rates have had limited reductions. This indicates the role quality of care may have in furthering substantial reductions in maternal mortality and morbidity.

The WHO defines quality of care as "the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care must be safe, effective, timely, efficient, equitable and people-centred (sp)" (8). In 2016, the WHO created a framework for improving the quality of care for mothers and newborns (QMNC) around the time of childbirth (8). The QMNC framework targets the health system as the structure to provide access to high-quality care (8). Two important dimensions of the health system are identified through the framework: the provision of care and the experience of care (8). While the provision of care encapsulates the dimensions of quality of care from the perspective of the service providers and managers, the experience of care captures the experience of quality of care from the service users. Nevertheless, the framework is explicit in recognizing the interconnected nature of these two components of the health system.

The framework segments quality of care into eight domains: 1. evidence based practices for routine care and management of complications, 2. actionable information systems, 3. functional referral systems, 4. effective communication, 5. respect and preservation of dignity, 6. emotional support, 7. competent, motivated human resources

and 8. essential physical resources available (8).

1.2 Literature Review

QMNC Framework

The breadth of literature using the WHO QMNC framework as a tool for concept and analysis remains small due in part because of the recent publication of the framework. The current literature does not include work with reference to the QMNC framework in the context of the Indonesian health system and few studies exist within the Southeast Asian region. Two significant studies used the QMNC framework as a guide for analysis in Australia and Uganda (9,10). These qualitative studies followed similar structures for data collection and analysis. The studies used focus group discussions (with the Munabi- Babigumira et al. study also including individual interviews) to collect data from both service users and service providers in the respective health systems. For data analysis, these studies first performed inductive, data-driven analysis to create themes then mapped the themes to the components of the QMNC framework. Findings across the studies suggest that the QMNC framework as a useful tool for assessing quality of care in maternity care settings. Additional studies have used similar quality of care frameworks as basis for analysis. Notably, Symon et al. utilized an informed framework for high-quality maternal and newborn care published in a 2014 edition of the Lancet Series on Midwifery (11,12). This study also supports the claim that a quality of care framework is useful in qualitative collection and analysis.

Maternal mortality in Indonesia

A consensus in the literatures suggests national interventions, including the village midwife program, were successful in increasing the number of midwives attendings births, but were unsuccessful in reducing rates of maternal mortality (1,2,13,14). Multiple surveys and reports published by both Indonesian governmental and inter-governmental agencies, such as the WHO, the World Bank, and USAID, also confirm this trend (3,4,7). Within this scope, the literature then indicates quality of care as a potential cause for high rates of maternal mortality in Indonesia. The literature investigates both the provision and experience of quality maternity care. Some work has identified challenges to the village midwife program that threatens quality of care among service providers, most notably midwives (1,15,16). These challenges include inadequate training for midwives, lack of supervision and mentoring, unclear job descriptions, isolation, and low social acceptability in some villages. Other work focused on the challenges of the services users, or clients, in receiving quality maternal care (5,14,17,18). These challenges include cultural preferences, accessibility to clinics and overcrowding in clinics.

The literature lacks significant studies that aim to capture the experiences of these two key stakeholders, providers and clients, within a single study. Regarding both participant groups is important to understanding the barriers and facilitators across the experience of quality care.

1.3 Study Aims

This study aims to investigate the provision of maternity care from the perspective of providers and clients in a primary health center in Jakarta, Indonesia to determine components of quality care.

2. Methods

This study used qualitative methods to explore attitudes and perceptions of midwife-managed maternity care among participating midwives, pregnant women and postpartum mothers in a community health center in Jakarta, Indonesia. Experiences were then mapped onto the WHO framework for the quality of maternal and newborn health care in order to assess the barriers and facilitators in the provision of quality maternal care within the study site.

All study procedures were approved by the ethical review boards at Duke Kunshan University, the University of Indonesia and Regional General Hospital Pasar Rebo. The reporting of this study adhered to the consolidated criteria for reporting qualitative research (COREQ) (19). A copy of the COREQ checklist can be found in appendix B.

2.1 Setting

The study took place at a public community health center (*puskesmas*) in, Depok city, Jakarta. Located on the island of Java, Jakarta is the capital and largest city in Indonesia. The majority of the population speaks Bahasa Indonesian, but the city hosts very diverse language and cultural groups. In Indonesia, health services are decentralized to provincial and district governments (20). Public community health centers fall under the direct jurisdiction of the district governments with provincial governments providing only technical oversight and monitoring (20). Since 2014, the

Ministry of Health has required community health centers to be nationally accredited in order to improve and maintain the quality and management of services. Community health centers have been established in every area with a population of 30,000 to 50,000 people (a subdistrict). In some cases, additional health centers are available at the village level (up to 30,000 people) (20). As a result, community health centers are often the first point of contact in the health care system for patients. From the community health centers, patients may be referred to district hospitals for provision of further care. However, without a referral letter, patients are not allowed to seek care directly from a district hospital, except for in emergency situations (20). Provision of maternal and child health and family planning services are part the community health center's six essential service areas. Antenatal care is most often sought with a midwife or obstetrician at a community health center (21).

The study clinic was conveniently selected based on a long-standing relationship with local collaborators. Both time in the field and local ethical approvals constrained this study to only include one community health center. The health center serves between 600 and 900 patients per day. The maternity ward manages 40-50 deliveries every month. The clinic employs 21 midwives (13 delivery midwives and 8 maternal care midwives) and seven physicians. Delivery midwives worked solely in the delivery ward to assist with childbirth and postpartum care for mother and baby (up to 24 hours after delivery). Maternal care midwives worked in the clinic to provide antenatal care to

pregnant women and postpartum care to mothers and newborns. Maternal care midwives may also provide additional support to women such as breastfeeding classes, parenting seminars, family planning services and childhood vaccinations. The clinic is open Monday through Thursday, and a small team provides emergency care on nights and weekends. All maternal and delivery services are free to mothers enrolled in the national health insurance scheme, *Jamkesmas*. The clinic also provides pharmaceutical provisions (prenatal vitamins) and nutritional support to patients free of charge.

2.2 Participants

Convenience sampling methods were used to select three groups of participants: pregnant women, postpartum women and midwives. Sample size was similar to, if not greater than, other qualitative maternal health studies in Indonesia (5,14,22). Additionally, sample sizes among both participant groups aimed to reach theoretical saturation of the qualitative data (23,24). Other relevant stakeholders could not be included in this study due to a lack of time and resources.

A total of 31 clients at the study clinic (23 pregnant and 8 postpartum women) completed in-depth interviews. All women were eligible to participate if they received antenatal care from midwives at the study site, self-identified as pregnant or recently postpartum, and could speak Bahasa. Postpartum women were eligible if they had given birth within one week of the interview date. All participants were married and

identified as Muslim. Nearly all mothers were enrolled in the national health insurance scheme.

Ten midwives participated in two focus group discussions (FGDs). Midwives were eligible to participate if they were employed at the clinic, had received formal education and national certification as midwives, and had at least one year of work experience. Participants were recruited by local key informants (two district-level doctors based at the study site) to participate in the study. Both delivery and maternal care midwives were eligible to participate.

2.3 Procedures

Data were collected by five local research assistants. All research assistants were senior undergraduate or recent graduates of the University of Indonesia's Faculty of Public Health. The lead research assistant was selected by the local PI; all other research assistants were selected based on qualifications by the research team. Three research assistants had previous experience collecting qualitative data. Before the start of data collection, the five research assistants received trainings on qualitative data collection and research ethics organized by the lead author.

Recruitment

The research team, with assistance from the midwives, recruited patients at the community health center to participate in the study, based on eligibility requirements. Patients were approached in the clinic waiting area, prior to an antenatal or postpartum

appointment with a midwife. The research assistant shared the overview of the study and asked if she would be interested in participating. If a woman agreed, she was escorted to a private room (typically used as the lactation room) directly off the waiting room area to do written informed consent. The private room had opaque windows and door to prevent anyone in the waiting room from seeing inside.

Research assistants first provided participants with a paper copy of informed consent. Then, research assistants read the consent out loud to participants. Research assistants proceeded to give participants time to individually read the consent agreement before answering questions. Participants were then asked to complete the written consent form. All women who expressed interest in the study provided written informed consent; no individuals refused consent. The research assistant assigned each participant with a unique identification number to anonymize data. The consent form, demographic questionnaire, and interview notes were all linked using the participant's identification number.

Prior to the interview, the research assistant collected basic demographic information from participants using a structured survey. The demographic questionnaire took about 5 minutes to complete. The research assistant then conducted the individual in-depth interview following a semi-structured topic guide. The topic guide was written in English, then translated and back-translated to Bahasa. The guide covered three domains of interest: 1) participant's experience with maternity care, 2)

participant's perceived quality of maternity care and 3) participant's satisfaction with maternity care. The guide provided research assistants with opening questions and sample probes.

The lead author, who did not speak Bahasa, was present for all interviews and made notes of the interview based on non-verbal cues and observations. Simultaneous translation during the interview did not occur due to time constraints from participant's who were waiting for their clinic appointment. After each interview, the lead author met with the research assistant to debrief. The lead author asked the research assistant to evaluate the quality of the interview and make suggestions for improvement so to strengthen subsequent interviews.

Interviews were typically 25-30 minutes long, but some interviews were considerably shorter. All in-depth interviews were audio recorded, with participants' consent. After the interview, participants were offered bread, chocolate or cookies and a milk drink.

Some interviews were interrupted by non-participating mothers who needed to use the private lactation room to breastfeed. In these cases, the research assistant paused the interview until the non-participating mother completed the feeding.

Two district-level doctors based at the study cite recruited FGD participants via email according to inclusion criteria. Participants shared their availability, and FGDs were held to accommodate their schedules. The FGDs took place in a private conference

room on the administrative (top) floor of the health center. Bread, cookies and water were provided to midwives upon arriving at the FGD.

The five participating midwives were assigned numbers prior to the start of the FGD. An equal number of delivery and antenatal care midwives participated in each FGD. The research assistant referred to participants by their number to protect participant's privacy. Assigned numbers also aided in the transcribing of the data to denote a shift in speaker.

The research assistant first introduced the background and aims of the study. Then, the research assistant read informed consent to participants. The research assistant collected oral informed consent from all participants. All participants accepted informed consent and no participant refused consent. Prior to the opening question, the research assistant collected basic demographic information including, participant's current role at the study site (delivery or antenatal care midwife), years of midwifery work experience, and previous place of employment (private midwife, district-level hospital, rural clinic, etc.).

The research assistant conducted the FGDs in Bahasa following a semi-structured topic guide. This topic guide was written in English then translated and back-translated to Bahasa. The guide covered four domains of interest as barriers or facilitators of midwives' provision of maternity care: 1) the health care system, 2) patients and families, 3) midwives' clinical training and work experience and 4) traditions, religion

and social constructs. The lead author was present for one of the FGDs. The lead author kept time and took notes during the FGD.

At the end of the FGD, participants were given an opportunity to ask any questions.

Both FGDs were audio recorded, with participants' consent.

2.4 Analysis

An applied thematic analysis approach was used to analyze data. The inductive approach is designed to rigorously identify and examine themes from qualitative data that is transparent, credible, accurate and comprehensive (25).

Audio recordings of the interviews and FGDs were transcribed then translated to English by the team of research assistants that also collected the data. Analysis was carried out on the English translations of the transcripts.

As a starting point for analysis, the lead author read all of the transcripts in English to gain a cursory understanding of the dataset. The lead author then wrote document memos on one-third (10) of IDIs and both (2) FGDs. Transcripts were purposively selected IDIs conducted by each of the local research assistants to account for variability across interview skill and style. Memos were written to put transcripts into a common format and identify patterns across the dataset.

Document memos were reviewed to create content codes. Separate codebooks were generated for IDIs and FGDs based on the emergent themes. Each codebook

included ten content codes with qualifying information: the name of the code, a definition of the code and an example of coded text. An abridged version of the codebooks can be found in the appendix. All transcripts were then coded line-by-line using Nvivo 12 by the lead author.

Following coding, queries were run to examine all commonly coded text. Analytic memos were then written based on each individual code. These memos were used to identify subthemes within each individual code. Subthemes were then used to synthesize the findings, structure results, and identify representative quotes.

Framework for quality of care

This study mapped emergent themes to the WHO framework for the quality of maternal and newborn health care (QMNC). The framework was proposed to guide health care providers, managers and policy-makers in improving the quality of health services for mothers and newborns (8). An image of the framework is available in the appendix. The framework has six domains of quality of care linked across the two dimensions of provision and experience of care. The framework also includes two "cross-cutting" domains that fall between provision and experience of care (8). All eight domains will be used for analysis.

3. Results

3.1 Description of the Sample

A total of 31 women, 23 pregnant and 8 postpartum, completed in-depth interviews. A description of participants can be found in Table 1. All participants were married and identified as Muslim. Participants' ages ranged from 24 to 41, with a median age of 28. A majority of participants completed high school or beyond (n=22). Most participants (n=23) reported a history of pregnancy and live birth. Five participants reported a history of miscarriage or loss of pregnancy. Nearly all participants lived within the community health center's catchment area and did not travel from other villages, cities, or districts. Few differences existed across the pregnant and postpartum populations. On average, postpartum participants were slightly younger, received less education and had more children than pregnant participants.

Ten midwives participated in focus group discussions. The participants all provided antenatal, delivery and postpartum care to patients at the community health center. A description of the participants can be found in Table 2. The participants ranged in age and years of working experience. One participant had less than five years of work experience while two participants had over 15 years of experience with 10.5 years as the median years of working experience across the group. The participants also had a variety of professional history ranging from past experience in rural clinics to large, district hospitals as well as experience as a private midwife and field researcher.

3.2 Mapping themes to the framework

Historically quality of care literature has not used the QMNC framework for analysis. However, with the recent publication of the WHO framework, timing was appropriate to examine results based on the eight domains of the framework. This approach to the analysis is presented below.

1. ***Evidence based practice for routine management of complications: Expanding knowledge and capabilities***

Participating midwives described their experiences learning, training and practicing evidence-based care. Participants described educational opportunities, such as the review of cases, as important mechanisms to gain skills in the management of complicated cases. They also characterize their training as evidence-based through the uptake of a 10-step procedure to deliver antenatal care. The experience of the midwives' delivery of evidence-based care was acknowledged by the clients and reflected in the client's own interviews.

Participating midwives described educational opportunities that supported the practice of evidence-based care. One participant details her experience with a training seminar aimed at the care and management of birth complications:

> "Usually we have training [classes] to handle (patient's) complications such as low birth weight or preeclampsia and [we] also have discussions" (participant 6, midwife).

This ability for midwives to participate in opportunities to further education can allow them to maintain evidence-based care and management based on the most updated standards. Participants described attending training opportunities that addressed the management of low birth weight and preeclampsia. Midwives also discussed how these learning opportunities helped them feel more confident in their roles by expanding their knowledge and capabilities.

Common themes related to the provision of evidence-based care were also expressed across interviews with participating mothers. In one example, a midwife first recounts her experience making a referral to the nutritional clinic, the client then described the ability of the midwife to efficiently offer a recommendation for the additional care. In discussions, one midwife said:

> "I can say that there are many supportive policies in term of midwifery standardization. For instance, the antenatal care that consist of "10T steps" is more comprehensive and all of the midwives have already recognized that. If we can follow those standards, we know that we can actually refer the pregnant mothers to the nutrition clinic and dentistry [for proper care]" (participant 3, midwife)

The participating mother then describes her experience with the referral:

> "There was a time when I had a toothache and I told them (the midwives) and they immediately sent a recommendation letter to the dentist here.

It's really good that they respond to my needs quickly" (participant 2, pregnant mother).

This mother received the comprehensive care the midwives described above and was satisfied with the care she received. Through the standardization of antenatal care, the midwives were able to quickly respond to the needs of the mother. The mother then recognized this ability to provide care as an indicator of high quality care. These two identified experiences work to describe the domain across the two participant groups and within the context of the health center; where the standard of care is routine, timely and appropriate. Midwives are trained with evidence-based care, mothers then receive the care and identify the care as high quality.

2. ***Actionable Information System: Capacity to manage***

This domain was not as frequently discussed by participants in both groups; however, reference was made to the potential capacity of the health center to maintain an information system related to maternal care. This may suggest the health center has the ability to manage an information system, but that the perception and experience of quality of care may not be recognized by providers and clients through the modality of a health information system.

The capacity of the health system to maintain a health information system was referenced by a participating midwife. No references were made among participating clients. The midwife described a monthly review of cases involving emergency care

during childbirth. This suggests the health center's ability to maintain an information system by collecting relevant client data:

> "Every month, there is review on all emergency cases that happened in that month. Therefore, we can get updated information regarding emergency cases and we also have sharing session with five different community health centers in the area through the Indonesian Midwife Association" (participant 8, midwife).

This midwife described the collection and review of data in order to appropriately improve the care of clients. Through this monthly review, providers are able to learn from poor outcomes and improve the standard of care; evidence of the capacity to maintain an actionable information system.

3. ***Functional referral system: A significant weakness***

Both participant groups expressed negative experiences when referencing the clinic's referral system. Participating midwives described the system as a significant barrier to provide quality care while participating mothers identify the system as hard to navigate and difficult to understand.

In discussions with participating midwives, one midwife recognized the need to refer some clients to the hospital but found the process complicated and burdensome. The midwife described a lack of clear coordination between the health facility and the hospital:

> "I think it (referral procedure) is quite a complicated issue… The problem is the hospital isn't well connected in which we can only contact them via WhatsApp….When we arrive there (the hospital) if the other side can tolerate [the client] they will handle it but sometimes we should debate for a bit to actually cooperate with them" (participant 3, midwife).

The midwife's experience highlights an absence of coordination and lack of willingness to manage the referral on the side of the hospital. Another midwife described the impact the referral system had on her capacity to provide care:

> "For the referral itself, it's quite hard to be conducted in Jakarta especially for [health facility]. Automatically, it affects our performance where we're afraid of complains from the upper side or from the hospital side" (participant 4, midwife).

The midwives' experience suggests a lack of a strong referral system that ultimately affects the ability to provide quality care.

Similarly, participating mothers expressed frustration with the referral system. One mother said:

> "I think it was quite hard to get the referral from here. I mean, for the first time, because they knew I needed it prior [to the visit] it was smooth. But for the next time, because they had their own procedure, it was indeed quite hard" (participant 22, postpartum mother).

The mother identified the lack of coordination described above as a barrier to receive care. The participant found the system hard to navigate and was left with the impression that the referral procedure is burdensome. For most clients, referrals during the antenatal period are necessary to ensure continuation of care. Clients are required to first seek care at a community health center to then get referred to larger hospitals with specialty care. Therefore, referrals are a major component of the health system and is often experienced by clients during maternity care. The interaction with the referral system can then have an impact on the perception of quality of care.

4. ***Effective Communication: Forming bonds and building trust***

Overall, participating midwives and mothers described communication during maternal health visits as effective and responsive. The midwives referenced their ability to form bonds and build trust as fundamental to facilitate effective communication. The mothers expressed a sense of trust with the midwives and relied on their ability to clearly explain information. The many references across both participant groups is suggestive of the importance of this domain to the experience and perception of quality care. Mothers closely link effective communication with quality care.

Participating midwives described different mechanisms that enabled them to share effective communication with their clients. Some midwives spoke to their ability to form intimate bonds with their clients because they were closely connected to the community. One midwife described her deep bond to the community:

> "There are some [of my] patients who have already become grandmothers and their grandchild has become my patient now" (participant 3, midwife).

Another midwife described the interactions with her clients in the clinic:

> "There are so many interactions [in this clinic], from the early pregnancy to the end of pregnancy, so we remember almost every family that comes to us. We unofficially build the connection with all the mothers and their relatives" (participant 1, midwife).

This close connection, as described by many participating midwives, is essential to carry out effective communication to clients. This also builds trust for the midwives among the clients and further fosters effective communication.

Participating mothers overwhelmingly described the communication with midwives as effective. Across the interviews, participants described their communication with midwives as clear, kind and accessible. The mothers note that the midwives were responsive and provided adequate answers to their questions. One participant said:

> "I think it's acceptable when they (the midwives) explain to pregnant mothers like me about pregnancy. I am at the very early phase of pregnancy so it's great because I can ask questions directly to the midwives" (participant 17, pregnant mother).

The mothers described a sense of comfort and trust with the midwives that allowed them to ask questions and felt that the midwives responded with accurate information. Participants also noted the ability for midwives to clearly explain information and describe it as a major strength.

One participant said:

> "they (midwives) are all really friendly, they explain all information in a common language so I can fully understand, then I feel comfortable" (participant 2, pregnant mother)

Another participant said:

> "…if we ask something, we will get a proper answer, to the point where we really understand" (participant 8, pregnant mother).

A third participant said:

> "She (the midwife) usually explains to me one by one until I understand" (participant 1, pregnant mother).

Effective communication is both a major strength and a significant measure of quality of care within the clinic.

5. ***Respect and preservation of dignity: Finding the balance***

Participating midwives described both barriers and facilitators they face to maintain respect and dignity in the provision of care. Significant barriers included religious beliefs and financial difficulties while facilitators were described as the ability

to foster a close bond with clients. Similarly, participating mothers described their close connection and trusting relationships with their providers as strong indicators of respect.

Across discussions, midwives described the barriers and facilitators they face when providing respectful care. The barriers most commonly addressed centered on the client's religious or cultural beliefs. Participating midwives described a tension when providing care to patients with strong religious or cultural beliefs. The midwife must contend with respecting the wishes of the client even if it is harmful or restrictive to providing evidence based care. One participant described this tension:

> "I think their (client's) beliefs can sometimes be a challenge. If there's a case, their belief towards something can prevent us from doing something for them… For example, immunization. Some Muslims are not allowed to accept any immunization. There are also some religions that do not allow their people to use contraceptive" (participant 5, midwife).

This midwife identifies religious belief as a barrier to providing care. This interaction highlights the tensions between respecting the choice of the client and providing the most appropriate care. Midwives described the delicate balance they must find to both respect and appease the mother but also keep them safe and cared for. One midwife describes this stress with a story about one of her clients during an antenatal visit:

> "In the maternity (examination) room, the mother will usually bring a pin or small scissor to put in her clothes. As midwives, we worry that it could hurt the mother therefore, we usually ask her to [give it to us] first and then we will give it to her again after the process is done" (participant 7, midwife).

This anecdote represents the balance many of the midwives must find to respect the client while also providing quality care.

Participating midwives also identified financial difficulties among clients as barriers to providing respectful care. One midwife described her experience:

> "…there are some moments when we (midwives) don't know how to respond and feel [bad] about that. For example, when the mother is actually ready to deliver the baby they apparently don't have the health insurance and money" (participant 5, midwife).

These midwives suggest the client's inability to finance health services can have an impact on the care the midwife can provide. For midwives, managing these situations requires the balance of respect and provision of care.

Participating midwives also discussed how they are able to provide care that preserves the respect and dignity of their clients. Across both discussions, many midwives suggest the close bonds they formed with the community has allowed them to adequately inform mothers about the services they can receive. Through intimate

interactions, midwives are able to provide clients with health related information that then can better prepare clients to make an informed choice.

Participating mothers also identified the close bond with midwives as a source of respect and dignified care. The midwives' desire to form close bonds with their clients and the community is felt by the mothers. Speaking about the close interactions she has had with midwives, one participant said:

> "I think they (the midwives) care about me. They even have remembered mothers' faces so when I come, they know my name and my story" (participant 17, pregnant mother)

These interactions support the idea that mothers value the connection with the midwife in order to feel respected and cared for.

6. ***Emotional support: Responding to needs***

Participating midwives described religion and a close bond to clients as means to provide emotional support. Participating mothers referenced a relationship with midwives and having trust in the midwife as sources of emotional support.

In discussions, one midwife participant identified religion as a tool to provide emotional support for their clients:

> "Usually if the mother becomes panicked, we recommend her to pray based on her belief" (participant 8, midwife).

Participants also discussed the close bonds to the community and long lasting

relationships with clients as a source of emotional support.

Across interviews, participating mothers described the emotional support they received from midwives as part of their care. Often, the participants would recount interactions and conversations they had with midwives as a source of emotional support. Just before seeing the midwife, one participant shared her feelings:

> "I feel a bit scared that I might get some bad news, but so far she (the midwife) always tells me that I'm fine and my baby is fine also" (participant 4, pregnant mother)

The participant describes how she felt anxious before visiting the midwife, but the midwife was able to consistently provide support and ease her worries. Participants also described the trust they had in their midwife as a source of emotional support. Many participants described feeling safe in the care of the midwife. One participant said:

> "I feel so safe, they (the midwives) responded really quickly to my needs" (participant 0, postpartum mother).

The participant associates the ability for the midwife to "respond" to her needs as a form of support that can translate to feeling safe and cared for.

7. ***Competent and motivated human resources: strength in practical experience***

Overall, both participant groups described the care providers at the clinic as competent and motivated. Participating midwives described many opportunities for capacity building such as continuing education and hands-on, work experience.

Throughout interviews, participating mothers described the midwives as knowledgeable and capable. Many mothers also made reference to work experience and years of interactions with clients as indicators of competent midwifery care. Some participating mothers said they preferred to receive care from the senior midwives because they found their level of experience equal to the highest quality care. Other participants implied there were too few midwives available at the clinic, thereby affecting wait times and perceptions of quality of care. This is also evidence that mothers consider the competency of human resources as a major indicatory of quality care.

Participating midwives described various capacity-building learning and training opportunities available through the health center. Participants also described their ability to learn through hands-on experience with a variety of clients in the health center. One midwife expressed that her job experience has greatly contributed to her knowledge:

> "I think it has been so long since I was a student…Therefore, I can say that I learned more during my experiences rather than what I have been taught" (participant 1, midwife).

Another midwife described her experience with learning directly from patients in the clinic:

> "…there are a variety of case and there are a lot of programs and trainings of the emergency cases, so we feel more trained and it helps us

to handle situations" (participant 8, midwife).

The midwives expressed clinical experience in the health center as a major component to build capacity and motivation. Participating mothers also recognized this sentiment and referenced the midwives' ability to learn through practical experience as a major strength. One participant said:

> "The midwife is better because they have more practical experiences, so they encounter more cases in the field. This is different from an obstetrician that has a master's degree, so the knowledge is maybe better in terms of theoretical understanding. Well, there are pluses and minuses for the obstetrician and the midwife; one is good at practice while the other is good at knowledge" (participant 16, pregnant mother).

Participants seem to associate the competency and knowledge of midwives as a strong indicator of quality of care. Some participants shared a preference for receiving care from the more senior midwives, suggesting a strong associate between years of experience and quality of care.

Some participating mothers did comment on the seemingly small team of midwives available in the antenatal clinic. These participants identified the small team of midwives as a contributing factor to long wait times and excess stress on the midwives. As one mother states:

> "Well it's true lately there are two midwives but there are many jobs that

> they have to do, right, so it takes too long" (participant 29, postpartum mother).

In these cases, the participants identified the lack of human resources as a determinate of quality care.

8. ***Essential physical resources available: meeting client's needs***

Participating mothers referenced the availability of physical resources and amenities, such as an ambulatory service, a pharmacy and a nutrition clinic, at the health center. Other participants described the absence of ultrasound machines as an inconvenience in their antenatal care routine. Participants described physical resources as components that contribute to the perceived level of quality care.

Participating mothers discussed the availability of physical resources across interviews. One participant recognizes the importance of having an ambulatory service available through the clinic:

> "The default is that the midwife will transfer us to the hospital if anything happens. But, not every [clinic] has an ambulance. It would be disastrous if something goes bad, right? I would need a caesarean delivery, and I would have to wait for a long time. However, if anything goes bad here, there will always be an ambulance on standby" (participant 8, pregnant mother).

This participant clearly recognized the importance of an ambulatory service to

her quality of care. By making reference to other clinics that do not have ambulatory services, the participant is implying the quality of care at her clinic is higher because of the availability of the ambulance as a resource. With the presence of this physical resource, the participant felt that her needs were satisfied. Across other interviews, participants referenced the health center's pharmacy and nutrition clinic. The participants overwhelmingly said that the pharmacy "always" had the vitamins and medications they were prescribed in-stock. Participants also described positive interactions at the nutrition clinic. One participant shared her experience:

> "Yesterday, I was referred to the nutrition clinic and the explanations are also great for the pregnant mothers" (participant 25, pregnant mother).

The availability of adequate medicines and nutritional supplies during the antenatal period describes the capacity of the health center to provide the physical resources and contributes to the sense that all related health needs for the client are met at the clinic.

Ultrasound imaging, however, was one area participants most commonly referenced did not meet their needs. Participants described the absence of ultrasound equipment at as inconvenient and through seeking ultrasound images outside the clinic was burdensome. The clinic refers clients to the larger hospital to receive ultrasound images, but many participants found the referral procedure difficult and confusing. One mother described her experience asking for an ultrasound:

> "I asked before that I wanted to have an ultrasound and they (the midwives) told me that they don't have it. They referred me to the hospital, but I preferred to go to the clinic" (participant 23, postpartum mother).

The participating mother identified the absence of an ultrasound machine as a hinderance to her routine care. The participant's reference to availability of physical resources and amenities suggests the impact this domain has on quality of care.

4. Discussion

The aim of this study was to investigate the provision of maternity care in a community health center through qualitative interviews with care providers and clients in order to determine components of quality care. The perspectives and experiences of participants were analyzed under the WHO QMNC framework. The intention of this paper was not to evaluate the validity of this tool, rather to use the framework as a guide for analysis and to add to the growing evidence base of quality care literature.

The findings of this study have shown that relationships and interpersonal connections between providers and clients are main determinates of perceived quality of care. Although challenges stemming from the health system and broader systematic barriers to providing quality care were referenced in the data, these factors did not significantly contribute to perceptions of quality care. We suspected that providers would indicate the systems and resources as major factors in the provision of quality care, yet these participants more often referenced relationships, interactions and experiences with their clients as key components to their roles. Similarly, clients most often referenced the relationship with their provider across interviews. Participant's descriptions of the interactions with their providers colored their experience of care and drove satisfaction.

The broader social, religious and cultural beliefs within the context of the study were also referenced by both providers and clients, generating a great impact on the

provision and experience of care. These factors are not as well accounted for in the framework for analysis but were clearly present in the data. This finding may indicate an area of further exploration of the impact of these factors on perceptions of quality care and the use of the framework as a tool for analysis within this domain. Data from qualitative interviews mapped to the QMNC framework to reveal an understanding of the perceptions of quality maternity care within the community health care setting.

Relationships matter

Across interviews and discussions, themes related to relationships, communication and connections were most prominent among the data. This finding suggests that both participant groups, providers and clients, highly value respectful interactions and consider it a strong indicator of quality care. Clients most often referred to relationships with their providers when describing their experience and satisfaction with maternity care. This finding is supported by a strong evidence base found across the current literature. In a meta-synthesis of qualitative studies capturing women's experiences with maternal care, Renfrew et al. (2014) found participants most often referred to respect and an interpersonal relationship as central features in the definition of quality midwifery care (12). Additionally, Hodnett's (2002) seminal systematic review found that relationships, described as the quality of client/provider relationship and the amount of support received from providers, were so important to the evaluation of a

women's birth experience that it outweighed all other variables (age, ethnicity, socioeconomic factors, medical interventions, pain perception, etc.) (26,27).

Clients were not alone when identifying the value of relationships in quality maternity care. This study also found providers similarly referenced themes related to interpersonal connections across the data. The many references made to this domain by providers was more surprising. Relationships clearly functions as a foundational element for the midwives to provide the highest level of quality care. Participating providers made many references to their ability to connect, interact, and bond with the community they serve. This finding is also repeated in the literature. Cummins et al. (2019) described the continuation of care between the midwife provider and client as a mechanism to facilitate relationship and trust building (11). Other literature suggests an important link between relationships with clients and overall job satisfaction. Even further, an association between positive relationships and improved health outcomes has been established in the literature base (11,27). Although this study did not formally measure health outcomes, indications from qualitative interviews support the idea that provider/client relationships contribute to levels of midwife job satisfaction and the ability to deliver quality care.

Systems and resources were underplayed

Themes and domains centered on the broader health system all had the fewest references in the data. While these organizational structures are essential to the capacity

to provide care, conversations with clients and providers around quality of care lacked significant references to these areas. The qualitative methodology of this study may have contributed to this finding. For questions related to health systems and physical resources, prompts were less open-ended and could have provoked participants to provide brief responses. Whereas with questions related to the client/provider relationship, prompts were often broader and could elicit personal stories or detailed responses. Therefore, the structure of the interviews could have contributed to fewer references to the impact of systems and resources on perceived quality of care. Pilot testing the interview guides could have offset this potential limit to the methodology. Questions and prompts related to the health system and physical resources could have been further refined to evoke more detailed responses within the study population through a pilot test. This study, however, lacked the time and resources to include a pilot test.

Within the context of this study, the health system is relatively strong in the ability to provide necessary physical and human resources. Studies in other LMICs, describe health system structural factors (technical, physical and human resources, infrastructure, etc.) as major barriers to quality care (10). These barriers were not as prevalent in this study perhaps due to the greater capacity of the health system and national public health programs. Nevertheless, this finding reinforces the idea that

relationships and interpersonal connections rather than structural or physical resources, contribute more to the conception of quality care in the Indonesian context.

Importance of cultural, social and religious beliefs

The interaction of tradition, religion and social constructs specific to the Indonesian context are significant aspects to the provision of quality maternal care; however, the framework did not fully represent the implications of these constructs. As a tool for analysis, the framework could be strengthened to better capture the role of social factors on the assessment of quality care. Data related to social factors mapped to the fifth domain, "respect and preservation of dignity," and the sixth domain, "emotional support." While these two domains represent some social and cultural factors, it did not illustrate the full implications of these factors and could suggest an area for improvement within the framework. With a more defined consideration of socioeconomic factors, the framework could become more encompassing across multiple contexts.

This finding is unique to this study as similar studies do not make reference to the impact of religious or social norms on the provision of care. The setting greatly contributes to this finding. Long-held traditions associated with pregnancy, labor and delivery were still present among some participants and were revealed in the data. The conservative nature of the community challenged the agency of women within their health behavior and had an impact on the provision of evidence-based care. These

constructs have an important role in the understanding of quality care and should be fully represented in the framework.

4.1 Implications for policy and practice

The WHO QMNC framework can be used to successfully assess the dimensions of quality of care from the perspectives of the service providers and service users in the Indonesian context. This study also revealed strengths and weakness to the provision of quality care at the study site.

Strengths in providing quality care

With quality relationships at the core of quality care, the health center should continue to invest in opportunities to further build up the provider/client relationships. Following recommendations from other literature, the provision of a communication skill training could be very beneficial to clinic providers as a means to build capacity in interpersonal communication (27). These workshops could be successfully created and deployed on the clinical level. Midwives and clinic staff could facilitate the workshops to best cater to the specific needs of their community. The clinic can incorporate interpersonal relationship workshops within the existing meetings with midwives for clinical training and review of protocols. Along with further developing interpersonal skills, these workshops could also signal the importance of relationship building within the provider/client relationship to quality care. More broadly, the clinic could place structures that incentivize relationship building and reward provider's interpersonal

skills. This could be a formal recognition procedure where the successful provider is announced to the wider clinic staff and rewarded honors.

Recommendations to improve quality care

Both participating providers and clients referenced the referral system as a major weakness for the clinic and district health system. Midwives referenced the referral system as a barrier to provide evidence-based, continuation of care and called for an "easier" referral system where clinics and hospitals are better connected.

The clients most often referenced the referral system in relation to their ability to receive ultrasound images during the antenatal period. Under the national insurance scheme, clients are allotted one free ultrasound image over the duration of their pregnancy. The study site, however, did not have an ultrasound machine and referred clients to the larger hospital to receive the images. For clients, the resources involved in traveling to the larger hospital could become a significant burden and could prevent them from seeking out the images. Along with presenting both client and provider with diagnostic and obstetric indicators for the health of mother and baby, ultrasound images can be a source comfort and opportunity for bonding between mother and baby.

The challenges linked to the referral procedure are amplified in the Indonesian context due to the coordination of the broader health care system whereby patients must first visit a community health center and receive a referral for specialty care. This requirement may overburden the processes of the referral system and bottleneck the

ability for clients to seek continuation of care. Creating a stronger and more streamlined system for referrals can have a great benefit to the capacity to provide and experience quality maternity care.

4.2 Implications for further research

This study contributes to the growing evidence base that aims to use the QMNC framework as a tool for data collection and analysis. The findings from this study endorse the framework as a useful tool to assess the health system's delivery of quality maternal care in a LMIC setting. The framework cannot reflect all experiences of care, but it captured the majority of the emergent themes from the data. This finding is significant because data collection tools were not based on the domains in the framework and data were analyzed, sorted, and coded independent of the framework. Even without reference to the framework, much of the data mapped back to the framework. Further research could continue to build the evidence base and use the QMNC framework as a tool to assess quality of maternal care.

This study also supports the premise that quality relationships are fundamental to the quality of maternity care. As health systems transition and build capacity to deliver quality care, the provider/client relationship will become increasingly significant as a dimension to quality health care.

Further research could include similar methods replicated in different contexts of transitioning LMICs. While this study revealed determinates to quality care in a district

of Jakarta, more is to be explored across the various regions of Indonesia. More studies are needed to fully capture the diverse set of barriers and facilitators facing providers and clients nationwide, particularly in low resource settings with the highest rates of maternal and newborn mortality and morbidity, such as the Papua and West Papua regions. The perspectives of other relevant stakeholders, such as MOH officials, district hospital personnel, clinic managers, obstetricians, partners and family members, can also be included in future qualitative research to broaden understanding of quality care.

4.3 Study strengths and limitations

Strengths

We suspect data saturation was reached through the triangulation of data across two participant groups. Through analysis, triangulation was clear as themes from both participant groups mapped to many of the same domains. Despite different topic guides, the two participants groups generated similar responses that mapped to the components of the framework. With these similar ideas expressed across both participant groups, a conversation clearly emerged across the data. Coding of themes from the client participant group (n=31) yielded no new derived themes. This is consistent with literature suggesting 12 interviews yields more than 90% of relevant codes for a research question (24). Additionally, coding was consistent across both focus group discussions within the provider participant group. Literature also supports this point of saturation whereby 80% of themes on a topic is reached with two to three FGDs

(23). With recognition that other factors in the collection of qualitative data can influence how saturation is reached, given the homogeneity of the participant groups and the aims of the study (to understand common perceptions and experiences), we feel that saturation has been reached (24).

Regarding both the experiences of providers and clients in the definition of quality care is essential and further supported by the evidence of triangulation in this study, and as indicated in the literature (8,11). Capturing the experience of good quality care is complex but exploring and measuring the quality of care through the perspectives of both providers and clients can add nuance to the complexity.

Limitations

This study has a number of limitations. First, interviews were conducted with a small sample size within a single community health center in the capital city of Jakarta. The experience of mothers and midwives in this context is not generalizable across the entire country. Indonesia is a vast and diverse archipelago with significant resource disparities. This uneven distribution has a major impact on both health experience and health outcomes. Jakarta is the largest and wealthiest city in Indonesia and consistently measures higher than other provinces and the national average on numerous key health and development indicators. This context may skew results in terms of how quality care is experienced and understood.

Second, although this study included two major stakeholders, key voices relevant to the provision and experience of quality care were left out. Further qualitative interviews with different groups of service users (such as women's partners and other family members) and service providers (such as physicians and obstetricians) may highlight new and different issues than found in this study.

Additionally, possible bias may exist due to subject selection of postpartum mothers. Participating postpartum mothers were interviewed one day to up to one week postpartum. These participants may have strong recall on the events of their pregnancy and birth experience but also lack the time and distance for reflection over this period. Plus, participants could have been tired and stressed caring for their newborn baby during the interview. Postpartum subject selection was designed due to constraints in time and resources; investigators were unable to travel to the postpartum mothers' homes to conduct the interviews, so we relied on postpartum mothers returning to the clinic for check-ups. Postpartum mothers were expected to visit the study site for a check-up up to one week postpartum with subsequent visits expected only once per month for the first six months of life. Investigators, therefore, had the best chance to recruit postpartum subjects at the one-week visit than at subsequent monthly visits.

Interviews with participating mothers were typically 25-30 minutes long, but some interviews were considerably shorter, lasting about 10 minutes. This may have occurred for a number of reasons. The skills of the facilitator could affect the time spent

during the interview, with less experienced facilitators using fewer probes and conducting shorter interviews. Investigators were able to compensate for the shorter interviews by including more participants.

Finally, focus group discussions with participating midwives may have introduced a social desirability bias. Focus group discussions included both junior and senior midwives with a range of professional histories. Prompted questions and subsequent discussions included references to professional success and challenges. Some participants may not have felt comfortable providing negative or critical points to the discussion with the presence of more senior colleagues, although this point was clearly addressed through informed consent. However, the scope of both positive and negative comments across the two focus groups suggests the participants answered questions honestly and were not trying to give socially or professionally desirable answers.

5. Conclusion

This study aimed to investigate the provision of maternity care from the perspective of providers and clients in a primary health center in Jakarta, Indonesia to determine components of quality care. Our findings reflect strong interpersonal relationships between provider and client was a major determinate to quality maternity care. This study supports the current literature base examining determinates of quality maternity care. We find that a strong provider/client relationship should be reflected in a definition of quality of care. With this important consideration, the experience surrounding pregnancy, the health of mothers and the health of newborns can be better protected.

Additionally , this study supports the WHO QMNC framework as a tool for qualitative analysis. Emergent themes were captured by the framework and aided in the organization of results. Relationships matter in the provision of quality care and serve as a fundamental component of the experience of quality care in this study.

Appendix A

Table 1: Description of Participating Mothers

	Pregnant Mothers (n=23)	Postpartum Mothers (n=8)
Age, median	29	27
Education, highest level attained, No.		
Primary school	3	1
Junior high school	3	2
High school	10	5
Beyond high school	7	0
Occupation*, No.		
Housewife	12	7
Clerk	2	
Entrepreneur	2	
Nurse	1	
Officer		1
Secretary	1	
Teacher	1	
Other**	3	
Total number of live children, mean	1.5	2.1
Experience loss of pregnancy†, No.		
Yes	4	1
No	18	7

*missing data for one pregnant mother participant

**occupation is not well translated

†missing data for one pregnant mother participant

Table 2: Description of Participating Midwives

	Midwives (n=10)
Years of work experience, median	10.5
0-5	1
6-10	4
11-15	3
15+	2
Past professional experience*	
Subdistrict/district Hospital	3
Rural clinic	2
Private midwife	1
Public Health official	1

*missing data

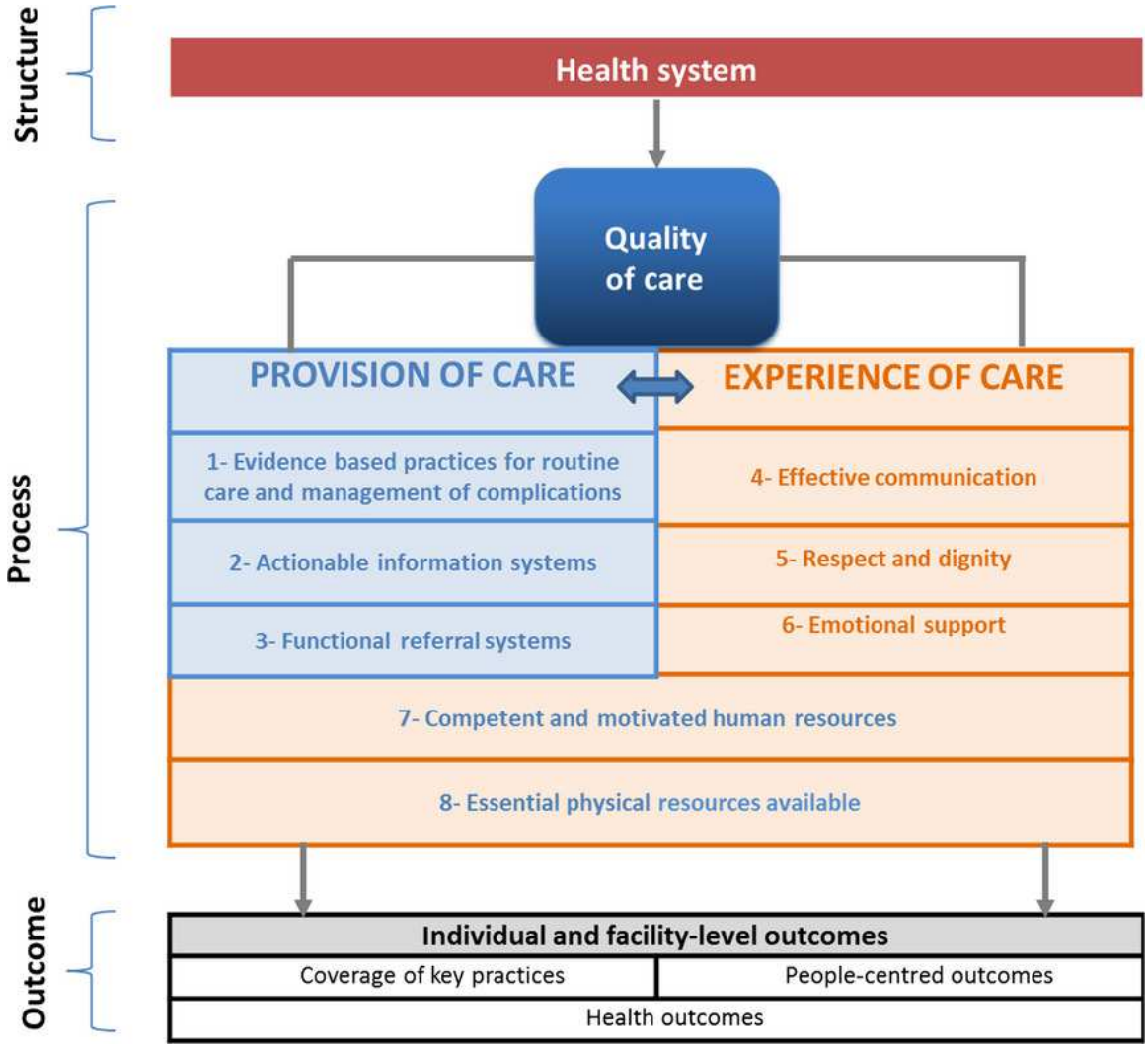

Figure 1: WHO Quality of Care Framework for maternal and newborn health (28)

1. How long have you been working as a midwife and how long have you been working at this clinic? (background question)
2. What does your typical day look like and how many patients do you see on an average day? (warm-up question)
3. How does the health clinic facilitate or impede your role as a midwife?
4. Can you describe your typical interactions with clients and their families?
5. Can you describe your clinical training or midwifery education?
6. How do cultural traditions, religious customs or social constructs affect your performance as a midwife?

Figure 2: Focus Group Discussion Instrument (abridged)

1. Why did you visit the clinic today and what services did you receive at the clinic today? (warm-up question)
2. How do you feel when you visit the clinic?
3. What do you think about the midwife's knowledge during your visit?
4. What did the midwife do or did not do to show you she cared about your needs?
5. How did your midwife build trust with you? Can you share a story?

Figure 3: In-Depth Interview Instrument (abridged)

Code name: Respect for personal choice

Brief definition: The participant's perceptions of respect as a client in the health center.

Full definition: Use this code for discussions of the participant's perception of respect within their interactions with midwives at the health center. These discussions include descriptions of the midwives' respect of their health-related choices (particularly type of birth) and if their needs/wishes were met.

Figure 4: Example Code from IDI codebook

Code name: Close bond to community

Brief definition: Participants feel a close bond to the community served by the health center

Full definition: Use this code for discussions of past or current experiences about feeling closely connected to the community which the health center serves. Also include experiences of feeling a close bond to clients.

Figure 5: Example Code from FGD codebook

Appendix B

COREQ Checklist

Domain 1: Research Team and Flexibility

Personal characteristics

1. Interviewer/Facilitator- Both IDIs and FGDs were collected by a team of five local research assistants. All research assistants were female, senior undergraduate or recent graduates of the University of Indonesia's Faculty of Public Health. The lead author (who did not speak Bahasa) observed all IDIs and one FGD. The lead author had conversations with the interviewers to discuss the interview and strengthen subsequent interviews.
2. Credentials- Author A.S.: Candidate for MSc.
3. Occupations: Graduate Student
4. Gender: Female
5. Experience and Training- Authors are trained as public health researchers

Relationship with Participants

6. Relationship established- Participating mothers (patients/service users) were not known to the investigators prior to the study. Some participating midwives were known to the investigator prior to the study. 3-5 participating midwives aided in the recruitment of participating mothers at the study site before taking part in their respective FGD.
7. Participant knowledge of the interviewer- Participating mothers were clearly informed of the motivations and background of the study team members through the consent form. The consent form was first read aloud to participants by the interviewer, then participants were given time to read the consent form on their own before signing the form. Participating midwives were also clearly informed of the motivations and background of the study team members through the consent form. The participants were read the consent form by the interview prior to the start of the study. Participants were then motioned to ask questions and finally provide oral consent.
8. Interviewer characteristics- The motivations and background of the study team members were made clear to the participants in the consent form and the FGD topic guides.

Domain 2: Study Design

Theoretical framework

9. An applied thematic analysis approach was used to analyze data

Participant Selection

10. Sampling- Convenience sampling was used
11. Method of approach- Patients were approached by the interviewer and a midwife in the study site (clinic waiting area), prior to an antenatal or post-partum appointment. Two district-level doctors based at the study cite recruited midwives to participate via email.
12. Sample size- 31 subjects participated in individual interviews. 10 subjects participated in FGDs; subjects were divided into two FGDs of 5 subjects.
13. Non-participation- All approached subjects accepted informed consent to participate in the study. No participants refused informed consent. There were no dropouts among participants.

Setting

14. Setting of data collection- Individual interviews were held in a private room (typically used as the lactation room) directly off the waiting room area of the study site. FGDs were held in a private conference room on the administrative (top) floor of the study site.
15. Presence of non-participants- Some individual interviews were interrupted by non-participating mothers who needed to use the private lactation room to breastfeed. In these cases, the research assistant paused the interview until the non-participating mother completed the feeding. As noted above, author A.S. was present for all individual interviews and one FGD.
16. Description of the sample- See Table 1 and Table 2

Data Collection

17. Interview guide- Please see Figure 1 and Figure 2
18. Repeat interviews- No repeat interviews were required.
19. Audio/visual recording- Data was collected via audio recording. No video recordings were collected.

20. Field notes- Field notes were created by author A.S. during and after the interviews and FGDs
21. Duration- Each individual interview was typically 25-30 minutes long, but some interviews were considerable shorter. Both FGDs were 45 minutes long.
22. Data saturation- Data saturation was achieved due to number of participants and inclusion of two different participant groups
23. Transcripts returned- Due to participant's distance and lack of English language ability transcripts were unable to be returned to participants for comments.

Domain 3: Analysis and Findings

Data Analysis

24. Number of data coders- The data was coded by author A.S.
25. Description of the Coding Tree- Please see Figure 3 and Figure 4 for the codebooks
26. Derivation of Themes- Themes were inductively derived from the data
27. Software- Data was managed using Microsoft Word and NVivo 12
28. Participant Checking- As noted above, due to distance and lack of English language ability, findings were unable to be presented to the participants for commentary.

Reporting

29. Quotations Presented- Quotations were presented in the manuscript and in the tables to illustrate each theme. Each quotation was identified.
30. Data and Findings Consistent- There was consistency between the data presented and the findings.
31. Clarity of Major Themes- Major themes are presented in the body of the manuscript.
32. Clarity of Minor Themes- Minor themes are presented in the body of the manuscript.

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