

Women's Perception of a Midwife-Led Clinic: A Qualitative Study

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Abstract—Background: While maternal and child health care is a crucial component of every healthcare system, the burden on medical staff in caring for low-risk pregnant patients could be significantly alleviated by recruiting and maintaining a substantial number of midwives.

Objectives: This study aims to understand the perceptions of women recipients of antenatal services provided by midwife-led clinics (MLC).

Method: The study utilised a phenomenological approach with semi-structured interviews to gather information from participants regarding their perceptions of the MLC.

Results: Participants in the survey were women (n=13) who attended the MLC, the majority being over 30 years of age and graduates. The participants believed that the clinic was essential, and felt at ease with the midwife and the services. Most expressed satisfaction with the health education offered by the clinic on the subject of prenatal care, nutrition, exercise, and breastfeeding.

Conclusion: The participants in this study preferred midwife-led clinics because they allowed for better communication, answered queries, and provided significant emotional support. The participants felt comfortable

with the midwife, who created a forum for discussion and clarification of doubts.

Index Terms—Maternal-Child Health Centres; Maternal-Child Health Services; Nurse-Led Clinic; Perception.

I. INTRODUCTION

Maternal and child health care is an essential aspect of every healthcare system. The effort to provide a less interventional model of care in maternity services and improve satisfaction for mothers has led to the initiation of a midwife-led clinic (MLC) in Japan [1] with an improved pregnancy and child health outcomes [2]. As midwife-led care is not a standardised model in low- and middle-income countries (LMIC), there is limited evidence on its effectiveness in these settings [3]. The World Health Organization and others have strongly recommended that professional midwives in LMIC, who have been trained according to international standards and with a woman-centred philosophy, play a critical role in reducing mortality and morbidity, minimising needless interventions during pregnancy and labour, and improving the quality of maternal care [4]. While midwives in these countries do offer care, their ability to deliver high-quality care is constrained by a lack of supporting conditions [3]. One study identifies information gaps, including the lack of data regarding the costs and effects of midwife-led birth centres (MLBC) in LMIC [5]. However, numerous studies have documented favourable outcomes for MLBC births, including low morbidity and mortality rates [6-8], and high quality of care [9,10].

Several international studies have used models to evaluate the outcome of midwife-led antenatal care [11,12]. These found that midwifery-led care services benefit women and have economic implications for service delivery [13,14]. It has been established that midwife-led care is as safe

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and effective as obstetrician-led care in achieving optimal birth outcomes for low-risk women [15] and, moreover, a study comparing midwife-led and doctor-led clinics revealed that the midwife-led clinic improved maternal outcomes and increased care satisfaction [16]. Furthermore, in midwife-led hospital clinics, the reassurance from healthcare professionals, particularly midwives, influenced maternal vaccine decisions [17]. It has also been observed that a better inter-professional team can improve the quality of care in a nurse-led clinic [18].

The 1990s saw a significant shift in the Kingdom of Saudi Arabia, from home births to hospital births. In 2006, most women in KSA gave birth in hospitals; reportedly, 95% gave birth in health facilities and were attended by skilled healthcare personnel such as obstetricians and nurses [19]. However, no specialised midwifery services are provided for Saudi women attending maternal health services. This may be related to the KSA healthcare system, where obstetricians rather than midwives play a vital role in the provision of routine maternity care [20].

According to a survey, the total fertility rate for Saudi Arabian women was 2.4 live children in 2016, in a country considered to have a relatively high birth rate, reaching 17.23 live children for every 1,000 persons [21]. A research study revealed that KSA had lower maternal death rates than the USA (17 vs. 23/100,000 live births) and identical infant mortality rates to the USA (2/1,000 live births in both nations) [22]. KSA's universal healthcare system may have enhanced access to care, explaining the quick improvement of several health outcomes in the country [22]. Nonetheless, the results of one study highlighted the need for more midwives in the maternity service to achieve the staffing level required for safe and superior care. The medical staff's burden of caring for low-risk pregnant patients would be significantly reduced if the MOH could recruit and maintain a sizable number of midwives [20].

The new model of care places more emphasis on preventative care than curative treatment. The

six systems of care (SOC)—keeping healthy, planned procedures, women and child care, urgent difficulties, chronic diseases, and the last phase of life—are the foundation of the model-of-care concept, which began with an awareness of the existing situation. One of these six systems is women and child care [23].

Promising initiatives reflect that the KSA government is deeply committed to improving the current healthcare system, increasing access, ensuring healthcare quality, and particularly enhancing and investing in women's employment, health, and education [24].

Given the facts and figures from the above-mentioned literature, it is evident that there is an increased need for mother and child health (MCH) services. Thus, the midwife-led clinic was implemented in a tertiary healthcare setting to avoid any unnecessary burden of care on obstetricians and other medical staff, to ensure appropriate care for women, and leverage the economic benefits of such services. As the clinic is newly established, understanding the beneficiaries' perceptions is essential to optimise the services. Hence, this study aims to explore and understand women's perceptions of the antenatal services provided by the midwife-led antenatal clinic in a tertiary facility.

II. METHODOLOGY

Study Design:

The study utilised a phenomenological approach with semi-structured interviews to gather information regarding participants' perceptions of the MLC.

Setting:

The study was carried out in a newly-established midwife-led antenatal clinic in a tertiary healthcare setting.

Study Population:

The study population consisted of women with low-risk pregnancies who attended the MLC.

Selection Criteria:

All women willing to participate in the survey, who were fluent in Arabic and had visited the

clinic at least twice, were included in the study. Women with high-risk pregnancies and those not willing to participate were excluded. The study was conducted from August 2021 to July 2022.

Data Collection Tools and Primary Questions:

Self-reported questionnaires were used to obtain the participants' demographic data, including age, education, work status, gravida/para, age at marriage, and age at first birth.

In the semi-structured interviews, the following primary questions were asked:

- What is your general perception of the MLC?
- What is your perception of the services provided by the MLC?
- What is your perception of the midwives providing the services in the MLC?
- Mention the aspect of the MLC with which you were most satisfied, and why.
- Mention the aspect of the MLC with which you were not at all satisfied, and why.
- Do you have any suggestions for improving the clinic?

Recruitment of Participants & Data Collection Procedure:

The women were contacted in their home settings, and telephone interviews were conducted. In addition to the benefits of convenience, several studies emphasise the methodological strengths of conducting qualitative interviews by telephone, such as perceived anonymity, increased privacy for respondents, and reduced distraction (for interviewees) or self-consciousness (for interviewers) when interviewers take notes during interviews [25,26]. Moreover, this method was selected for this study because the participants were otherwise hard to reach.

The study recruited pregnant women who attended the midwife-led antenatal clinic, with potential participants identified by purposive

sampling. The participants were then interviewed. Previous studies have recommended that qualitative studies require a minimum sample size of 12 to reach data saturation [27,28]; hence, the survey was stopped after interview 13, having reached the saturation point.

Ethical Considerations:

The research was approved by the Institutional Review Board of the study's setting [IRB Log No. 20-237]. Permission was obtained from each participant, and the interviews were recorded with their permission. The study ensured anonymity and confidentiality, and adhered to the ethical guidelines.

Data Analysis:

The telephone interview transcripts were analysed manually, using thematic analysis [29], which allowed for the identification of common themes with minimal interpretation from the researchers. This content analysis explored the perceptions of the MLC and its services, the researchers guided by the study's aim and research question.

After the interviews had been transcribed, the transcriptions were professionally translated from Arabic into English. Next, for familiarisation, the interviews' audio recordings were listened to while the transcriptions were read. Two researchers then independently examined the transcripts line by line, and assigned codes to denote particularly meaningful segments. Then, both researchers organised the data using open coding, creating categories and themes to achieve consensus and increase the rigor of the results. The data were presented from the participants' perspective.

III. RESULTS

Characteristics of Participants:

Table 1 presents the characteristics of the women who attended the MLC (n=13).

Table 1. Demographic variables of participants (n=13)

Demographic Variables	N
Age in years	18-24
	0

	25-29	2
	30-34	6
	> 35	5
Educational status	Illiterate	0
	Elementary	1
	Primary	0
	Secondary	2
	Graduate and above	10
Work status	Working	4
	Not working	9
Age at marriage	< 18	0
	18-24	7
	25-29	6
	30-34	0
	> 35	0
Age in years at the first child's birth	18-24	4
	25-30	9
	> 30	0
Number of previous pregnancies	1	3
	2-3	5
	4-5	3
	> 5	2
Number of live-born children	1	4
	2-3	4
	4-5	3
	> 5	2

The main themes that emerged were the views of the clinic, characteristics of the midwife, services (aspects) of the clinic, and follow-up care.

Views (Expectations) of the Clinic- *Healthcare professionals in the clinic:*

Views regarding the clinic were the central theme identified in the telephone interviews. Most participants believed it to be a consultant-led clinic, while few expressed the perception that it was led by a consultant accompanied by a qualified midwife. They were surprised to know that the clinic was in fact led by a qualified, specialised midwife. Some participants were concerned about the non-availability of the consultant, and expressed the need for a consultant to check for any foetal health problems. The participants felt that the clinic was

comfortable.

Excerpts from interview script:

'I would have preferred to have a doctor in the clinic, but after dealing with the midwife, I assumed she was a specialist because she was excellent. The midwife was qualified and could lead the clinic.' (p. 2)

'It is a consultation clinic, and a specialist midwife is in charge. The midwife supervises and cares for me; she is not a general nurse.' (p. 3)

'Fear of the clinic because the consultant isn't there while the checks are being done; it is a consultation clinic, and a specialist midwife is in charge.' (p. 7)

'I did not expect the presence of a midwife in a consultation clinic like in other clinics. After my

consultation, I discovered that the clinic is significant, that the midwife is specialised, and speaks knowledgeably.’ (p. 8)

Scope of the clinic and facilities:

The participants felt that the purpose of the clinic was to support women and ensure everything was normal during pregnancy. Some observed that the clinic was overcrowded, had a long waiting time, and lacked adequate facilities.

Excerpts from interview script:

‘Everything is perfect, and the appointments are timely.’ (p. 1)

‘There is nothing negative about the clinic, and the hospital is classy and wonderful.’ (p. 3)

‘It is a comfortable clinic with no negatives.’ (p. 8)

‘I was initially scared because it is a public hospital; it is 80-85% better than I had imagined, and the midwife constantly explained things to me.’ (p. 11)

‘There is no follow-up between the consultant and the mother to check on the newborn’s condition after delivery, especially if there is a health problem.’ (p. 12)

‘Overcrowding, long waiting times, and follow-up with a different midwife every visit were the negative features of the clinic.’ (p. 6)

Characteristics of the Midwife- Knowledge and attitude of the midwife:

All the participants reported that the midwife was qualified, knowledgeable, provided appropriate education, and could clarify their questions. The participants were quite satisfied with the midwife’s behaviour. They expressed that the midwife had a good attitude, was very supportive, and that they felt comfortable with the midwife.

Excerpts from interview script:

‘The clinic’s staff is knowledgeable on everything. The midwife was excellent and treated me nicely.’ (p. 2)

‘The midwife is more capable, understanding, and I am more comfortable with her than the doctor. The midwife is a woman with whom I

feel at ease when speaking or asking questions.’ (p. 5)

‘The midwife had a good attitude during the appointment.’ (p. 7)

Roles and responsibilities:

The participants reported that the midwife supervises their care, carries out the required investigations, and provides education. One participant expressed the need to clarify the role of the midwife, so that attendees are aware of what to expect from the midwife upon visiting the clinic.

Excerpts from interview script:

‘A The clinic has a specialised midwife who oversees the clinic, helps women prepare for childbirth, and plays other key roles.’ (p. 1)

‘The midwife was excellent, treated me nicely, and provided me with pregnancy-related information that I was unaware of.’ (p. 2)

‘The midwife helps conduct tests, supports, encourages, and advises on nutrition.’ (p. 3)

Services Offered by the Clinic- Information, education, and communication:

All the participants said they received appropriate information and communication in the clinic, including advice on nutrition, exercise, breastfeeding, and birth plans. In addition, education was provided according to the individual needs of the mother. Almost all participants reported good communication and a clear explanation of facts. Most reported a positive experience with the health education provided in the clinic, and with the clarification provided in response to their questions. A few participants commented on the potential for improving communication, as well as the nutrition aspect of health education.

Excerpts from interview script:

‘There was education about nutrition, healthy exercise, and breastfeeding.’ (p. 2)

‘Support and encouragement to have a normal delivery, and monitoring to ensure everything remains normal. Supporting and encouraging. Advice on nutrition and pregnancy-related

information that I was unaware of.’ (p. 3)

‘Education about exercise, healthy food, breastfeeding, and continuous check-ups. Conducting ultrasound and giving information about pregnancy; positive and integrated education; and postpartum and breastfeeding education. (p. 12)

Investigations:

The participants reported that not all investigations were carried out in the clinic. During their visit, the midwife helped pregnant women by conducting all the required investigations, such as blood tests, and the results were clearly explained. However, for some investigations, such as X-ray and ultrasound, the women had to go to other areas of the hospital. One participant expressed the belief that some procedures were unnecessary, while another said that the explanation of the ultrasound findings was unclear.

Excerpts from interview script:

‘Carried out blood tests and ultrasounds.’ (p. 2)

‘Nothing, but some medical procedures, I think, are unnecessary.’ (p. 2)

‘Conducted blood and diabetes tests; I can't get X-rays done at the same time and the same place.’ (p. 4)

‘The midwife gave me a poor and confusing explanation of the ultrasound results.’ (p. 7)

‘There should be better communication regarding the nature of the appointments—whether it is an appointment only, or if there will be tests, ultrasounds, or medications—to relieve pressure on the doctor and on the pregnant woman.’ (p. 6)

Support- Excerpts from interview script:

‘The clinic offered care and counseling during pregnancy, provided moral support during childbirth, and monitoring to ensure everything was normal. Also, the midwife communicated well and clarified my doubts.’

‘Supervision and care during appointments and monitoring to ensure everything remains normal.’ (p. 3)

‘Psychological and positive support; supervision,

care, and counseling throughout pregnancy; caring for the mother and foetus before delivery; and monitoring to ensure that the condition of the mother is normal.’ (p. 12)

‘Supervise, care, and counsel during pregnancy; monitor to ensure everything, including emotional support, remains normal.’ (p. 8)

‘Following up on the health status, and overcoming the anxiety and fears, of the pregnant woman.’ (p. 10)

Follow-Up Care- Continuity of care:

A few participants expressed that they had expected to see the same midwife at the delivery as had been with them during the clinic appointments, while in fact there was follow-up by a different team at the time of delivery. They suggested that the midwife could have informed them that she would not be attending the birth. The participants reported that the clinic had a special file for each patient, detailing everything about their condition.

Excerpts from interview script:

‘Everything I need is provided for; if I have complaints, they follow up in the clinic; and they provide guidance during pregnancy.’ (p. 6)

‘Follow-up dates are too far apart. There was no follow-up during COVID.’ (p. 4)

‘Everything in the clinic is fine, and the follow-up is accurate.’ (p. 12)

‘Timely follow-up in the pregnancy period.’ (p. 9)

‘Making it easier to re-open the file after it has been closed post-delivery.’ (p. 3)

It should be explained to pregnant women that the midwife will not be with her during the delivery.’ (p. 11)

Post-partum follow-up:

Most participants expected their midwives to follow up with them during the birth and the postpartum period, with one stating that the follow-up communication was not good.

Excerpts from interview script:

‘A different team followed up at the time of delivery; I expected to see the midwife who was with me at my appointments.’ (p. 11)

'I expected more help, especially as it was my first delivery; I expected them to reassure me during delivery. During the follow-ups, there was education about pregnancy, healthy food, and exercise, but at the time of delivery it was different; there was insufficient communication and no explanation. (p. 11)

'Making it easier to reopen the file after it has been closed post delivery.' (p. 3)

IV. DISCUSSION

This study reveals the perceptions of women attending a midwife-led clinic that was implemented in the tertiary healthcare setting to ensure appropriate care for women, as well as to leverage the economic benefits of such services. The midwife-led antenatal clinic, a novel treatment model in the current setting, was evaluated from the perspective of the beneficiaries, and it was determined that it is, in fact, the best choice for low-risk pregnant women. This supports a study that showed that midwives and specialists created the best practice model for delivering prenatal care to low-risk women [30].

The participants of this survey thought the clinic was important, and were at ease with the midwife and the services. This indicates that midwife-led services are accepted and utilised by pregnant women. Research illustrating the prevalence of midwife-led prenatal care and general use of its services supports this [31]. Another study revealed that continuity models of care led by midwives had greater rates of satisfaction by the mothers who used them [32]. In the current study, a participant was concerned that the clinic was in a public setting. This is reinforced by research that found that women are always concerned about the level of healthcare offered by public facilities as opposed to private ones [33].

Most participants in the current study expressed satisfaction with the health education offered in the clinic regarding prenatal care, nutrition, exercise, and breastfeeding. They also expressed appreciation for the extra time they were given by the midwife to ask questions and receive

answers, noting that support and encouragement for mothers was still the clinic's primary focus. This conclusion was supported by research providing interesting information on why women favour midwife-led clinics: women attending MLC reported more excellent options, shorter wait times, more conversation time, and simpler access to prenatal care. In addition, midwife-led prenatal care was successful for women with low-risk pregnancies and better in terms of the choice, nursing, and care experience [34]. The comprehensive pre-birth training, led by a midwife, improved their expectations, readiness and preparedness for the delivery process, according to another study with similar conclusions [35].

The participants in this study claimed that everything was ideal in the clinic and that the midwife was skilled, knowledgeable, provided the proper education, and could answer their questions, but a few felt the need for a consultant when the condition of the foetus was out of the ordinary. The participants also mentioned the need to upgrade the facility, as well as the communication and education components.

Satisfaction with antenatal care was high among the women. One study revealed that factors contributing most to dissatisfaction with antenatal care were a lack of information about pregnancy-related issues, and midwives and not taking their lack of awareness seriously [36]. Overall, our study found that women preferred the services of a MLC and had specific expectations, which is supported by another study that found both women and healthcare professionals favour the services of MLCs. Both were optimistic about creating a new care model while considering participants' particular expectations and barriers [37]. The study included the viewpoints of the clinicians, and found areas in which the clinic may be improved that were mentioned by the beneficiaries. Gaps in understanding, perception, and application of midwife-led care have also been found [38]. Providers can offer antenatal care options that facilitate better outcomes for the women and

their neonates by being aware of women's perceptions of midwifery [39].

According to this study, the clinic provided psychological services and decreased the mothers' worries and anxiety. These findings align with those of another study that found that women who used MLC services had lower levels of anxiety and higher levels of perinatal satisfaction [40]. Although many of our participants felt that the midwife provided good emotional support and answered all of their questions during the visit, some also voiced concerns about the clinic's facilities and communication. Numerous studies back this; one identified that the main concerns were related to staff attitude and communication [41]. This theory was validated by a different study, which found that impressions of clinic facilities and staff communication impacted attendees of clinics in Saudi Arabia [42].

The present study highlighted that the attitude of the clinic staff was good, and the participants felt comfortable with the staff, although some complained that communication was lacking. In other research, women claimed that counseling provided by a midwife increased their birth confidence by educating and empowering them. Education about the birth plan helped calm their fears and anxieties and prepare them for labour. This finding aligns with numerous other study findings. Women valued how midwives put them at ease and gave them the facts after earning their confidence [43]. Women also said that midwife-led counseling increased their confidence in giving birth through knowledge and information in qualitative research [44].

Most of our participants, however, were unaware of the clinic's scope and expected their midwives to monitor them throughout the pregnancy and postpartum periods. One participant voiced concern that the later communication was poor. Although there was follow-up by the various teams at the time of birth, some participants had expected to see the same midwife who had been with them throughout the clinic visits. This finding, too, aligns with previous studies.

Although most women welcomed the idea of an midwife led unit, they lacked awareness of midwives' full scope of practice [39]. However, recipients' expectations were higher in all facets of quality than their perceived care [45].

The women in the current study stated that having a familiar midwife present throughout labour and delivery benefits the birthing experience. Findings from another study support this claim: women's birthing experiences were favourably enhanced by having a familiar midwife present. Women who received care from a reputable midwife reported improved knowledge, involvement in decision-making, and a sense of control over their pain perception [46].

The participants in this study were under 35 years old, graduates, and reported high satisfaction levels. Women in other studies also expressed satisfaction with services provided by nurse-midwives. According to research, satisfaction was linked to age, education level, parity, and pregnancy status. Women over 55 who had only primary education and were nulliparous (had never given birth) were less likely to be happy with midwife-led care [47].

V. LIMITATIONS

There was only a small number of participants in this study, which involved one particular MLC. However, the findings may be considered reliable because most participants shared the same opinions, and the study vividly depicted how the clinic is perceived by its beneficiaries.

VI. CONCLUSION

The women who participated in this survey preferred midwife-led clinics because they allowed for better communication, answered their queries, and provided significant emotional support. However, when considering the postpartum follow-up, they had been under the impression that the same midwife would be available to them during the birth. To prevent expectations beyond the clinic's scope, they emphasised that a thorough explanation should

be provided, both of the clinic's and the midwife's scope. While the study uncovered a few issues with the clinic's infrastructure and aftercare, overall, it revealed that women favoured the services of the MLC, and had specific expectations of the clinic and its staff.

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VIII. REFERENCES

1. Iida M, Horiuchi S, Nagamori K. A comparison of midwife-led care versus obstetrician-led care for low-risk women in Japan. *Women and Birth*. 2014 Sep;27(3):202–7.
2. Mortensen B, Diep LM, Lukasse M, Lieng M, Dwekat I, Elias D, Fosse E. Women's satisfaction with midwife-led continuity of care: an observational study in Palestine. *BMJ Open*. 2019 Nov 3;9(11):e030324.
3. Michel-Schuldt M, McFadden A, Renfrew M, Homer C. The provision of midwife-led care in low-and middle-income countries: An integrative review. *Midwifery*. 2020 May;84:102659.
4. Beckingham A, Downe S, Fernandez E, Reed B, Kaur I, Aziz N, Kingdon C. Implementing Professional Midwife-Led Maternity Care in India for Healthy Pregnant Women: A Community Case Study. *Front Public Health*. 2022 Jun 9;10.
5. Nove A, Bazirete O, Hughes K, Turkmani S, Callander E, Scarf V, Forrester M, Mandke S, Pairman S, Homer CS. Which low- and middle-income countries have midwife-led birthing centres and what are the main characteristics of these centres? A scoping review and scoping survey. *Midwifery*. 2023 Aug;123:103717.
6. David K V, Pricilla RA, Venkatesan S, Rahman SP, Sy G, Vijayaselvi R. Outcomes of deliveries in a midwife-run labour room located at an urban health centre: results of a 5-year retrospective study. *Natl Med J India*. 2012;25(6):323–6.
7. Moudi Z, Tabatabaei SM. Birth outcomes in a tertiary teaching hospitals and local outposts: a novel approach to service delivery from Iran. *Public Health*. 2016 Jun;135:114–21.
8. Ngongo C, Christie K, Holden J, Ford C, Pett C. Striving for excellence: Nurturing midwives' skills in Freetown, Sierra Leone. *Midwifery*. 2013 Oct;29(10):1230–4.
9. Akhtar N, Shahid S, Jan R, Lakhani A. Exploring the Experiences and Perceptions of Women About Childbirth at Birthing Centers in Karachi, Pakistan. *Int J Childbirth*. 2018 Mar 1;7(4):214–26.
10. Freitas JM dos S, Narchi NZ, Fernandes RAQ. Práticas obstétricas em centro de parto normal intra-hospitalar realizadas por enfermeiras obstetras. *Escola Anna Nery*. 2019;23:e20190112.
11. Butler MM, Brosnan MC, Drennan J, Feeney P, Gavigan O, Kington M, O'Brien D, Sheehy L, Walsh MC. Evaluating midwifery-led antenatal care: Using a programme logic model to identify relevant outcomes. *Midwifery*. 2014 Jan;30(1):e34–41.
12. Symon A, Pringle J, Cheyne H, Downe S, Hundley V, Lee E, Lynn F, McFadden A, McNeill J, Renfrew MJ, Ross-Davie M, van Teijlingen E, Whitford H, Alderdice F. Midwifery-led antenatal care models: mapping a systematic review to an evidence-based quality framework to identify key components and characteristics of care. *BMC Pregnancy Childbirth*. 2016 Dec 19;16(1):168.
13. Murphy A. Antenatal options: developing midwife-led services in Ireland. *Midwifery*. 2012;20(9).
14. Ryan P, Revill P, Devane D, Normand C. An assessment of the cost-effectiveness of midwife-led care in the United Kingdom. *Midwifery*. 2013;29(4):368–76.
15. Voon ST, Lay JTS, San WTW, Shorey S, Lin SKS. Comparison of midwife-led care and obstetrician-led care on maternal and neonatal outcomes in Singapore: A retrospective cohort study. *Midwifery*. 2017 Oct;53:71–9.
16. Sutcliffe K, Caird J, Kavanagh J, Rees R, Oliver K, Dickson K, Woodman J, Barnett-Paige E, Thomas J. Comparing midwife-led and doctor-led maternity care: a systematic review of reviews. *J Adv Nurs*. 2012 Nov 11;68(11):2376–86.

17. Skirrow H, Holder B, Meinel A, Narh E, Donaldson B, Bosanquet A, Barnett S, Kampmann B. Evaluation of a midwife-led, hospital based vaccination service for pregnant women. *Hum Vaccin Immunother.* 2021 Jan 2;17(1):237–46.
18. Heale R, James S, Wenghofer E, Garceau ML. Nurse practitioner's perceptions of the impact of the nurse practitioner-led clinic model on the quality of care of complex patients. *Prim Health Care Res Dev.* 2018 Nov 9;19(6):553–60.
19. Ministry of Health of Saudi Arabia. Statistical Report of Gynecology Obstetrics Departments and Maternal Care in MOH 1427. <http://www.moh.gov.sa/en/ministry/statistics/book/pages/default.aspx>. 2006.
20. Altaweli R, Shaban I, Paine P. Report On The Midwifery Workforce In The Moh, Saudi Arabia, For 2019. *Practising Midwife.* 2020;23(8).
21. General Authority for Statistics. Demographic Research Bulletin 2016. <https://www.stats.gov.sa/en/4522>. 2016.
22. Young Y, Alharthy A, Hosler AS. Transformation of Saudi Arabia's Health System and Its Impact on Population Health: What Can the USA Learn? *Saudi Journal of Health Systems Research.* 2021 Aug 20;1(3):93–102.
23. Chowdhury S, Mok D, Leenen L. Transformation of health care and the new model of care in Saudi Arabia: Kingdom's Vision 2030. *J Med Life.* 2021 Jun;14(3):347–54.
24. Nurunnabi M. Transformation from an Oil-based Economy to a Knowledge-based Economy in Saudi Arabia: the Direction of Saudi Vision 2030. *Journal of the Knowledge Economy.* 2017 Jun 28;8(2):536–64.
25. Cachia M, Millward L. The telephone medium and semi-structured interviews: a complementary fit. *Qualitative Research in Organizations and Management: An International Journal.* 2011;6(3):265–77.
26. Lechuga VM. Exploring culture from a distance: The utility of telephone interviews in qualitative research. *International Journal of Qualitative Studies in Education.* 2012;25(3):251–68.
27. Braun V, Clarke V. To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qual Res Sport Exerc Health.* 2021 Mar 4;13(2):201–16.
28. Fugard AJB, Potts HWW. Supporting thinking on sample sizes for thematic analyses: a quantitative tool. *Int J Soc Res Methodol.* 2015;18(6):669–84.
29. Clarke V, Braun V. Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *Psychologist.* 2013;26(2):120–3.
30. Cooke HM, Waters DL, Dyer K, Lawler J, Picone D. Development of a best practice model of midwifery-led antenatal care. *Australian Midwifery.* 2004 Jun;17(2):21–5.
31. Abdullah P, Gallant S, Saghi N, Macpherson A, Tamim H. Characteristics of patients receiving midwife-led prenatal care in Canada: results from the Maternity Experiences Survey (MES). *BMC Pregnancy Childbirth.* 2017 Dec 2;17(1):164.
32. Sandall J, Soltani H, Gates S, Shennan A, Devane D. Midwife-led continuity models versus other models of care for childbearing women. *Cochrane Database of Systematic Reviews.* 2016 Apr 28;2016(4).
33. Jallow IK, Chou YJ, Liu TL, Huang N. Women's perception of antenatal care services in public and private clinics in the Gambia. *International Journal for Quality in Health Care.* 2012 Dec 1;24(6):595–600.
34. Butler MM, Sheehy L, Kington M (Maureen), Walsh MC, Brosnan MC, Murphy M, Naughton C, Drennan J, Barry T. Evaluating midwife-led antenatal care: Choice, experience, effectiveness, and preparation for pregnancy. *Midwifery.* 2015 Apr;31(4):418–25.
35. Onchonga D, Várnagy Á, Keraka M, Wainaina P. Midwife-led integrated pre-birth training and its impact on the fear of childbirth. A qualitative interview study. *Sexual & Reproductive Healthcare.* 2020 Oct;25:100512.
36. Hildingsson I, Haines H, Cross M, Pallant JF, Rubertsson C. Women's satisfaction with antenatal care: Comparing women in Sweden and Australia. *Women and Birth.* 2013 Mar;26(1):e9–14.

37. Maillefer F, de Labrusse C, Cardia-Vonèche L, Hohlfeld P, Stoll B. Women and healthcare providers' perceptions of a midwife-led unit in a Swiss university hospital: a qualitative study. *BMC Pregnancy Childbirth*. 2015 Dec 11;15(1):56.
38. Esienmoh EE, Okon IE, Ojong IN, Akpan MI, Armon MA, Whiley EE. Perception And Practice of Midwife-Led Model Of Care Among Skilled Birth Attendants In Selected Health Facilities In A Southern State In Nigeria. *Int J Nur S Midwife Health Relate Case*. 2015;1:1–16.
39. Yoder H, Hardy LR. Midwifery and antenatal care for black women: A narrative review. *Sage Open*. 2018;8(1):2158244017752220.
40. Gu C, Wu X, Ding Y, Zhu X, Zhang Z. The effectiveness of a Chinese midwives' antenatal clinic service on childbirth outcomes for primipare: A randomised controlled trial. *Int J Nurs Stud*. 2013 Dec;50(12):1689–97.
41. Alanazy W, Rance J, Brown A. Exploring maternal and health professional beliefs about the factors that affect whether women in Saudi Arabia attend antenatal care clinic appointments. *Midwifery*. 2019 Sep;76:36–44.
42. Alanazy W, Brown A. Individual and healthcare system factors influencing antenatal care attendance in Saudi Arabia. *BMC Health Serv Res*. 2020 Dec 20;20(1):49.
43. Baron R, Heesterbeek Q, Manniën J, Hutton EK, Brug J, Westerman MJ. Exploring health education with midwives, as perceived by pregnant women in primary care: A qualitative study in the Netherlands. *Midwifery*. 2017 Mar;46:37–44.
44. Larsson B, Hildingsson I, Ternström E, Rubertsson C, Karlström A. Women's experience of midwife-led counselling and its influence on childbirth fear: A qualitative study. *Women and Birth*. 2019 Feb;32(1):e88–94.
45. Gholipour R, Shahoei R, Ghader Khani G. The quality of midwifery care from the perspective of healthcare service recipients using the SERVQUAL model in Sanandaj comprehensive health centers in 2018. *Journal of Clinical Nursing and Midwifery*. 2019;8(2):337–46.
46. Hildingsson I, Rubertsson C, Karlström A, Haines H. A known midwife can make a difference for women with fear of childbirth-birth outcome and women's experiences of intrapartum care. *Sexual & Reproductive Healthcare*. 2019 Oct;21:33–8.
47. Eleke C, Agu IS. Patients' Satisfaction With Nurse Led Care In Selected Government Owned Primary-Health-Centres In South-East Nigeria.