Review of the Influence of Women's Empowerment on Maternal Health Outcomes

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ABSTRACT

Background: Many studies have examined the impact of empowerment on maternal health outcomes, yet few have addressed the specific contexts through which empowerment influences health outcomes. This study aimed to explore the contexts in which empowerment affects maternal health status.

Method: This literature review used studies from PubMed and Semantic Scholar databases. Articles were included if published within the last five years and provided free full-text access. Exclusion criteria included studies deemed irrelevant. All included articles were thoroughly reviewed. A total of 13 articles were identified and reviewed.

Result: The findings revealed that women's empowerment influences maternal health through various pathways. Financial empowerment, including control over household expenditures and access to income, along with social empowerment—characterized by mobility, decision-making autonomy, access to communication tools, and rejection of spousal violence—was associated with increased antenatal care (ANC) visits, greater utilization of skilled birth attendants (SBAs), and a higher likelihood of delivering in healthcare facilities. In turn, it impacts maternal health status, as they are associated with reduced risk of complications. Furthermore, cultural and structural barriers, such as patriarchal norms and gender-based restrictions, were identified as challenges to empowerment.

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INTRODUCTION

Indonesia's maternal mortality rate (MMR) is significantly elevated, well beyond the Sustainable Development Goals (SDGs) target of 70 per 100,000 live births by 2030. In 2023, the average maternal mortality rate remained over 100 deaths per 100,000 live births. Despite having the lowest MMR countrywide in Java, this objective remains unachieved.(1) Reducing MMR is a crucial measure of healthcare quality, signifying effective initiatives to enhance health access and service quality within a nation. Reducing the MMR is a vital element in realizing the vision of Indonesia Emas 2045 since it immediately enhances public health and fortifies the foundation of human capital development.(2) Nevertheless, persistent efforts are critically required to diminish maternal mortality in Indonesia.

A crucial aspect in reducing maternal mortality is the empowerment of women, recognized as a significant determinant of health outcomes, especially in maternal health.(3–8) Gender inequality, resulting in violations of women's human rights, is a contributing factor to maternal mortality. Gender-based disparities severely restrict women's access to vital health services, resulting in considerable adverse outcomes. For instance, every hour, a mother succumbs to obstetric-related difficulties, mostly when women's sexual and reproductive health rights are disregarded.(3) This underscores the imperative to focus on women's empowerment in health efforts.

In 2023, Indonesia's Gender Inequality Index (GII), which assesses gaps in empowerment, reproductive health, and labor force participation between genders, was 0.447, reflecting a modest improvement from the prior year with a reduction of 0.012 points.(9) Nonetheless, it continues to exhibit considerable gender differences impacting women's health. The GII, which ranges from 0 (indicating total equality) to 1, signifies enduring gender inequalities that directly influence health outcomes.(10) The proportion of women aged 15–49 giving birth outside health facilities decreased to 0.126 in 2023 from 0.140 in 2022, indicating even little advancements in gender equality can significantly impact maternal health.(9)

The Sustainable Development Goals emphasize the importance of gender equality and women empowerment, with Goal 5 explicitly aimed at achieving

gender equality and empowering all women and girls, highlighting a worldwide commitment to these objectives.(11) Mitigating gender disparity is essential for improving health outcomes, as it enables women to make informed decisions about their health.

Cultural norms significantly influence health outcomes. Conventional Indonesian norms frequently position women in inferior roles, promoting passivity in health-related decision-making. Patriarchal norms, which designate men as the principal decision-makers, significantly restrict women's autonomy in asserting their healthcare requirements. When men possess predominant decision-making authority, these circumstances are perpetuated by limiting women's capacity to make critical decisions.(4) These attitudes restrict women's autonomy and decision-making, exacerbating health disparities and hindering advancements in maternal health.

Research indicates that the empowerment of women can markedly enhance maternal health outcomes.

Women with empowerment experience reduced risks of prenatal depression (5) and postpartum depression (6–8). empowerment-oriented activities associated with reduced maternal mortality rates.(6) Although many studies examine the overall effects of empowerment on health, there is a lack of research focusing on the specific circumstances where significantly affects maternal health empowerment particularly within Indonesia's outcomes. framework. This review seeks to address this gap by analyzing the direct impact of women's empowerment on maternal health. Thus, incorporating empowerment into maternal health initiatives in a manner that honors and adjusts to local cultural contexts is essential. This study seeks to investigate the particular settings in which empowerment during pregnancy and childbirth influences women's health outcomes.

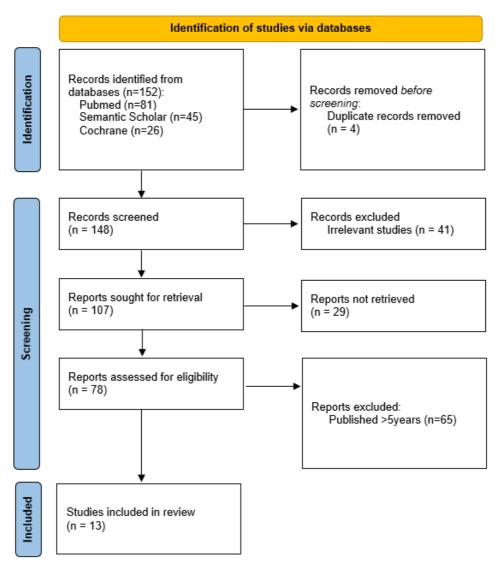


Figure 1. The flow diagram

METHOD

This study employed a narrative literature review methodology and followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure a transparent and structured selection process, focusing on articles retrieved from PubMed, Semantic Scholar, and Cochrane databases. The search strategy incorporated a combination of key terms, including "women." "empowerment," "pregnancy," "childbirth," and "health status." These terms were systematically combined using Boolean operators to formulate structured search queries, ensuring comprehensive exploration of relevant literature.

The literature review procedure commenced with collecting data and information by discovering pertinent

RESULT AND DISCUSSION

The preliminary search produced 152 articles from PubMed, Semantic Scholar, and Cochrane. Figure 1 depicts the selection procedure that culminated in including 13 papers. After removing four duplicate records, a total of 148 articles proceeded to the screening phase. Then, 41 publications were removed due to their irrelevance (n=41), as they did not investigate the notion

theories in scientific literature. The papers were subsequently selected based on inclusion and exclusion criteria to ensure the relevance and quality of the reviewed studies. The inclusion criterion comprised publications issued during the last five years and published using English. Meanwhile, the exclusion criteria encompassed studies deemed irrelevant, specifically those that did not focus on empowerment or maternal health during pregnancy and childbirth, as well as publication that did not provide full text. Following the selection process, all pertinent materials were examined to extract key insights related to women's empowerment and its influence on maternal health outcomes, presented through a narrative synthesis approach and the conceptual framework summarizing the key relationships identified in the review. of empowerment but only referenced it in the debate or concentrated on empowerment beyond the context of pregnancy and childbirth. Additionally, some articles were removed because they lacked open full-text access (n=29). Furthermore, the papers published more than five years ago (n=65) were excluded. Following these steps, 13 studies were deemed eligible and included in the final review, as depicted in Figure 1.

Table 1. Paper review

No	Author/ Title	Country	Objectives	Methods	Results
1.	Ali H, et al./ Women's status and its association with home delivery: a cross-sectional study conducted in Khyber- Pakhtunkhwa, Pakistan (24)	Pakistan	Evaluate the correlation between women's social position and their inclination towards home childbirth.	Cross- sectional	 Women perceived as less valuable than males were 2.33 times more likely to give birth at home. Women who experienced abuse were considerably more inclined to give birth at home. If the husband unilaterally decided on household expenditures, maternity care, and outdoor social activities, the probability of home birth significantly increased.
2	Ou C-Y, et al./ Maternal delivery at home: issues in India (12)	India	Examine the diverse factors that influence and diminish home births in India.	Cross-sectional	 12% of women indicate that their partners or other household members prohibit them from giving birth at a healthcare facility. Empowerment characteristics were examined based on financial and social autonomy criteria. Women engaged in year-round jobs, possessing bank accounts, or knowledgeable about loans and business options are less inclined to deliver at home. Women who are prohibited from buying or accessing healthcare independently are more prone to delivering at home.

3	Gebremedhin TA, et al./ Public health insurance and maternal health care utilization in India: evidence from the 2005-2012 mothers' cohort data (22)	India	Evaluate the impact of health insurance on access to Maternal and Child Healthcare (MCH).	Cross- sectional	 The critical factors for evaluating maternal empowerment are the mother's bargaining power, autonomy, and limitations on movement. The utilization of MCH services substantially correlated with all three metrics of women's empowerment. Constraints on the mother's mobility exhibited a more significant adverse impact on maternal and child health, whereas maternal autonomy was positively correlated with enhanced MCH utilization.
4	Andriani H, et al./ Continuity of maternal healthcare services utilisation in Indonesia: analysis of determinants from the Indonesia Demographic and Health Survey (14)	Indone- sia	Examine the independent predictors of ANC4 + SBA in Indonesia.	Cross- sectional	 Determinants affecting the utilization of ANC4+ and SBA during birth encompassed familial influence and accessibility-related factors. Those possessing greater decision-making autonomy about their maternal care were markedly more inclined to attend a minimum of four antenatal care appointments (ANC4+) (44.2%) and to utilize a skilled birth attendant during childbirth (44.4%), in contrast to those without such autonomy.
5	Misgina KH, et al./ Pre-conception and prenatal factors influencing gestational weight gain: a prospective study in Tigray region, northern Ethiopia (15)	Ethiopia	Determine the preconceived notions and perinatal circumstances that influence women's gestational weight gain.	Prospective cohort	 Enhancing women's economic empowerment would elevate the probability of achieving a healthy gestational weight by 50.1%, 51.6%, 55.2%, and 41.4%, respectively. Women's empowerment is demonstrated by their capacity to get resources, make decisions regarding those resources, and manage their lives within and beyond the domestic sphere.
6	de Loenzien M, et al./ Women's empowerment and elective cesarean section for a single pregnancy: a population-based and multivariate study in Vietnam (23)	Vietnam	Analyze the correlation between women's empowerment and the choice to pursue elective cesarean	Cross- sectional	- The correlation between empowerment and elective cesarean utilization was observed solely among multiparous women. The likelihood of elective cesarean rose with elevated levels of empowerment, as evidenced by variables such as education, mobile phone ownership, and rejection of intimate partner abuse.

7	Winters S, et al./ How does women's empowerment relate to antenatal care attendance? A cross-sectional analysis among rural women in Bangladesh (13)	Bangla- desh	Examine the possible effects of women's empowerment on antenatal care participation among women in rural Bangladesh.	Cross- sectional	-	Increased prenatal visits correlated with elevated levels of women's empowerment. Women with high empowerment were more likely to have four or more prenatal care visits. The subscales of women's empowerment that influenced the associations were women's decision-making authority and control over assets. Increased empowerment correlates with more antenatal care visits.
8	Bhowmik J, et al/ Investigating the role of women's education status and empowerment on accessing skilled birth attendance in Bangladesh: A structural equation modelling approach (16)	Bangla- desh	Analyze the correlations between education and the accessibility of SBA services as influenced by sociodemographi c factors and dimensions of women's empowerment.	Cross- sectional	-	The SEM model revealed substantial direct and indirect impacts, along with mediated influences, of women's empowerment on their capacity to receive SBA services. Educated women are more likely to pursue SBA, as they are less vulnerable to domestic violence and possess greater decision-making autonomy. The utilization of education and SBA services was affected by decision-making authority, age at marriage, availability to healthcare facilities, and media exposure.
9	Dickson KS/ Women empowerment and Skilled Birth Attendants among women in rural Ghana (17)	Ghana	Investigated the correlation between empowerment and childbirth attendance among rural women in Ghana.	Cross-sectional	-	The following factors exhibited a strong correlation with the utilization of SBA among Ghanaian women: decision-making authority, women's knowledge level, acceptance of domestic violence (including child neglect and partner disputes), antenatal care attendance, partner's educational attainment, and accessibility to health services. Individuals with moderate decision-making authority were less likely to utilize SBA during birthing. Women with a diminished acceptance of wife-beating were more inclined to seek the aid of a skilled birth attendant.

10	Yeo S, et al./	Afgha-	Employing the	Cross-		Decision-making and access to
10	Afghan women's empowerment and antenatal care utilization: a population-based cross-sectional study (19)	nistan	women's empowerment conceptual framework to evaluate the correlation between empowerment and the utilization of antenatal care (ANC).	sectional	-	information were correlated with attending more than three ANC appointments, with decision-making consistently associated with an increased likelihood of completing ANC visits. Women having more than 3 antenatal care visits are generally wealthier, possess higher literacy rates, and have better-educated partners. Individuals with elevated educational attainment were more inclined to fulfill at least four antenatal care appointments. The possession of assets exhibited a negative correlation with the frequency of ANC visits.
11	Demissie KA, et al./ Only 9% of mothers have eight and more ANC visit in 14 sub- saharan African countries; evidence from the most recent DHS 2018-2023: a multilevel analysis (20)	Countrie s in sub- Saharan Africa	Investigate the prevalence and determinants of antenatal care utilization in Sub-Saharan African countries.	Cross- sectional	-	Health decision-making empowerment was one of the numerous characteristics that positively influenced antenatal care utilization, along with work position, education level, affluence, media exposure, and pregnancy intention.
12	Dickson KS, et al./ Women empowerment and skilled birth attendance in sub- Saharan Africa: A multi-country analysis (18)	Countrie s in sub- Saharan Africa	Investigate the correlation between SBA and women's empowerment.	Cross- sectional	-	Women's empowerment emerged as the primary explanatory variable, encompassing labor force participation, attitudes toward domestic violence, decision-making authority (evaluated through control over medical care, income generation, household expenditures, and family visits), and knowledge level. Women who exhibited lower acceptance of domestic violence and possessed greater decision-making authority were more likely to utilize skilled birth attendance.

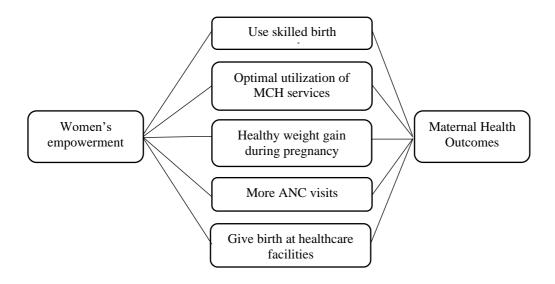


Figure 2. How women's empowerment impacts maternal health outcomes

This investigation identified 13 pertinent articles published between 2020 and 2024 that examined the effects of women's empowerment and health status during pregnancy and childbirth, comprising 12 cross-sectional studies and one prospective cohort study. The research in the chosen articles collected data from multiple countries in South Asia (n=6), Southeast Asia (n=2), and Africa (n=3). Additionally, 2 studies collected papers from other sub-Saharan African countries (n=2).

We determined that the defining attributes of empowerment during pregnancy and labor vary. This review concluded that empowerment is assessed via financial and social dimensions. Economic empowerment is essential, encompassing women's employment options, engaging in decision-making over household expenditures, and overseeing personal income and assets.(12)(13) Conversely, social empowerment is evidenced by several critical aspects, including the authority to make decisions (13–21), liberty of movement (12,22), the capacity to see family or relatives, and access to communication tools such as cell phones (12)(23), condemnation of spousal abuse (17,18,21,23). Moreover, access to informational resources (20)(21) and media outlets, including newspapers, radio, and the internet, enhance women's knowledge and awareness.

The principal domains of potential empowerment examined in the reviewed publications were the relationship between women's empowerment and its effects on maternal health outcomes. Critical factors analyzed indicated that empowered women were more inclined to select skilled birth attendants (SBA) (n=4), participate in increased antenatal care (ANC) visits (n=2), and optimally utilize maternal and child health (MCH) services (n=2), as well as to pick SBA and attend additional ANC visits. They typically achieve appropriate gestational weight (n = 1), deliver in healthcare institutions (n=2), and opt for elective cesarean sections (n=1). The findings indicate that enhanced autonomy among women favorably affects their health-related decisions and outcome.

Empowerment attributes

This research identified that women's empowerment encompasses a broad context. The notion of women's empowerment has evolved to encompass several interpretations and perspectives over time. Women's empowerment is the process of granting women the autonomy to govern their lives, make decisions, and participate fully in all societal facets.(25)

This analysis references solely financial and social empowerment. Nonetheless, political and cultural empowerment, as examined in prior research (25) were not thoroughly discussed. Political empowerment pertains to women's engagement in leadership positions that affect societal transformation, whereas cultural empowerment encompasses involvement in cultural and creative endeavors, enhancing women's influence within their communities. This evaluation inadequately addresses these extra aspects, indicating a deficiency in comprehending their potential influence on women's well-being and societal position, necessitates further investigation.

Empowerment and health outcomes

Empowering women is crucial for achieving SDG 5, which emphasizes gender equality and considers women's empowerment vital for advancing women's rights. While SDG 5 does not directly address maternal health, SDG 3, which aims to ensure healthy lives and promote well-being, has a particular target (Target 3.1) to reduce maternal death.(11) Enhancing women's decision-making autonomy, financial authority, and access to healthcare is essential for attaining this objective. Consequently, although SDG 5 emphasizes gender equality, women's empowerment substantially aids in achieving the maternal health objectives of SDG 3.

The results indicate that empowered women were more likely to select SBA for childbirth. The World Health Organization (WHO) characterizes skilled birth attendants (SBAs) as certified professionals, including midwives, nurses, and physicians, who possess the necessary abilities to oversee standard maternity and newborn care and to refer complicated situations.(26) SBAs are crucial in reducing maternal and neonatal mortality.(27) This research corroborates the WHO's assertion that support from qualified healthcare professionals during childbirth is one of the most effective measures for decreasing maternal mortality.(28) Using inexperienced birth attendants carries a significant risk of morbidity, impairment, and even death for both the mother and the newborn.(29) This highlights the essential function of SBAs in averting and addressing problems that may result in maternal mortality. The collaboration between SBAs and traditional birth attendants (TBAs) is vital to fostering trust and enhancing results.

This analysis indicates that less empowered women are more inclined to opt for home births due to familial restrictions preventing them from giving birth at healthcare facilities. Home births can be safe for uncomplicated deliveries when conducted by skilled birth attendants who are adequately equipped and have access to referral options if necessary.(28) However, studies in other contexts indicate divergent results. Research undertaken in the United States, a developed nation, suggests that planned home births are less safe than hospital deliveries, irrespective of the attendant's qualifications. This results from restricted access to referral institutions, challenges identifying risk factors, and insufficient monitoring.(31) In contrast, SBA services are generally offered in healthcare in Indonesia, particularly in urban areas, as is common in developing countries.(28) While midwives may assist with home births if necessary, healthcare facilities remain preferred and safer.

A significant conclusion is that empowered women are more likely to utilize maternal and child health services and attend more than four antenatal care visits. This aligns with current research indicating that obtaining antenatal care more than three times substantially enhances the probability of accessing necessary maternal care during pregnancy.(32) The scarcity of antenatal care visits resulted in insufficient routine monitoring for both the fetus and the mother, leading to the undetected emergence of different health concerns and subsequent difficulties, including anemia.(33) This finding corroborates other research highlighting the significance of consistent prenatal appointments in preventing problems and promoting a healthier pregnancy.

ANC visits also affect maternal health outcomes by shaping the selection of skilled birth attendants. Research in Ethiopia indicated that the frequency of antenatal care visits and the individual responsible for the ultimate decision about the birth location were positively correlated with the choice of skilled healthcare providers and enhanced health outcomes.(34) Similarly, studies in India demonstrated that antenatal care visits substantially influenced the selection of professional health practitioners, even when childbirth occurred at home.(35)

Midwives' role

Midwives play a crucial role in facilitating women's empowerment (36) and improving maternal health, as articulated by the International Confederation of Midwives (ICM), which endorses all initiatives aimed at empowering women.(37) Studies indicate that enhancing women's knowledge and decision-making abilities can improve maternal health outcomes (38), as empowerment is a crucial determinant in women's mental and physical health choices and overall healthcare decision-making.(39) Women have greater satisfaction when they are free to make decisions about their health, including the location of childbirth and the selection of attendants present during the birth.(40) This satisfaction is essential since it might aid women in recuperating from adverse childbirth situations. Support from compassionate and proficient healthcare professionals, active involvement in decisionmaking, and being the focal point of care within a secure setting contribute to a favorable birth experience for women, enhancing their health outcomes. Consequently, future initiatives should concentrate on overcoming obstacles to women's autonomy and improving access to maternity healthcare services.

This review emphasizes the imperative of enhancing empowerment through increased access to education. Empowering women will enhance the demand for maternal healthcare.(41) They can improve their bodily awareness and make informed health-related decisions (42), including selecting secure birth sites and attaining sufficient prenatal care. In this situation, midwives deliver midwifery care and emotional support. Midwives serve as educators, counselors, and advocates for women in their communities, facilitating comprehension of health support's significance and providing essential knowledge for informed decision-making. They can support women who may experience isolation or disempowerment, so improving their mental and emotional health.

Midwives, as primary healthcare providers, play a vital role in recognizing and addressing the issues encountered by women in their communities. Community-wide initiatives can be implemented through educational programs for teenagers in schools, general health education via social media, outreach initiatives, or other pertinent activities. They can offer emotional support, create a safe environment for women to articulate their concerns, and encourage them to participate in health-related decision-making. By employing a holistic and

empowerment-oriented methodology, midwives can facilitate significant and transformative improvements in women's and the community's lives.

By augmenting empowerment, midwives can significantly influence the attainment of the SDGs and "Indonesia Emas 2045," as the empowerment of women affects not only individual health but also the health of families and communities collectively (43) is crucial for achieving advancement in health, social welfare, and economic development.

This study possesses numerous strengths and weaknesses. Its merits include a thorough analysis synthesizing findings from several studies, offering an extensive grasp of the correlation between women's empowerment and maternal health status. This method emphasizes essential elements, including economic and social determinants, that significantly impact maternal health and elucidates how various aspects of empowerment affect health-related decision-making.

Demographic and cultural disparities among populations may constrain the generalizability of these findings. Only studies available in English and with full-text access were included, potentially leading to language and publication bias. Moreover, this review inadequately addresses political and cultural empowerment, resulting in a deficiency in our understanding of how different forms of empowerment influence women's health and social status. Further research is necessary to investigate these subjects and comprehensively understand women's empowerment. An additional restriction is that nearly all the included studies employed a cross-sectional design, thus constraining the capacity to ascertain causal correlations.

CONCLUSION

The empowerment of women is a vital factor in enhancing maternal health outcomes. Empowered women are more likely to participate in behaviors that enhance health outcomes, including increased attendance at antenatal care appointments, selecting skilled birth attendants, maximizing health support utilization, and delivering in safe environments. The economic, social, political, and cultural aspects of empowerment allow women to make educated choices and champion their rights. Midwives are integral during this process, offering medical care, emotional support, and education, thereby enhancing women's access to vital maternity care services.

Several health promotion-based recommendations can be implemented. One key approach is increasing reproductive health literacy through community-based education programs, targeting women, their partners, and their relatives to raise awareness about women's rights. Additionally, fostering social transformation by

empowering women in household decision-making is crucial. Policies that strengthen women's autonomy in choosing healthcare services, including birth location and healthcare providers, should be actively promoted. Moreover, integrating gender equality training into maternal and child health programs is essential and should begin as early as the pre-marital stage. As Indonesia strives toward "Indonesia Emas 2045" and the attainment of the SDGs, prioritizing women's empowerment is essential, as empowered women significantly impact their health and the wider community.

Conflict of Interest

The authors declare that there's no conflict of interest.

REFERENCES

- Badan Pusat Statistik. Cerita data statistik untuk Indonesia edisi 2024.01. 2024. Available from: https://www.bps.go.id/id/publication/2024/02/28/d0f 91336b3ea975c1b2847c8/cerita-data-statistik-untukindonesia-edisi-2024-01.html
- 2. Kementerian PPN. Indonesia 2045: berdaulat, maju, adil, dan makmur [Internet]. Available from: https://indonesia2045.go.id/.
- 3. United Nations. International womans' day 2024: investing in women, a catalyst for economic growth [Internet]. Available from: https://indonesia.un.org/en/262737-international-womans%E2%80%99-day-2024-investing-women-catalyst-economic-growth.
- 4. Ernanda E. Challenging the patriarchal culture; feminist critical discourse analysis of the Indonesian environmental heroines. Wacana. 2023;24:58–86.
- Garcia ER, Yim IS. A systematic review of concepts related to women's empowerment in the perinatal period and their associations with perinatal depressive symptoms and premature birth. BMC Pregnancy Childbirth. 2017;17.
- 6. Prata N, Tavrow P, Upadhyay U. Women's empowerment related to pregnancy and childbirth: Introduction to special issue. BMC Pregnancy Childbirth. 2017;17.
- 7. Khademi K, Kaveh MH. Social support as a coping resource for psychosocial conditions in postpartum period: a systematic review and logic framework. BMC Psychol. 2024;12.
- 8. Leight J, Pedehombga A, Ganaba R, Gelli A. Women's empowerment, maternal depression, and stress: Evidence from rural Burkina Faso. SSM Mental Health. 2022;2.
- Badan Pusat Statistik (BPS). Official statistic news BPS-Statistic Indonesia. Available from: 2024.https://www.bps.go.id/id/publication/2024/02/2 8/c1bacde03256343b2bf769b0/statistik-indonesia-2024.html
- 10. United Nations Development Programme (UNDP). Gender equality and social Inclusion [Internet]. https://www.undp.org/indonesia/gender. Available

- from:
- https://www.undp.org/pacific/publications/gender-equality-and-social-inclusion.
- 11. United Nation. Transforming our world: the 2030 agenda for sustainable development [Internet]. https://sdgs.un.org/publications/transforming-our-world-2030-agenda-sustainable-development-17981. Available from: https://sdgs.un.org/2030agenda.
- 12. Ou C-Y, Yasmin M, Ussatayeva G, Lee M-S, Dalal K. Maternal delivery at home: issues in India. Adv Ther. 2021;38:386–398.
- 13. Winters S, Pitchik HO, Akter F, Yeasmin F, Jahir T, Huda TMN, Rahman M, Winch PJ, Luby SP, Fernald LCH. How does women's empowerment relate to antenatal care attendance? A cross-sectional analysis among rural women in Bangladesh. BMC Pregnancy Childbirth. 2023;23:436.
- Andriani H, Rachmadani SD, Natasha V, Saptari A. Continuity of maternal healthcare services utilisation in Indonesia: analysis of determinants from the Indonesia Demographic and Health Survey. Fam Med Community Health. 2021;9.
- 15. Misgina KH, van der Beek EM, Boezen HM, Bezabih AM, Groen H. Pre-conception and prenatal factors influencing gestational weight gain: a prospective study in Tigray region, northern Ethiopia. BMC Pregnancy Childbirth. 2021;21:718.
- 16. Bhowmik J, Apputhurai P, Williams J, Biswas RK. Investigating the role of women's education status and empowerment on accessing skilled birth attendance in Bangladesh: A structural equation modelling approach. Midwifery. 2024;138:104140.
- 17. Dickson KS. Women empowerment and skilled birth attendants among women in rural Ghana. Biomed Res Int. 2021;2021:9914027.
- 18. Dickson KS, Adde KS, Ameyaw EK. Women empowerment and skilled birth attendance in sub-Saharan Africa: A multi-country analysis. PLoS One. 2021;16:e0254281.
- 19. Yeo S, Bell M, Kim YR, Alaofè H. Afghan women's empowerment and antenatal care utilization: a population-based cross-sectional study. BMC Pregnancy Childbirth. 2022;22:970.
- Demissie KA, Jejaw M, Wondimu BG, Mersha YT, Demsash ES, Dessie SG, Teshome AG, Geberu DM, Tiruneh MG. Only 9% of mothers have eight and more ANC visit in 14 sub-saharan African countries; evidence from the most recent DHS 2018-2023: a multilevel analysis. BMC Public Health. 2024;24:1631.
- 21. Yaya S, Zegeye B, Ahinkorah BO, Seidu A-A, Ameyaw EK, Adjei NK, Shibre G. Predictors of skilled birth attendance among married women in Cameroon: further analysis of 2018 Cameroon Demographic and Health Survey. Reprod Health. 2021;18:70.
- 22. Gebremedhin TA, Mohanty I, Niyonsenga T. Public health insurance and maternal health care utilization in india: evidence from the 2005-2012 mothers'

- cohort data. BMC Pregnancy Childbirth. 2022:22:155.
- 23. de Loenzien M, Mac QNH, Dumont A. Women's empowerment and elective cesarean section for a single pregnancy: a population-based and multivariate study in Vietnam. BMC Pregnancy Childbirth. 2021;21:3.
- 24. Ali H, Mahmood QK, Jalil A, Fischer F. Women's status and its association with home delivery: a Cross-sectional study conducted in Khyber-Pakhtunkhwa, Pakistan. Matern Child Health J. 2022;26:1283–1291.
- 25. Reshi IA, Sudha DT. Women empowerment: a literature review. International Journal of Economic, Business, Accounting, Agriculture Management and Sharia Administration E-ISSN: 2808-4713. 2022;
- World Health Organization. Definition of skilled health personnel providing [Internet]. 2018. Available from: www.unfpa.org/sowmy.
- 27. Hug L, Alexander M, You D, Alkema L. National, regional, and global levels and trends in neonatal mortality between 1990 and 2017, with scenario-based projections to 2030: a systematic analysis. Lancet Glob Health. 2019;7:e710–e720.
- 28. World Health Organization. Births attended by skilled health personnel [Internet]. Available from: https://www.who.int/data/nutrition/nlis/info/births-attended-by-skilled-health-personnel.
- 29. Olakunde BO, Adeyinka DA, Mavegam BO, Olakunde OA, Yahaya HB, Ajiboye OA, Ogundipe T, Ezeanolue EE. Factors associated with skilled attendants at birth among married adolescent girls in Nigeria: Evidence from the Multiple Indicator Cluster Survey, 2016/2017. Int Health. 2019;11:545–550
- Shimpuku Y, Madeni FE, Shimoda K, Miura S, Mwilike B. Perceived differences on the role of traditional birth attendants in rural Tanzania: a qualitative study. BMC Pregnancy Childbirth. 2021;21.
- 31. Grünebaum A, McCullough LB, Orosz B, Chervenak FA. Neonatal mortality in the United States is related to location of birth (hospital versus home) rather than the type of birth attendant. Am J Obstet Gynecol. 2020;223:254.e1-254.e8.
- 32. World Health Organization. Antenatal care coverage at least four visits (%) [Internet]. Available from: https://www.who.int/data/gho/indicator-metadata-registry/imr-details/80.
- 33. Saapiire F, Dogoli R, Mahama S. Adequacy of antenatal care services utilisation and its effect on anaemia in pregnancy. J Nutr Sci. 2022;11.

- 34. Mathewos Oridanigo E, Kassa B. Utilization of skilled birth attendance among mothers who gave birth in the last 12 months in Kembata Tembaro Zone. Adv Med. 2022;2022:1–10.
- 35. Islam A, Nahar T, Siddiquee T, Toma AS, Hoque F, Hossain Z. Prevalence and determinants of utilizing skilled birth attendance during home delivery of pregnant women in India: Evidence from the Indian Demographic and Health Survey 2015–16. PLoS One. 2024;19.
- 36. Baghini FK, Iranifard E, Roudsari RL, Najmabadi KM. The role of midwives in women's empowerment: A narrative review. Journal of Midwifery and Reproductive Health. Mashhad University of Medical Sciences; 2023. p. 3767–3781.
- 37. International Confederation of Midwives. Midwives, women and human rights [Internet]. Available from: https://internationalmidwives.org/resources/midwives-women-and-human-rights/.
- 38. Gebeyehu NA, Gelaw KA, Lake EA, Adela GA, Tegegne KD, Shewangashaw NE. Women decision-making autonomy on maternal health service and associated factors in low- and middle-income countries: Systematic review and meta-analysis. Women's Health. SAGE Publications Ltd; 2022.
- 39. Roy K, Chaudhuri A. Influence of socioeconomic status, wealth and financial empowerment on gender differences in health and healthcare utilization in later life: evidence from India. Soc Sci Med. 2008;66:1951–1962.
- Deherder E, Delbaere I, Macedo A, Nieuwenhuijze MJ, Van Laere S, Beeckman K. Women's view on shared decision making and autonomy in childbirth: cohort study of Belgian women. BMC Pregnancy Childbirth. 2022;22.
- 41. Alinsato AS, Alakonon CB, Bassongui N. Women's empowerment, modern energy, and demand for maternal health services in Benin. Int J Health Econ Manag. 2022;24:279–299.
- 42. Lopes MI, Vieira M, Cardoso A. Women's empowerment for active labor: A qualitative study with nurse-midwives in antenatal education for childbirth. Eur J Midwifery. 2024;8.
- 43. Pradhan MR, Unisa S, Rawat R, Surabhi S, Saraswat A, R S R, Sethi V. Women empowerment through involvement in community-based health and nutrition interventions: Evidence from a qualitative study in India. PLoS One. 2023;18:e0284521.