Journal of Community Medicine and Primary Health Care. 37 (1): 1 – 13
https://dx.doi.org/10.4314/jcmphc.v37i1.1

JOURNAL OF COMMUNITY MEDICINE AND PRIMARY HEALTH CARE

REVIEW ARTICLE

Improving Maternal Health Outcomes in Sub-Saharan Africa: The Merits and Demerits of Person-Centred Maternity Care

Omorogbe CE,[1] Adewale-Olalemi OI.[1]

[1] Centre for Excellence in Reproductive Health and Innovation, Department Of Nursing Science, Faculty of Basic Sciences, University of Benin, Benin city

Keywords

Person-centred Maternity Care;

Holistic Approach;

Maternal Mortality Rate;

Infant Morbidity and Mortality;

Sub-Saharan Africa;

Barriers

ABSTRACT

Background: The traditional approach to maternity care, commonly practiced in developing countries such as sub-Saharan Africa (SSA), has been discovered to be primarily focused on the clinical health of the mother and the foetus. However, this has only had a minimal effect on maternal and infant mortality rates in SSA. Hence, there is a need for a holistic approach: Person-Centred Maternity Care (PCMC). PCMC is a novel approach that has recorded better maternal and infant health outcomes in developed countries due to its holistic focus on maternal health. Therefore, this article seeks to identify the merits and the demerits of PCMC over the traditional approach to maternity care.

Methodology: Using databases such as MEDLINE, EMBASE, and CINAHL, twenty-five articles were reviewed to identify the merits and demerits of the implementation of PCMC in countries within Sub-Saharan Africa, using Ethiopia, Rwanda, Uganda, Kenya, and Nigeria as case studies.

Results: Findings revealed benefits such as increased knowledge about pregnancy, improved relationship, birth preparedness, enhanced relationship with health team members and low incidence of complications. Inadequate resources, poor communication and non-proximity to health centres were identified as the barriers.

Conclusion: Maternity care must be person-centred, quality-based and outcome-focused. Considering the merits and barriers identified, its adoption in other developing countries where it is non-existent will be easier to achieve reduced maternal and infant morbidity and mortality rates.

Article History
Date submitted: 26/08/2024;
Date accepted: 06/02/2025;

Correspondence to:
Adewale-Olalemi OI
Centre for Excellence in Reproductive Health and Innovation,
Department Of Nursing Science, Faculty of Basic Sciences,
University of Benin, Benin city.
Email: kemilamidi@gmail.com

INTRODUCTION

Providing optimal care during pregnancy, delivery and post-delivery is every woman's reproductive right.[1] Pregnancy is a transition period characterized by diverse physiological events, events that can lead to maternal morbidity and mortality (MMR) if not adequately

managed.[2] Sub-Saharan Africa (SSA) refers to regions south of the Sahara.[3] These regions include Central Africa, East Africa, Southern Africa, and West Africa. Fertility rates in these regions are remarkably high. Unfortunately, SSA is the second region with the highest incidence of MMR globally, with incidence rates of 119 deaths per 100,000 live births in South Africa, 1,360 deaths per 100,000 live births in Sierra Leone, 800 deaths per 100,000 live births in South Sudan, and 473 deaths per 100,000 live births in the Democratic Republic of Congo.[4]

However, despite the concerted effort by the different countries within the sub-Saharan region of Although Africa aims to reduce maternal mortality rates (MMR), the decline in these rates remains slow[5]. Therefore, there is a need to shift focus from purely physiological factors to the exploration of other influences, particularly social factors, such as the inequalities affecting sexual and reproductive health and rights, which can significantly impact pregnancy outcomes.[6] Person-Centred Maternity Care (PCMC) is an integrated antenatal approach designed to meet the needs of all pregnant women, regardless of their culture, tribe, or race, while promoting quality care and optimal maternal (and perinatal) well-being.[7] Before its introduction in 2016, the Sub-Saharan African region experienced a slow decline in maternal mortality rates; however, within a year after its introduction, a fast decline of 39 percent was observed.[5,7]

Therefore, considering the need for a sustained universal decline of MMR, this review aims to explain the concept, practice, merits, and current challenges of the person-centred antenatal care approach using Ethiopia, Uganda, Rwanda, Nigeria, and Kenya as case studies.

METHODS

Selection of empirical studies

Empirical studies were selected using the PICO (P-population, I-intervention, C-comparator, and O-outcome) approach to ensure that only relevant studies were selected for review. The participants were postpartum women and healthcare providers in Sub-Saharan Africa (Ethiopia, Rwanda, Uganda, Kenya and Nigeria). Studies that compared the effect of PCMC in public and private health institutions were considered, and studies that reported determinants and policies that influence PCMC were reviewed.

All relevant literature published from August 2016 to August 2024 was considered regardless of their design. However, empirical studies that reported other approaches to maternity care except PCMC were excluded.

Electronic Search

Databases such as MEDLINE, EMBASE and CINAHL were searched using appropriate keywords in combination with truncation (*), wild card symbols ($) and adjacent search options such as (Near 1) and relevant Boolean operators such as AND and OR. This search strategy, which was restricted (criteria used: year, intervention, population, and language), was applied to identify literature from the electronic databases using appropriate subject headings and text words. In addition to electronic database

searches, relevant references from identified research articles were searched. Twenty-five articles were reviewed out of the thirty-five materials retrieved.

Concept of Person-centred Maternity Care (PCMC)

The PCMC approach was introduced in 2016 to ensure the provision of antenatal care with optimal obstetric outcomes void of complications.[7] It also ensures the provision of individualized, rather than routine, clinical/therapeutic practices to ensure the provision of clinical services integrated with local practices and knowledge that are appropriate and effective.[8] The client's clinical decisions are based on preferences, needs, and values.[3] System-provider responsiveness, patient-provider communication, and interpersonal treatment are key features of this approach.[9] In other words, PCMC is an approach that addresses maternal problems centred on availability, affordability and accessibility due to its individualized focus. It is quality-oriented; hence, its outcomes are measurable under six domains: safety, effectiveness, patient-focused, timeliness, efficiency, and equity.[8]

In 2016, Person-Centred Maternity Care (PCMC) was introduced to ensure that every woman and new-born receives quality person-centred care throughout pregnancy, delivery and postpartum periods.[7,8,9] Before its introduction, the Sub-Saharan African region experienced a gradual decline in maternal mortality rates from 2000 to 2016; however, in 2017, after the introduction of PCMC, a steep decline of 39 percent was observed.[10]The successful implementation of this approach improved maternal and neonatal outcomes, enhanced prompt family planning uptake, and reduced the incidence of postpartum depression[11]. Also, the ability to evaluate the outcome of person-centred care using the person-centred maternity scale made PCMC a priority in ensuring the reduction of maternal mortality and morbidity.[10,11]

PCMC starts with antenatal care and the following recommendations were made to improve antenatal care under this approach such as midwife-led continuity-of-care model, group antenatal care, task-shifting components of antenatal care of delivery, recruitment and retention of staff in the rural area, community-based intervention, women-held case notes and antenatal care contact schedule. [12]

Person-Centered Maternity Care Approach in Sub-Saharan Africa

Ethiopia

The uptake of PCMC in Ethiopia has evolved over the years; in 2019, a city called Hawassa, located in the Sidama region of Ethiopia, recorded a low PCMC (52.3%) in the public health institutions.[12] In 2020, a community-based cross-sectional study among 317 participants in Dessie, Northeastern Ethiopia, showed a better uptake in private health institutions than public health institutions due to effective communication between the health care provider and the client.[13] Private health institutions had a better approach, as they needed to attract and

sustain the utilization of their services; PCMC became a common practice among them with better maternal outcomes, hence higher patronage.[13]

Finally, in 2022, the prevalence of PCMC in Addis Ababa, Ethiopia, became 65.8% compared to 52.3% recorded in 2017, a clear increase in its adoption, especially in public hospitals where its effect was more evident.[14] However, the result of the cross-sectional study revealed that healthcare providers neither introduced themselves nor sought permission before carrying out procedures.[14] A practice that can be detrimental to the overall practice of PCMC if not stopped by policymakers and enforced by health leaders in public health institutions.

Rwanda

A qualitative study that involved eighteen (18) health centres was carried out to study the outcome of PCMC in Rwanda over a period of nine (9) months.[15] Before its introduction, fears concerning the risk of divulging private information among group members were the only source of concern shown among participants.[15] However, a great deal of enthusiasm was shown among them. After the implementation of the model, the pregnant women reported huge benefits such as improved knowledge concerning pregnancy and the changes that occur during the period.[15] Adequate peer support and improved relationships with healthcare providers were also reported.[15]

Additional findings demonstrated that strict adherence to ethical considerations, such as confidentiality and the right to privacy in maternity care, enhanced the patient-centred aspect of care.[15] This approach alleviated participants' fears about sharing private information in a public forum and further improved the provision of individualized care, even within a group setting. [16] The involvement of a diverse technical team, which included not only nurses and midwives but also community health workers, medical officers, and radiographers, contributed to the success of the intervention in the 18 district hospitals where it was implemented. [15] Needs such as access to clean drinking water during visits, confidentiality, privacy, punctuality, the non-invitation of husbands, and the cultural preference for using a cot during physical examinations were prioritized and addressed. These efforts led to the achievement of the established goals of health promotion, maintenance, and early detection of medical issues during pregnancy.

Uganda

In 2017, the introduction of the PCMC in Uganda achieved not only the intervention’s goals but also the development of long-lasting friendships among the women, a trusting bond with the midwife who they often hope will also take their delivery.[8]

The group sessions were designed to be individualized as much as group-centred; participation by each member was ensured as roles were shared among the participants.[6,8] Culturally acceptable methods and using local

materials during the session were ensured to promote acceptance and easy understanding of the processes involved.[8] For instance, the pregnancy club members began each session with "a ritual of opening and closing a simple, circular mat made of local fabric."[6] The women will gather around the mat and roll out scrolls containing picture cards of health discussion topics. They are also allowed to pass around a ball so that everyone has a turn to speak.[8]

Kenya

In 2018, PCMC was introduced in six health facilities in Kakamega County, Kenya, for over six months. At the end of the study, this approach was associated with enhanced social support, improved knowledge that increased from 7.1% to 26.4%, the adoption of healthy behaviours, enhanced self-efficacy, and a better care experience.[17] Knowledge of danger signs increased, friendships among participants and health caregivers were established, the knowledge and competence of health care providers improved, and the quality of care was enhanced.[17,18,19] Antenatal care providers showed respect to the women, and adequate birth preparation was ensured.[17] The experience of care among participants improved, measured using indices such as respect shown, knowledge and competence of health workers, and satisfaction with care provided, which increased from 58.9% to 71.7%.[17]

Nigeria

The adoption of PCMC in Nigeria is quite recent. Few studies have reported that health institutions in Enugu (eastern Nigeria) and Kano (northern Nigeria) have documented its utilization. Furthermore, a cross-sectional study involving 450 postpartum women in Enugu identified inadequacies in the PCMC scale concerning patient characteristics, facility characteristics, and service types.[20] Additionally, midwives practicing in the region emphasized its shortcomings in public health institutions, as adequate provisions for human resources, infrastructure, and necessary equipment for its implementation are not yet in place, which does not meet patients' expectations.[20] Participants were committed to the birth preparedness plan, ensuring active participation from everyone, and they shared what they learned with others.[20]

Merits of PCMC in different regions in Sub-Saharan Africa

Since the introduction of the PCMC, various merits have been observed, including the following: applying the PCMC approach enhanced knowledge concerning pregnancy. Regular attendance at the antenatal clinic provided access to crucial information about the pregnancy process, especially the warning signs. This led to the early identification of danger signs and the prompt detection of medical problems, which allowed for timely treatment. [6,8,17,21] Hence, introducing the PCMC approach increased participants' knowledge from 46% to 80%.[21] Participants also shared the information they received without hesitation with other pregnant women in their circles. In Sokoto, the delivery of

health information in clear terms using their local language improved understanding.[21]

One of the highlights of the PCMC approach was the improved relationships among pregnant women.[8] Peer support was strengthened, and each participant developed a sense of belonging, which forged long-lasting relationships even after delivery.[8] The emotional support provided throughout pregnancy enhanced the overall experience. Periodic meetings with the midwife and discussions of pertinent issues selected by the participants promoted a positive relationship between the pregnant women and the midwife.[15] Questions could be asked without fear of reprimand, and each client was treated with the utmost respect. The patients' wishes were well documented, and care was planned to address their concerns.[8, 15, 20]

The pregnancy period becomes less tedious as the midwife is fully involved in caring for pregnant women from the antenatal phase until delivery. A relationship that transcends the health centre is established.[21] Clarifications regarding myths and old midwife tales are provided, and each individual receives adequate health information that enhances their pregnancy experience.[22]

The PCMC approach also enhances the early preparation of the birth preparedness plan which is formulated to promote healthy pregnancy and childbirth, to prevent complications that can lead to maternal or neonatal mortality,[15,20] and with the relationship promoted between the pregnant women and the health care provider, the birth preparedness plan is mapped out with ease.[20] The birth process is explained in terms that the woman can easily comprehend, and an individualized birth plan is formulated and documented.[20] The signs of labour and the different options of birth that can be implemented in case of complicated childbirth are also explained.[21,23] Social issues affecting the birth plan are identified and considered to ensure an uneventful delivery with a good outcome.[23] The conditions as stipulated in the six domains, safety, effectiveness, patient-focused, timeliness, efficiency, and equity, that measure the quality of health care rendered were met by the PCMC approach when applied in the countries (Uganda, Rwanda, and Nigeria).[24] The participants felt safe enough to divulge private information to the midwife without being forced and did not feel threatened by their peers.[5,19] Information provided during the sessions is primarily patient-focused; therefore, individualized care is rendered, and the concerns raised by the patient are addressed respectfully.[22] Health problems (physical, mental, social, and emotional) identified are addressed promptly, and complications are prevented.[24] Methods used to enhance the provision of antenatal care, utilizing the PCMC approach, have also been confirmed to be both efficient and effective, as culturally acceptable methods that are affordable and self-reliant are adopted.[22] Lastly, equity was ensured in the provision of care; all participants studied were treated equally without bias.[19, 24]

Barriers to Implementing the PCMC Approach in Sub-Saharan Africa

Despite these commendable merits, three major factors have been identified as barriers. Poor communication is the leading cause of failure of PCMC;[12] this results from varying understandings or interpretations of person-centred care behaviours by healthcare providers, as well as differing expectations, norms, or values regarding provider behaviours from clients.[22] Situations such as abuse towards women, refusal of the chosen companion, and constant blame on clients for the lack of effective patient-provider communication exist.[15,19] Hence, women lost confidence in the care being provided.[22]

Furthermore, PCMC is a midwife-led approach that cannot be provided by ill-trained midwives.[20] In Kano, an industrial city, located in Northern Nigeria, it was observed that PCMC could not be successfully practiced, [21] because the midwives had no training concerning this approach.[20,21] In Nigeria, most health facilities at all healthcare levels (primary, secondary and tertiary) where maternal services are rendered are ill-equipped, with inadequate infrastructure, equipment and health manpower (midwives inclusive).[25] Considering the high rate of brain drain among health workers in SSA, the availability of midwives to provide patient-centred care is low.[20] Consequently, a failure of this approach was recorded in Nigeria and Uganda.[8,21]

Also, in recent times, healthcare in most of the countries located within SSA has consistently been allocated low budgets, which has led to poor health financing, a factor that has hugely affected the ability of the government to provide quality healthcare for its citizens. [25]

Similarly, the patriarchal system in the sub-Saharan region of Africa has been observed to hinder the utilization of antenatal care significantly.[21] A lack of cooperation from male partners was reported to have affected attendance and decreased the frequency of visits among pregnant women in countries like Rwanda and Uganda.[17, 22]

Finally, the inadequate provision of health centres in municipalities affects the patronage of pregnant women[20.] Coupled with a lack of basic amenities such as bad roads, a poor road network, and inadequate transportation, accessibility to the health centres is very poor.[23,26,27] This has inadvertently affected attendance, and irregular attendance will not enhance the attainment of the outcomes highlighted above.[28,29,30]

DISCUSSION

PCMC is a critical component of maternity care that guarantees better maternal and perinatal outcomes.[26,29,31] In climes where it is well utilized, it increases patronage of health services during labour and post-delivery.[27] From the review, various factors were identified as determinants of PCMC in SSA, such as the type of health facility where delivery takes place, as shown in a study carried out at Dessie, Ethiopia.[13] The study revealed that mothers who gave birth in private health institutions had access to person-centred care than those who delivered in public health institutions ($\beta = 14$, 95% CI: 7.70),[12] a

finding that is consistent with the study carried out at Kawassa in Southern Ethiopia where mothers who gave birth at private health institutions had increased person-centred care during childbirth (β = 4.3, 95% CI: (2.37, 6.22).[13] Furthermore, the level of education of a prospective mother was identified as determinants of PCMC, as shown in the study carried out in Kenya, which concluded that disadvantaged women received the lowest quality of PCMC,[18] a finding consistent with the findings from Ethiopia, which stated that women with higher education recorded a higher PCMC score compared to women who had no formal education (β = 3.75, 95% CI: 1.11, 6.39).[32] These studies further prove the impact of education on the health-seeking behaviour of individuals, as an educated woman will be able to communicate effectively as she seeks to understand the care being rendered and thereafter, make informed decisions.[30]

The perception of the women concerning PCMC is also a factor that influences their readiness to align with it. The type of birth attendant was identified as one of the factors that influence women's perception of PCMC.[20] Women whose deliveries were managed by doctors had higher PCMC scores than those attended by nurse midwives.[20] This finding is consistent with findings from Rwanda and Kenya, where women who recently had their deliveries taken by doctors recorded a better rating of PCMC.[7,18,19] Care delivered by Nurses was judged harsh and disrespectful as a result of poor staffing, extreme burn-out and poor remuneration.[20]

Other determinants identified using the PCMC validation scale include the client's need for respect and autonomy,[20] a finding which is consistent with the study at Debre Markos, located in Northwestern Ethiopia, where the participants rated the care provided high on the dignity and respect sub-scale, [32] as it highlights the inadequate interpersonal relationship between the healthcare professionals and the expectant mothers; and in some instances, the lack of regard for their decision-making ability with respect to their decision on labour and delivery companions. [32]

Successful implementation of PCMC in SSA is possible if initiatives aimed at raising awareness are prioritized among healthcare providers and clients.[29] Frequent engagement will promote the acquisition of in-depth knowledge of PCMC. Also, the consideration of individual women's choices before, during, and after pregnancy is a key requirement of the PCMC initiative instead of upholding institutional policies against their choices.[31] The provision of adequate facilities and infrastructures will enable the healthcare providers to align with the individual decisions of the prospective mothers. Also, periodic monitoring and evaluation of maternal care processes should be carried out by highly skilled midwives to identify weak points and ways through which they can be improved.[29,31] Rewards should also be given to motivate healthcare workers and clients alike. The

evaluation of the PCMC initiative is critical for its advancement, and the outcomes of such an evaluation will aid in the early identification of gaps.[31]

Finally, equity which remains one of the major domains of PCMC must be always upheld, irrespective of the location or facility type. Therefore, interventions to reduce disparities are to be designed and implemented to improve maternal outcomes among disadvantaged groups.[27,29,31]

CONCLUSION

The adoption of PCMC by all the countries in SSA will promote a progressive reduction in MMR. Considering its holistic approach towards antenatal care, which integrates the recommendations made by WHO to enhance the provision of optimal care during pregnancy, its implementation in the Nigerian health sector, being the most populous country in Africa, will have a spiral effect on the MMR of the SSA. Improved maternal outcomes, the receipt of adequate health information, access to peer group support, promotion of a good relationship between the midwife and the pregnant women, and promotion of self-reliant behaviours that promote parenting skills and other positive outcomes it affords will have significant global health effects. The optimal care it ensures during pregnancy makes this novel approach worth adopting at all levels of health care; therefore, efforts should be made to ensure its integration into all the levels of health care to enhance wider coverage in Nigeria and other countries in the SSA region.

Acknowledgement: We acknowledge the support and contributions of the lecturers in the Department of Nursing, University of Benin and the CERHI Library staff for the completion of this article presented at a seminar.

Conflict of interest: There was no conflict of interest.

Authors Contributions: A-OO: Conceptualisation, Literature Review, Design, Drafting Manuscript; OEO: Conceptualisation, Design, Manuscript Writing, Review and Editing.

REFERENCES

1. United Nations Human Rights (UNHR). Information Series: Sexual and Reproductive Health and Rights, 2020; [cited March 21, 2024] Available from URL: https://www.ohchr.org/en/women/information-series-sexual-and-reproductive-health-and-rights
2. Agunwa C, Obi E, Ndu A, Omotowo I, Idoko C, Umeobieri A, Aniwada E. Determinants of Patterns of Maternal and Child Health Service Utilization in a Rural Community in South Eastern Nigeria. BMC Health Services Research, 2017; 17 (2), 715-723. [cited March 21, 2024] Available from URL: doi 10.1186/s12913-017-2653-x
3. World Bank. 2016; [cited March 21, 2024] Available from URL:https://data.worldbank.org/country/ZG; 2016.
4. Musarandega R, Nyakura M, Machekano R, Pattinson R, Munjanja, S. Causes of Maternal Mortality in Sub-Saharan Africa: A Systematic Review of Studies Published from 2015 to 2020. Journal of Global Health, 2021; 11 (2), 40-48.

Available from URL:https://doi.org/10.7189/jogh.11.04048

5. Islam M and Masud M. Determinants of Frequency and Contents of Antenatal Care Visits in Bangladesh: Assessing the Extent of Compliance with the WHO Recommendations. PloS one, 2018; 13(9), e0204752. Available from URL: https://doi.org/10.1371/journal.pone.0204752
6. World Health Organisation (WHO). Recommendations on Antenatal Care for a Positive Pregnancy Experience: Summary Highlights and Key Messages from the World Health Organization's 2016: Global Recommendations for Routine Antenatal Care; 2019 Available from URL: https://apps.who.int/iris/bitstream/handle/10665/259947/WHO-RHR-18.02-eng.pdf ; 2019.
7. Miller P, Afulani P, Musange S, Sayingoza F and Walker D. Person-centered Antenatal Care and Associated Factors in Rwanda: A Secondary Analysis of Program Data. BMC Pregnancy and Childbirth, 2021; 21(1), 290- 300. Available from URL: https://doi.org/10.1186/s12884-021-03747-z
8. Ramsey K and Rashid S. Person-centered Group Antenatal Care in Eastern Uganda: Reaching Women through Pregnancy clubs. Boston: Maternal Health Taskforce; 2017. Available from URL: https://doi.org/2017/07/18/person-centered-group-antenatal-care-in-eastern-uganda-reaching-women-through-pregnancy-clubs/
9. Afulani P, Phillips B, Aborigo P and Moyer O. Person-centered Maternity Care in Low-income and Middle-income Countries: Analysis of Data from Kenya, Ghana and India. The Lancet, Global Health, 2019; 1(3), 96-109. Available from URL: doi: https://doi.org./10.1016/S2214-109X(18)30403-0
10. Montagu D, Giessler K, Nakphong M, Roy K, Sahu A, Sharma K, Green C and Sudhinaraset M. Results of a Person-centered Maternal Health Quality Improvement Intervention in Uttar Pradesh, India. PloS one, 2021; 15(12), e0242909. Available from URL: https://doi.org/10.1371/journal.pone.0242909
11. Labrusse C, Ramelet A, Humphrey T, MacLennan S. Patient-centered Care in Maternity Services: A Critical Appraisal and Synthesis of the Literature. Women's Health Issues, 2017; 26(1), 100-109. [cited December 21, 2023] Available from URL: doi: 10.1016/j.whi.2015.09.003
12. Getahun SA, Muluneh AA, Seneshaw WW. Person-centered Care during Childbirth and Associated Factors among Mothers who gave Birth at Health Facilities in Hawassa city Administration Sidama Region, Southern Ethiopia. BMC Pregnancy Childbirth, 2022; 22, 584-592. Available from URL: https://doi.org/10.1186/s12884-022-04909-3
13. Dagnaw FT, Tiruneh SA, Azanaw, MM. Determinants of Person-Centered Maternity Care at the Selected Health Facilities of Dessie town, Northeastern, Ethiopia: Community-based Cross-sectional Study. BMC Pregnancy Childbirth, 2020; 20, 524-530. Available from URL:https://doi.org/10.1186/s12884-020-03221-2
14. Tarekegne, AA, Giru, BW and Mekonnen, B. Person-centered

Maternity Care During Childbirth and Associated Factors at Selected Public Hospitals in Addis Ababa, Ethiopia, 2021: A Cross-sectional Study. Reproductive health, 2022; 19 (1), 199. Available from URL; https://doi.org/10.1186/s12978-022-01503-w

15. Musabyina A, Lundeen T, Butrick E, Sayinzoga F, Ngabo R, Rwabufigiri I, Walker D and Musange S. Before and After Implementation of Group Antenatal Care in Rwanda: a Qualitative Study of Women's Experiences, Reproductive Health, 2019; 16(9), 90-99. Available from URL:https://doi.org/10.1186/s12978-019-0750-5
16. Sanyinzoga F, Lundeen T, Gakwere M, Manzi E, Delphine Y, Nsaba U, Umuziga P, Kalisa I, Musange S. and Walker D. et al. Use of a Facilitated Group Process to Design and Implement a Group Antenatal and Postnatal Care Program in Rwanda. Journal of Midwifery & Women's Health, 2018; 63 (2), 593–601. Available from URL:doi: 10.1111/jmwh.12871.
17. Somji A, Ramsey K, Dryer S, Makhokha F, Ambasa C, Aryeh B, Booth K, Xueref S, Mwenesi R. and Rashid S. Taking Care of Your Pregnancy": A Mixed-methods Study of Group Antenatal Care in Kakamega County, Kenya. International Journal of Humanities and Social Science, 2018; 9(4), 110-119. [cited March 21, 2024] Available from URL: https://doi.org/10.1186/s12913-022-08200-1
18. Afulani P, Diamond-Smith N, Golub G. and Sudhinaraset M. Development of a Tool to Measure Person-centered Maternity Care in Developing Settings: Validation in a Rural and Urban Kenyan population. Reproduction Health, 2017; 14(1), 118-126. Available from URL: doi: 10.1186/s12978-017-0381-7.
19. Afulani P, Phillips B, Aborigo P and Moyer O. Person-centered Maternity Care in Low-income and Middle-income countries: Analysis of data from Kenya, Ghana and India. The Lancet, Global Health, 2019; 1(3), 96-109. Available from URL: doi: https://doi.org./10.1016/S2214-109X(18)30403-0
20. Ogbuabor, DC and Okoronkwor, OL. Midwives' Perspectives on Person-centred Maternity Care in Public Hospitals in South-east Nigeria: A mixed-method Study. PLOS One, 2021; 2(4), 440-448. Available from URL https://doi.org/10.1371/journal.pone.0261147
21. Adaji S, Jimoh A, Bawa, U, Ibrahim, H, Abiola A, Adelaiye H, Garba C, Lukong A, Idris S and Oladapo S. Women's Experience with Group Prenatal Care in a Rural Community in Northern Nigeria. International Journal of Gynaecology and Obstetrics, 2019; 145(2), 164-169. Available from URL :doi: 10.1002/ijgo.12788
22. Akeju D, Oladapo O, Vidler M, Akinmade A, Sawchuck D, Qureshi R, Solarin M, Adetoro O, Dadelszen P and the CLIP Nigeria Feasibility Working Group. Determinants of Health Care Seeking Behaviour During Pregnancy in Ogun State. Nigeria Reproductive Health, 2016; 13(1), 32- 38. Available from URL: doi: 10.1186/s12978-016-0139-7.
23. Sharma J, O'Connor M. and Jolivet R. Group Antenatal Care Models in Low- and Middle-income Countries: a Systematic Evidence Synthesis. Reproductive Health, 2018; 15 (38).

Available from URL: https://doi.org/10.1186/s12978-018-0476-9

24. Bradford B, Wilson A, Portela A, McConville F, Torienzo C and Homer C. Midwifery Continuity of Care: A Scoping Review of Where, How, By Whom and For whom? PLos Global Public health, 2022; 2(10): e0000935. Available from URL: https://doi.org/10.1371/journal.pgph.0000935.
25. Okonofua F, Ntoimo L, Ogungbangbe J, Anjorin S, Imongan, W and Yaya S. Predictors of Women's Utilization of Primary Health Care for Skilled Pregnancy Care in Rural Nigeria. BMC pregnancy and Childbirth, 2018; 18(1), 106 - 114. Available from URL: https://doi.org/10.1186/s12884-018-1730-4
26. Ngharbu R. and Olaniyan O. Determinants of antenatal care utilization in Nigeria. African Development Bank Group Bank: Abidjan. 2019. Available from URL: https://www.econbiz.de/Record/determinants-of-antenatal-care-utilization-in-nigeria-nghargbu-rifkatu/10012058162
27. Dong B, Jameel B, and Gagliardi A. How is Patient-Centered Care Conceptualized in Obstetrical Health? Comparison of Themes from Concept Analyses in Obstetrical Health-and Patient-Centered Care. Health Expectations, 2021; 2(1), 1-17. Available from URL: https://doi.org/10.1111/hex.13434
28. Awotunde O, Amole I, Adesina, S, Adeniran A, OlaOlorun D, Durodola A and Awotunde T. Pattern of Antenatal Care Services Utilization in a Mission Hospital in Ogbomoso South-west Nigeria. Journal of Advances in Medical and Pharmaceutical Sciences, 2019; 21(2), 1-11. Available from URL:https://doi.org/10.9734/jamps/2019/v21i230127.
29. McNellan C, Dansereau E, Wallace M, Columbara D, Palmisano E, Johanns C, Schaefer A, Rios-Zertuche D, Zuniga-Brenes P, Hernandez B, Iriarte E and Mokdad A. Antenatal Care as a Means to Increase Participation in the Continuum of Maternal and Child Healthcare: An Analysis of the Poorest Regions of Four Mesoamérican Countries. BMC Pregnancy and Childbirth, 2019; 19(1), 66-72. Available from URL: https://doi.org/10.1186/s12884-019-2207-9.
30. El-Khatib Z, Odusina E, Ghose B. and Yaya S. Patterns and Predictors of Insufficient Antenatal Care Utilization in Nigeria over a Decade: A Pooled Data Analysis Using Demographic and Health Surveys. International Journal of Environmental Research and Public Health, 2020; 17(21), 8261-8268. Available from URL: https://doi.org/10.3390/ijerph17218261.
31. Masi S, Bucagu M, Tunçalp Ö, Pablo Peña-Rosas, Lawrie T and Oladapo O. Integrated Person-Centered Health Care for All Women During Pregnancy: Implementing World Health Organization Recommendations on Antenatal Care for a Positive Pregnancy Experience. Global Health: Science Practice. 2017; 5(2):197-201. Available from URL: https://doi.org/10.9745/GHSP-D-17-00141
32. Alelign Y, Melesse M, Beka E, Alemu A, Ejigu M, Asres C. Person-Centered Maternity Care during Childbirth and Associated Factors among Mothers who Gave Birth at Public Health Institutions of Debre Markos town, Northwest

Ethiopia, 2022: A Cross-sectional Study. SAGE Open Medicine. 2024; 12. Available from URL: doi:10.1177/20503121231225352