

A narrative literature review on media and maternal health in Africa

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Abstract

Health communication is a strategy used to disseminate health information to individuals and communities to enable them to make decisions that will enhance their health and well-being. Particularly in the era of digital health, such strategies tend to emphasize health promotion and disease prevention. Access to essential health information is a fundamental aspect of an effective health-care system and is therefore crucial for achieving universal health coverage and other health-related sustainable development goals. Traditional media play a crucial role in enhancing maternal and newborn health, which remains a significant challenge in sub-Saharan Africa. This narrative literature review explores the use of mass media in disseminating maternal health-related information in Africa. Twenty-five articles were considered relevant and included in the review. The result is presented under the following themes (1) access to health information, (2) health-seeking behavior, (3) birth preparedness, and (4) challenges associated with mass media. UNICEF Strategy for Health 2016–2030, African Union agenda 2063, and sustainable development goal #3 informed this review. As a major stakeholder in the African health sectors, the media plays a critical role in tackling systemic health inequities by promoting the sharing of maternal health information with citizens. There is a need for collaboration among all health stakeholders, as well as a sustainable relationship between media practitioners and health authorities for the promotion of improved maternal health in Africa.

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KEYWORDS

Africa, communication, health information, mass media, maternal health

Key points

- Access to essential health information is a fundamental aspect of an effective health-care system and is therefore crucial for achieving universal health coverage and other health-related sustainable development goals.
- Exposure to media promotes increased usage of antenatal care and skilled birth attendants, reproductive behaviors of women and their spouses, and reduced maternal morbidity and mortality in Africa.
- A major challenge associated with media intervention, advocacy, and engagement on maternal health issues is inequalities in media access with its attendant effect on maternal health service utilization.
- The media as a major stakeholder in the health sector plays a critical role in tackling the systemic health inequalities in Africa by promoting the sharing of maternal health information with citizens.
- There is the need for effective dissemination of health information and education through media advocacy amid the grime statistics of a high rate of mortality, morbidity, and undernutrition of mothers in the continent of Africa.
- There is need for synergy among all health stakeholders and a sustainable relationship between media practitioners and health authorities for the promotion of good maternal health in Africa.

INTRODUCTION

Despite interventions made by governments and nongovernmental agencies on maternal health and mortality, the current rate of maternal mortality and access to maternal health in Africa remains unacceptable. Access to traditional media has been useful in enhancing the knowledge and health behavior of women toward the reduction of the maternal mortality rate (MMR) (Achia & Mageto, 2015; Adamu, 2020; Ahinkorah et al., 2020; Ajaero et al., 2016; Birmeta et al., 2013; Etana & Gurm, 2018; Igbinoba et al., 2020; Kim & Kim, 2019; Kreps, 2015; Machira & Palamuleni, 2017; Maryon-Davis, 2012; Rutaremwa et al., 2015; Sserwanja et al., 2022; Tekelab et al., 2019; Tsawe et al., 2015; Wang et al., 2021; Yaya & Bishwajit, 2020; C. O. F. Zamawe et al., 2016).

The United Nations International Children Emergency Fund (UNICEF) (2016a) noted that communication strategies within maternal health are essential for reducing the risk and rate of mortality, morbidity, and undernutrition of mothers by increasing their knowledge, which would lead to changes in behaviors, attitudes, and social norms at the individual, community, and societal levels. Access to essential health information is a fundamental aspect of an effective healthcare system and is therefore crucial for achieving universal health coverage and other health-related sustainable development goals (SDGs) (Royston et al., 2020).



Information provided by the media is easily accepted by communities and therefore impacts and molds how people conduct their daily activities (Nwagbara, 2017). Even though there is recorded progress in maternal health internationally, maternal mortality remains high in Africa (Tekelab et al., 2019). More than two-thirds (68%) of all global maternal deaths occur in sub-Saharan Africa (World Health Organization [WHO], 2019) due to a lack of access to quality antenatal care and skilled birth attendance during delivery (Ahinkorah et al., 2021). Sub-Saharan Africa is the only region in the world with a very high MMR, with 542 maternal deaths per 100,000 live births estimated in 2017. Comparatively, four subregions (Australia and New Zealand, Central Asia, Eastern Asia, and Western Asia) and two regions (Latin America and the Caribbean, and Europe and Northern America) have low MMR (<100 maternal deaths per 100,000 live births) (WHO, 2019).

The literature reveals the relative effectiveness of different traditional media in promoting maternal health through access to health information due to wide coverage. Classical traditional media such as print and electronic media are proven means of maternal health knowledge and awareness in sub-Saharan Africa (Ahinkorah et al., 2020; Asp et al., 2014; Atakiti & Ojomo, 2015; Gallo, 2021; Mweemba et al., 2021; Odorume, 2015; Sowa et al., 2018; United Nation Educational, Scientific and Cultural Organization [UNESCO], 2013; Waithaka, 2013; C. O. F. Zamawe et al., 2016).

UNESCO reports that more than 75% of households in developing countries have access to a radio (UNESCO, 2013), but only 42% of households in Africa having access to radio (Conroy-Krutz & Appiah-Nyamekye, 2019). Comparatively, 35% used television as a news origin in Africa every day, while barely 7% read newspapers periodically (Conroy-Krutz & Appiah-Nyamekye, 2019). Aspects of maternal health influenced by the media include the use of family planning, uptake of skilled birth attendants' services, and birth preparedness among others (Mills et al., 2008; Sserwanja et al., 2022).

However, print media coverage of maternal health news is lacking because media houses focus on issues that increase their sales and prefer sensational reports (Waithaka, 2013). The empirical literature reveals gaps in knowledge with respect to how traditional media influence MMRs through access to health information among women. By implication, this scenario has impacted the provision of informed intervention by governments and nongovernmental agencies toward maternal health in sub-Saharan Africa. To fill the identified knowledge gaps, this study seeks to investigate the role and contribution of the traditional media to maternal health management in Africa. Specifically, it aims to proffer solutions to mitigating maternal health issues, and how the media can assist in achieving better health care for women in Africa.

CONCEPTUAL FRAMEWORK

At the end of UNICEF's 2006–2015 health and nutrition strategy and the Millennium Development Goals, a fresh long-term policy was developed to assist the achievement of the SDGs. The policy consists of two main goals: (1) end preventable maternal, newborn, and child deaths and (2) promote the health and development of all children. The former goal pledges to address inequalities associated with maternal, newborn, and under-five survivals (UNICEF, 2016b)

African Union Agenda 2063 is Africa's framework for delivering on its goal of inclusive and sustainable development and is a concrete manifestation of the pan-African drive for unity, self-determination, freedom, progress, and collective prosperity pursued under Pan-Africanism and African Renaissance. The agenda focused on healthy and well-nourished citizens and prioritized healthy nutrition (African Union, 2015). The SDGs comprise 17 goals with 169 targets that all UN member countries have approved to work toward attaining by the



year 2030. The SDGs established a vision for a biosphere free from hunger, disease, and poverty. Well-being has a prominent place in SDG 3, which aims to “ensure healthy lives and promote well-being for all at all ages,” and is buttressed by 13 targets that cover an extensive range of WHO's work. The other 16 goals are concerned with health, as well, whether directly or indirectly. SDG 3.1 aims to “reduce the global MMR to less than 70 per 10,000 live births by 2030” (United Nations (UN), 2015). Together, the three agendas seek to end preventable maternal, newborn, and child deaths, and promote the health and development of all children.

METHODS

Literature was searched using the following electronic databases: PubMed, CINAHL, Scopus, and Embase. The search terms included “mass media,” “radio,” “television,” “newspaper,” “maternal health,” “health communication,” “pregnancy,” “perinatal,” “child-birth,” “Africa,” “sub-Saharan Africa,” and “African countries.” These terms were searched in different combinations using the Boolean Operators AND/OR. A manual search of the full-text references was also conducted. The inclusion criteria were as follows: (1) articles published in the English language in peer-reviewed journals between 2010 and 2021; (2) papers that focused on the use of radio, newspaper, and/or television; (3) articles that focused on women and their families; and (4) available full text.

Articles were excluded if they were duplicates, were not published in English, were focused exclusively on healthcare providers, or were concerned with social media. Articles that focused on the use of social media were excluded because even though its use has increased in recent years, access to social media for people in the rural areas of many African nations remains limited. A total of 200 papers were retrieved from the database search including five papers identified through other sources (reference list of retrieved articles). Fifty duplicates were also removed. The full texts of 150 papers were screened using the eligibility criteria, 125 papers that did not meet the inclusion criteria were excluded, and 25 papers met the inclusion criteria, quantitative ($n = 14$), qualitative ($n = 3$), and meta-analysis ($n = 1$), as well as mixed methods ($n = 7$) (see Figure 1).

Data extraction

E. K. S. and M. O. extracted data independently from the included studies and arrived at a decision whether to include them based on the inclusion and exclusion criteria. For each study included, we recorded the last name of author(s), year of publication, country, title, focus/aim, design/methodology, data collection method, sample size, and key findings (see Table 1).

RESULTS

After the abstract and full-text screening, 25 articles were considered relevant and included in the review. The included studies were conducted in seven countries, one in the west African region (Laouan, 2020), and two in low- and middle-income countries (LMICs) including a number of African countries (Granger et al., 2018; Gugsu et al., 2016) (Table 2). A summary of the characteristics of the included studies is shown in Table 1. The UNICEF Strategy for Health 2016–2030, African Union (AU) agenda 2063 and SDG goal 3 (African Union, 2015; UNICEF, 2016a; UN, 2015) guided the review. Specifically, all three agendas

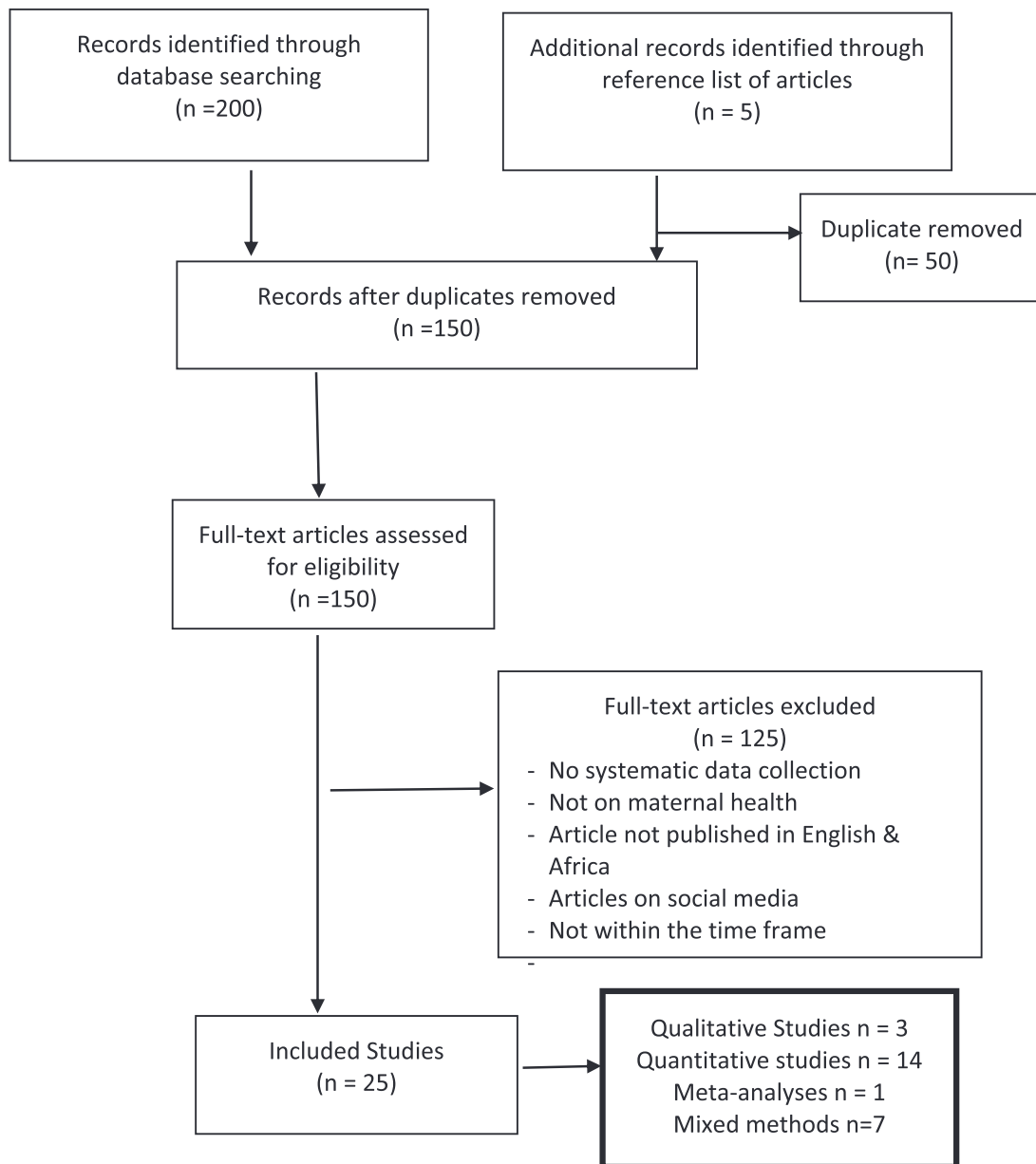


FIGURE 1 PRISMA flow

seek to end preventable maternal, newborn, and child deaths, and promote the health and development of all children. Four subthemes have been identified, such as access to health information, health-seeking behaviors, birth preparedness, and challenges associated with mass media, which are presented in Table 3.

Access to health information

Among the objectives of Igbinoba et al.'s (2020) study, which comprised 100 women of reproductive age (15–49 years), is an examination of women's mode of obtaining information and the influence of mass media exposure on maternal health awareness. Their findings demonstrated a significant influence of exposure to mass media on maternal health awareness. Thus, the internet (49%) was the top source of maternal health



TABLE 1 Summary of reviewed studies

| Author (year), country | Title | Focus/aim | Design/ methodology | Data collection | Sample | Key findings |
|-----------------------------------|--|---|------------------------|------------------------|---|--|
| Adamu (2020), Nigeria | Exposure of Hausa women to mass media messages: Health and risk perception of cultural practices affecting maternal health in rural communities of Bauchi State, Nigeria | To determine the exposure of Hausa women in rural areas of Bauchi state to health messages from the mass media, with a view to ascertaining if these messages have a bearing on their perception of risk regarding prevalent cultural practices relating to maternal health. | Qualitative design | Focus group discussion | Women of child-bearing age (14–49 years) | women encounter health messages (mostly through radio and posters) that are contextually relevant in addressing problems associated with maternal health, none of these are centered specifically on harmful cultural practices. |
| Ajaero et al. (2016), Nigeria | Access to mass media messages, and use of family planning in Nigeria: A spatiodemographic analysis from the 2013 DHS | To examine the relationship between access to mass media messages on family planning and the use of family planning in Nigeria. It also investigated the impacts of spatiodemographic variables on the relationship between access to mass media messages and the use of family planning. | Survey | Questionnaire | Data from the 2013 demographic and health survey of Nigeria, which was conducted in all the 36 states of Nigeria, and Abuja | Access to mass media messages increases the likelihood of the use of family planning. |
| Atakiti and Ojomo (2015), Nigeria | Influence of television health programs on maternal health | Examined the influence of television health programs on maternal health focusing on Badagry and Ikenne local government areas and health programs on Lagos State Television and Ogun State Television. | Descriptive statistics | Questionnaire | 441 pregnant and postpartum women | Television health programs had a moderate influence on women in the two local government areas. However, the rate of exposure was low. |



TABLE 1 (Continued)

| Author (year), country | Title | Focus/aim | Design/ methodology | Data collection | Sample | Key findings |
|------------------------|--|--|------------------------|-----------------|-----------|---|
| Utalor (2019), Nigeria | Influence of broadcast media messages on awareness, perception, and attitude of maternal health among reproductive women in Ilorin | (i) Find out women's level of exposure to broadcast media messages, (ii) investigate the level of awareness of women about maternal health messages on broadcast media, (iii) examine women's perception of maternal health messages on broadcast media, and (iv) and investigate the influence of maternal health messages on broadcast media on women's attitude toward maternal health. | Survey | Questionnaire | 382 women | Women in Ilorin depend mostly on broadcast media as a major source of information on maternal health, but they identified radio as more effective than television in disseminating maternal health messages (58.2%). Besides talk show and health programs, maternal health messages were rarely promoted through other programs (31.4%). Women agreed to the statement that broadcast media positively change their attitude toward maternal health. Women used broadcast media as a major source of enlightenment on maternal health. Women expressed a positive perception about broadcast media messages on |

(Continues)



TABLE 1 (Continued)

| Author (year), country | Title | Focus/aim | Design/ methodology | Data collection | Sample | Key findings |
|---------------------------------|---|--|-----------------------------------|-----------------|---|--|
| Ahmed and Seid (2020), Ethiopia | Association between exposure to mass media family planning messages and utilization of modern contraceptive among urban and rural youth women in Ethiopia | To examine the association between exposure to mass media family planning messages and the utilization of modern contraceptives among urban and rural youth women in Ethiopia. | Comparative cross-sectional study | Questionnaire | 6401 women age 15–24 years (4061 from rural and 2340 from the urban area) | maternal health. Hypotheses confirmed that awareness of women's maternal health has a positive influence on their attitude. There was no association between women exposed to mass media family planning messages and the utilization of modern contraceptives in rural areas. Surprisingly, this study showed that women exposed to mass media family planning messages in an urban area were less likely to use modern contraception by 62%. |
| Asp et al. (2014), Uganda | Associations between mass media exposure and birth preparedness among women in southwestern Uganda: A community-based survey | To explore the association between media exposure and birth preparedness in rural Uganda. | Community-based survey | Questionnaire | 65 recently delivered women from 120 villages in the Mbarara District of southwest Uganda | Women who read newspapers were more likely to be birth prepared. High media exposure, that is, regular exposure to radio, newspaper, or television, showed no significant association with birth preparedness. |

TABLE 1 (Continued)

| Author (year), country | Title | Focus/aim | Design/ methodology | Data collection | Sample | Key findings |
|---------------------------------|--|---|-------------------------------------|--|--|---|
| Igbinoba et al. (2020), Nigeria | Women's mass media exposure and maternal health awareness in Ota, Nigeria | To identify the sources of maternal health awareness. To examine means of obtaining maternal health information. To determine the frequency of mass media exposure. | A descriptive (survey) | Questionnaire | 100 women of reproductive age (15–49 years), resident in Ota, Ado-Odo Ota Local Government Area (LGA) in Ogun State | Mass media exposure had a significant influence on maternal health awareness. |
| Tekelab et al. (2019), Ethiopia | Factors affecting utilization of antenatal care in Ethiopia: A systematic review and meta-analysis | To analyze the influence of mass media exposure on maternal health awareness among female residents. | Systematic review and meta-analysis | Web search | 15 observational studies were included. 20,185 Women who were pregnant or had given birth at least once preceding the survey | Exposure to mass media was strongly associated with the utilization of antenatal care. |
| C. Zamawe et al. (2015), Malawi | The effect of mass media campaign on men's participation in maternal health: A cross-sectional study in Malawi | To assess the effect of mass media campaign on men's involvement in maternal health. | A cross-sectional study | Face-to-face interviews using electronic structured questionnaires | 3825 women of childbearing age (15–49 years) | Husbands of the women who were exposed to the PLM radio program were more likely to participate in antenatal care, to be involved in childbirth and to participate in postnatal care than their counterparts. |

(Continues)

TABLE 1 (Continued)

| Author (year), country | Title | Focus/aim | Design/ methodology | Data collection | Sample | Key findings |
|---------------------------------------|---|---|---------------------------------------|---|---|--|
| C. O. F. Zamawe et al. (2016), Malawi | The impact of a community driven mass media campaign on the utilization of maternal health-care services in rural Malawi | To examine the impact of a community-driven mass media campaign called Phukusi la Moyo (tips of life) on the utilization of maternal health-care services. | Community-based cross-sectional study | Structured electronic questionnaires | 3825 women of reproductive age (15–49 years) | The likelihood of using contraceptives, sleeping under mosquito bed nets, utilizing antenatal care services, and utilizing postnatal care service were significantly higher among women who had exposure to the PLM campaign than those who did not. |
| Sanda (2014), Nigeria | Media awareness and utilization of antenatal care services by pregnant women in Kano State- Nigeria | To explore pregnant women's major sources of information on antenatal care services, their media preferences of antenatal care programs, and their appropriate timing, as well as the challenges they face in use of the media in Kano state. | Qualitative method | Focus group discussion, in-depth interviewing, and document analysis. | 115 participants that is, 100 pregnant women, 10 health workers and 5 media personnel. The pregnant women were between the reproductive years of 15–49 years. | Radio is the primary source of information on antenatal care services. The pregnant women in the study preferred media programs in which a health expert discusses antenatal care and maternal health issues. |
| Chaka (2020), Ethiopia | Examining individual- and community-level factors affecting Skilled delivery care among women who received adequate Antenatal care in Ethiopia: Using multilevel analysis | Investigating the individual- and community-level factors affecting the use of skilled delivery care among those women who had received adequate antenatal care. | Cross-sectional study | Questionnaire | 957 women aged 15–49 years and gave birth within 5 years before the survey | Women who were exposed to media were more likely to use skilled delivery care. |

TABLE 1 (Continued)

| Author (year), country | Title | Focus/aim | Design/ methodology | Data collection | Sample | Key findings |
|-------------------------------------|---|---|-------------------------------|--|--|---|
| Wittels (2016), Sierra Leone | Exploring the role of communication in community health in Sierra Leone | To explore the role that media and communication can play in improving health outcomes across communities to explore the health-seeking and information-seeking behavior of participants. | Mixed methods | Questionnaire interviews, focus group discussion | 2500 Sierra Leoneans | Radio and mobile phones are the media platforms that can reach most people. Media access—in particular for radio (81%) and mobile (83%)—is high. |
| Mezmur et al. (2017), Ethiopia | Socioeconomic inequalities in the uptake of maternal healthcare services in Ethiopia | To examine socioeconomic inequalities in the uptake of maternal health services and to identify factors that contribute to such inequalities. | Survey | Questionnaire | 7917 women in the year 2000; 7273 women in the year 2005 and 7836 women in the year 2011 who had a live birth in the 5 years preceding the surveys | Media access significantly contributes to inequalities in maternal health service utilization favouring the nonpoor. |
| Gebre et al. (2018), Ethiopia | Inequities in maternal health services utilization in Ethiopia 2000–2016: Magnitude, trends, and determinants | To assess the magnitude, trends, and determinants of inequities in maternal health services utilization in Ethiopia from 2000 to 2016. | Cross-sectional survey design | Questionnaire | 2000–2016 DHS data set | Among the determinants of inequality is fewer access to mass media. |
| Oluyemi and Adejoke (2020), Nigeria | Maternal health information in Nigeria: The myth and the beliefs | Influence of cultural beliefs on maternal health information and the sources of these information on maternal health in Nigeria. | Survey | Questionnaire | 1706 participants from the six geopolitical zones | The source of maternal health information was hospital (22.3%), radio (18.6%), internet (13.2%), friends (12.4%), television (12.2%), school (10.8%), and family (10.5%). |

(Continues)

TABLE 1 (Continued)

| Author (year), country | Title | Focus/aim | Design/ methodology | Data collection | Sample | Key findings |
|----------------------------------|--|--|------------------------|---|---|---|
| Saleh and Lasisi (2011), Nigeria | Information needs and seeking behavior of rural women in Borno State, Nigeria. | To identify the information needs of rural women. To identify their sources of information. To examine their information-seeking behavior. | Survey | Questionnaire | Women from eight local government areas | The rural woman hardly seeks information in a formal way through formal sources or channels. Watching television or listening to radio, where available, is seen as luxury only men can afford. |
| Owusu et al. (2011), Ghana | Sexual and reproductive health education among dressmakers and hairdressers in the Assin South district of Ghana | To identify the existing sexual and reproductive health education programs dressmakers and hairdressers in the study area were knowledgeable of. | Mixed methodology | Questionnaires, focus group discussion, and in-depth interview guides | Female dressmakers and hairdressers as well | Respondents major sources of information on sexual and reproductive health. |
| | | Determine the sources of information on sexual and reproductive health available to dressmakers and hairdressers in the study area, and assess the communication pattern(s) on reproductive. | | | Their apprentices (aged between 15 and 35 years, had attained basic education and were never married) | Were friends, mass media, health professionals, and parents. |
| Etana and Gurmu (2018), Ethiopia | The effect of mass media on women's reproductive health behavior in Ethiopia | This study investigates the roles of mass media in positively affecting women's reproductive health behavior. | Mixed method | Questionnaire interviews | Women of reproductive age, media, and health personnel | Exposure to mass media has significant positive effects only on a few reproductive health indicators but not on others. The insignificant role of mass media is |

TABLE 1 (Continued)

| Author (year), country | Title | Focus/aim | Design/ methodology | Data collection | Sample | Key findings |
|--|---|--|------------------------|------------------|--|--|
| Granger et al. (2018), Burkina Faso, Ghana, Guinea, India, Kyrgyz Republic, Niger, Senegal, and Uganda | Community media for social and behavior change: Using the power of participatory storytelling to improve nutrition | To help guide program managers and other decision-makers considering the use of various types of community media. In these pages, we describe relevant experiences, tools, evidence, and lessons learned. Reflections on earlier definitions and principles of community media are also presented for readers interested in further exploring the foundations and key concepts of this approach. | Survey | Questionnaires | Women from various group | attributable to constraints associated with reproductive health communication design, implementation, and monitoring and evaluation. Community video and radio programs have been shown to be effective and innovative SBCC program models in the resilience context of the Sahel, changing both nutrition-specific and nutrition-sensitive behaviors. |
| Gugsa et al. (2016), Bangladesh, Rwanda and South Africa | Newspaper coverage of maternal health in Bangladesh, Rwanda and South Africa: A quantitative and qualitative content analysis | To examine newspaper coverage of maternal health in three countries that have made varying progress toward MDG 5 | Mixed methods | Content analysis | English language newspaper published in print and online | It is possible that greater media attention toward maternal health could be linked with maternal health being positioned higher on the agenda for policy action. |

(Continues)

TABLE 1 (Continued)

| Author (year), country | Title | Focus/aim | Design/ methodology | Data collection | Sample | Key findings |
|----------------------------------|--|---|-----------------------------|-----------------|--|---|
| Waithaka (2013), Kenya | Print media coverage of free maternal health-care issues by the daily nation | To investigate how the print media covered free maternal health-care programs in Kenya a case of the <i>Daily Nation</i> newspaper. | Mixed methods | Code sheet | 180 publications | Print media coverage of maternal health news is wanting. Media houses are primarily profit-making organizations. They tend to focus on issues that will increase their sales and as a result prefer very sensational reports. Maternal health issues, by their nature, do not fall under this category they need to be given more coverage as we endeavor to attain the millennium goals. |
| Ukachi and Anasi (2019), Nigeria | Information and communication technologies and access to maternal and child health information: Implications for sustainable development | Aimed at ascertaining women's perception of the impact of information and communication technologies on access to maternal and child health information and its implication on sustainable development. | Descriptive research design | Questionnaire | Women of reproductive age who were patients at the University of Lagos Teaching Hospital at the time of data collection for this study | Women perceive information and communication technologies to have a positive impact on their access to maternal and child health information. It was also found that irregular power supply, poor internet access, and ignorance of the media that transmit |

TABLE 1 (Continued)

| Author (year), country | Title | Focus/aim | Design/ methodology | Data collection | Sample | Key findings |
|-----------------------------------|--|--|------------------------|-----------------|--------------------------------|---|
| Agboola and Ahmed (2020), Nigeria | Rural women perceptions of digital media influence on awareness creation about maternal health information in Minna, Nigeria | Investigated the perception of digital media influence in awareness creation on maternal health amongst rural women in Minna, Nigeria. | Survey | Questionnaire | 384 respondents | maternal and child health information were the key factors that militate against effective access to maternal and child health information using communication technologies. Lack of local content on maternal health issues and inadequate relevant maternal health information were revealed as the challenges to maternal health. |
| Laouan (2020), West Africa | Rapid gender analysis —COVID-19 West Africa. | To determine reduced income and access to basic needs due to government lockdowns, changing gender roles in households, and increased gender-based violence. | Qualitative | Interview | 266 people across 12 countries | Women and youth have limited access to traditional channels of communication, such as TV and radio, as they are controlled by men in the household. Broadcasts sharing information about COVID-19 tend to take place at times when women are occupied with domestic chores. |

Abbreviations: COVID-19, coronavirus disease 2019; MDG 5, Millennium Development Goal 5.

TABLE 2 Country/regional classification per publication

| Country/region | Number of publication(s) |
|--------------------------------|--------------------------|
| Ethiopia | 6 |
| Ghana | 1 |
| Kenya | 1 |
| LMICs (with a focus on Africa) | 2 |
| Malawi | 2 |
| Nigeria | 10 |
| Sierra Leone | 1 |
| Uganda | 1 |
| West Africa | 1 |

Abbreviation: LMICs, low- and middle-income countries.

awareness, while advertisements/campaigns (30.6%) were the most common means of obtaining maternal health information. Exposure to mass media campaigns has been associated with increased uptake of antenatal care, contraceptive usage, use of mosquito bed nets, and postnatal and delivery care services among exposed women (as compared with nonexposed women) (C. O. F. Zamawe et al., 2016). This study was a cross-sectional study comprising 3825 women of childbearing age (15–49 years) and conducted in rural Malawi.

Atakiti and Ojomo (2015) examined the influence of television programming on maternal health in Lagos Nigeria. Data were gathered from 300 pregnant and 161 postpartum women using a questionnaire. The study showed that programs had a moderate influence on maternal health, and the authors reported low exposure to television. Television as educational entertainment increases women's knowledge; this is particularly important as people with limited literacy can successfully access television without depending on print media (Atakiti & Ojomo, 2015). Radio has been shown to be the primary source of maternal health information in several Nigerian studies (Adamu, 2020; Oluyemi & Adejoke, 2020; Sanda, 2014; Utalor, 2019). The findings of a survey of 382 Nigerian women by Utalor (2019) demonstrated that women identified the broadcast media as the main source of information with radio being more effective than television. A focus group discussion with women of childbearing age (14–49 years), also in Nigeria, showed that radio and posters were sources of maternal health information (Adamu, 2020). Again, a qualitative study involving 100 pregnant women (15–49 years) revealed that radio is the primary source of information on antenatal care services. Moreover, radio (18.6%) was the second most important source of maternal health information, while television (12.2%) ranked fifth in a survey of 106 participants from six geopolitical zones (Oluyemi & Adejoke, 2020). In a mixed method study involving 25,000 Sierra Leoneans, the radio was among the topmost source of media access within the community (Wittels, 2016).

A study in Ghana using individualized interviews to collect data from 119 dressmakers and hairdressers with four focus group discussions ($n = 29$), and in-depth interviews with key informants ($n = 5$), showed that sources of information on sexual and reproductive health for a majority of respondents ranked mass media as the second most source of information to friends (Owusu et al., 2011). Oluyemi and Adejoke (2020) carried out a study of the sources of maternal health information in six states from the six geopolitical zones of Nigeria. The findings showed that the hospital was the main source of maternal health information

TABLE 3 Themes

| Themes | Sources |
|---------------------------------------|---|
| Access to health information | Sanda (2014) Adamu (2020) Utalor (2019) C. O. F. Zamawe et al. (2016) Igbinoba et al. (2020) Atakiti and Ojomo (2015) Oluyemi and Adejoke (2020) Owusu et al. (2011) Wittels (2016) |
| Health-seeking behaviors | Ahmed and Seid (2020) Ajaero et al. (2016) Saleh and Lasisi (2011) Granger et al. (2018) Tekelab et al. (2019) Etana and Gurmu (2018) |
| Birth preparedness | Asp et al. (2014) Chaka (2020) C. Zamawe et al. (2015) |
| Challenges associated with mass media | Gugsa et al. (2016) Gebre et al. (2018) Mezmur et al. (2017) Waithaka (2013) Ukachi and Anasi (2019) Laouan (2020) Agboola and Ahmed (2020) |

(22.3%). Radio (18.6%) was recorded as the second source, followed by the internet (13.2%) and television (12.2%). Therefore, knowledge of women on maternal health has a constructive impact on their feeling (Utalor, 2019).

Health-seeking behaviors

Many countries have understood the importance of communication as an intervention needed to reduce and prevent maternal deaths, thus improving maternal health; yet, this benefit cannot materialize if the target audience does not have sufficient knowledge of the message (Sanda, 2014). According to Owusu et al. (2011), the mass media is a powerful tool not only for awareness creation about new technology but also for encouraging people's



desire for information on sexual and reproductive health and facilitating their efforts to apply the information to their own behavior. Yet, in their findings, mass media did not produce any behavioral change among dressmakers and hairdressers due to their consumption of music and movies. Comparatively the findings of the Malawian community-based study (C. O. F. Zamawe et al., 2016) indicate an increased likelihood among women who had exposure to media campaigns of using contraceptives, antenatal care and utilizing postnatal care services, and sleeping under mosquito bed nets. Indistinguishably, access to radio programs increased men's participation in maternal health care (antenatal, childbirth, and postnatal care) (C. Zamawe et al., 2015). In parallel, a systematic review and meta-analysis of 15 observational studies of 20,185 women who were pregnant or had given birth at least once observed that exposure to mass media was firmly linked to the uptake of antenatal care (Tekelab et al., 2019). Ajaero et al. (2016) analyzed data from the 2013 Nigerian Demographic Health Survey of 15,859 urban and 22,663 rural women aged 15–49 years from all 36 states showed the increased likelihood of family planning due to access to mass media. Similarly, Utalor (2019) found that exposure to mass media unequivocally and positively influenced women's attitudes toward maternal health issues. In contrast, a comparative cross-sectional study by Ahmed and Seid (2020) in Ethiopia, with 6401 women aged 15–24 years (4061 from rural and 2340 from the urban area) found no association between women exposed to mass media family planning messages and the utilization of modern contraceptives in rural areas. However, those exposed to mass media were less likely to use family planning by 62%. Conversely, research that explored the role of communication in community health in Sierra Leone by BBC Media Action revealed strong health information-seeking efforts, with 86% of respondents indicating that they wanted to receive more information on health while 61% of women of reproductive age were interested in receiving more information on pregnancy (Wittels, 2016).

A mixed method study of women of reproductive age, media, and health personnel by Etana and Gurmu (2018) found that the mass media had positively affected a few reproductive health indicators. However, they reported that the insignificant role of mass media is associated with the design of reproductive health communication, and how it is implemented, monitored, and evaluated. The use of groups of women to effect community-based interventions has proven to be effective in increasing community acceptability of health-related interventions. Granger et al. (2018) carried out a multicountry study of community media's effect on social and behavior change among women from various groups in eight LMICs. They found community video and radio programs to be effective in improving nutrition and hygiene practices. However, a survey of women from eight government areas, which sought to identify the information needs, sources of information, and information-seeking behavior of rural women, revealed that this population rarely seeks information from formal sources such as radio or television. Watching television or listening to the radio, where available, is seen as a luxury only men can afford (Saleh & Lasisi, 2011).

Birth preparedness

Mass media is useful in promoting maternal health by influencing birth preparedness. Using a community-based survey, Asp et al. (2014) explored the link between birth preparedness and exposure to media among 65 postnatal women recruited from 120 villages in southwest Uganda. The study showed that 88.6% and 33.9% listened to the radio and read newspapers, respectively. The use of newspapers was more prevalent in urban areas, while radio was more common in rural areas. Factors such as saving money, identifying a skilled birth attendant, finding a blood donor, and arranging transportation for delivery and any obstetric emergencies were the birth preparedness action included.

A study by Chaka (2020) examined both community and individual-level factors that affect the utilization of skilled care delivery for women who received adequate antenatal care in Ethiopia. The study, which involved 957 women aged 15–49 years, and who gave birth within 5 years preceding the survey, showed that women who were exposed to media were more likely to attend antenatal care as well as use the services of a skilled birth attendant. A cross-sectional study of 3825 women of childbearing age in Malawi, conducted between July and December 2013 and focused on the effect of a mass media campaign on men's participation in maternal health, revealed that when exposed to a radio programme, men were likely to participate in the antenatal care (1.5 times), childbirth (1.7 times), and the postpartum period (2 times). The researchers found a high probability of engaging in birth preparedness and postnatal care (C. Zamawe et al., 2015).

Challenges associated with mass media

Scholars have taken note of the news media's influence on public policy issues. Through the process of “agenda setting and framing,” news stories are prioritized over other stories, and influence not only what issues are presented to mass audiences but also how these are perceived, and what importance the public should attach to them. These were echoed in Gugsu et al.'s (2016) mixed method content analysis study involving newspapers published in the English language.

Communication via mass media raises several challenges, such as identifying and reaching the right audience, and ensuring that the message is appropriate for that audience and the likelihood of implementing it (Adamu, 2020).

Traditional mass media campaigns typically have little room for community-level participation. Mass media for health education is also limited in that it is a one-way communication channel, with information traditionally flowing from urban centers outward and only sometimes reaching remote populations. It follows that many long-established health communication techniques enable only a limited exchange of ideas and input from and within communities (Granger et al., 2018). Thus, inequalities in media access significantly contribute to inequalities in maternal health service utilization, as indicated by two different surveys involving over 20,000 women in Ethiopia (Gebre et al., 2018; Mezmur et al., 2017). Failure to address the cultural and practical barriers to behavior change, and the use of inappropriate media platforms to reach rural target audiences, are among the challenges identified (C. O. F. Zamawe et al., 2016). Tekelab et al. (2019) and Ukachi and Anasi (2019) in their study among women of reproductive age at Lagos teaching hospital identified some challenges associated with access to health information and dissemination. These can be grouped under political, infrastructure, cost, power supply, poor internet access, funding, and inaccessibility of health information. Similarly, Waithaka (2013) investigated print media coverage of maternal healthcare programs in Kenya using a code sheet search of 180 publications. It was discovered that given the profit-making nature of media houses, the focus was on sensational issues, which increase sales. Unfortunately, maternal health is not in that category.

As indicated by a survey involving 34 women in Nigeria (Agboola & Ahmed, 2020), the lack of local focus on maternal health issues and inadequate relevant maternal health information is challenging to maternal health. A qualitative study of 266 women across 12 countries in West Africa found that women and youth have limited access to traditional channels of communication, such as TV and radio, particularly as men in the household control them (Laouan, 2020). Additionally, broadcasts sharing information tend to occur when women are occupied with domestic chores, as has been the case during coronavirus disease 2019 (Laouan, 2020). It is difficult for maternal and child health to be covered regularly when politics and other major news carry more weight (Waithaka, 2013).



DISCUSSION

Fundamental to a robust healthcare system is the effective communication of basic health information and practices for improving maternal health, as well as achieving good health and well-being for all in Africa (Royston et al., 2020; UNICEF, 2016b). The need for the effective dissemination of health information and education through media advocacy is increasingly important in view of the high rates of mortality, morbidity, and undernutrition of mothers throughout Africa (UNICEF, 2016b). There is a consensus in the literature surveyed that media intervention at the community level impacts the behaviors, health practices, and health knowledge and beliefs of African communities (Ahinkorah et al., 2020; Gallo, 2021; Mweemba et al., 2021; Nwagbara, 2017; Odorume, 2015; Sowa et al., 2018; C. O. F. Zamawe et al., 2016).

However, the preference for sensationalism in the reporting of health issues has limited the effectiveness of the community-level interventions by the mass media (Waithaka, 2013). The role of the media in improving maternal health, particularly in the information age of the 21st century, cannot be overemphasized (Fatema & Lariscy, 2020; Igbinoba et al., 2020; C. O. F. Zamawe et al., 2016). Also, the media's role in the dissemination of health information has become increasingly important considering the huge deficit of health personnel in Africa, which is precariously low. Africa has 2.3 health-care employees per 1000 people, compared with the Americas, which has 24.8 (Naicker et al., 2009). The role that the media has played so far in areas of information dissemination and advocacy, and the possible impact the media has had on maternal health in Africa, need to be examined for policy advocacy and interventions to strengthen the public health system and improve maternal health in the African continent.

Studies (Adamu, 2020; Asp et al., 2014; Igbinoba et al., 2020; C. O. F. Zamawe et al., 2016) observed that mass media is globally recognized as a cost-effective and potent approach for promoting public health, good health practices, increased awareness, and knowledge, as well as changed attitudes. Specifically, tangible achievements of increased media advocacy and campaign on good health practices and behavior include reducing the population-level use of tobacco, alcohol, and drugs; promoting cancer screenings; reducing birth and HIV infections; increasing the usage of antenatal care; improving acceptance of the female condom; promoting more involvement of men in prenatal and postnatal care; and improving the patronage of delivery care services. In exceptional cases, a few studies found no link between family-oriented media campaigns, or the utilization of modern contraceptives in rural areas (Ahmed & Seid, 2020). Some studies of urban and rural communities in Africa reported that the media, radio, television, internet, and adverts/campaigns contributed significantly to the progress achieved in more access to health information among women and their spouses (Atakiti & Ojomo, 2015; Igbinoba et al., 2020; Oluyemi & Adejoke, 2020; Owusu et al., 2011; Sanda, 2014; Utalor, 2019; Wittels, 2016; C. Zamawe et al., 2015). Also, the studies noted that effective communication strategies through media intervention and advocacy that are culture-specific and gender-centric can help create and advance positive health behavior change. Thus, exposure to mass media will ultimately promote good health and reproductive behaviors of women and their spouses in Africa (Ajaeo et al., 2016; Mutanda et al., 2016; Owusu et al., 2011; Saleh & Lasisi, 2011; Sanda, 2014). Studies also noted that exposure to media promoted increased usage of antenatal care and skilled birth attendants (Chaka, 2020; Sserwanja et al., 2022), promoted maternal health, and reduced maternal morbidity and death in Africa.

A major challenge associated with media intervention, advocacy, and engagement on maternal health issues is inequalities in media access, with its attendant effect on maternal



health service utilization (Adamu, 2020; Gebre et al., 2018; Granger et al., 2018; Mezmur et al., 2017). Other challenges include cultural prejudices, social norms, inappropriate media platforms, politicization, systemic and institutional issues, poor communication strategies, poor local content on maternal health issues, and inadequate relevant maternal health information (Agboola & Ahmed, 2020; Etana & Gurmu, 2018; Laouan, 2020; Odesanya et al., 2015; Sokey et al., 2018; Tekelab et al., 2019; Ukachi & Anasi, 2019; Waithaka, 2013; C. O. F. Zamawe et al., 2016).

These challenges associated with media intervention and advocacy on maternal issues have been largely responsible for their ineffectiveness in promoting good health behavior and maternal health in Africa. The consequence of this ineffectiveness is among the causes of poor maternal health-seeking behavior and high maternal morbidity and maternal death rate in many African countries. In Africa several factors—such as family income, transportation to health centers, and the management of birth complications—influence birth preparedness according to several studies (Asp et al., 2014; Chaka, 2020; C. Zamawe et al., 2015). Also important is the role of men exposed to the mass media campaign in promoting antenatal care critical to birth preparedness. Such roles will go a long way in influencing maternal health in Africa.

There are several challenges militating against effective and timely communication of maternal health information in Africa. These challenges are many and include language barriers, health message content, channels of delivery, information perception, cultural prejudices, information source credibility, feedback mechanisms, communication techniques, literacy levels, inequalities in media access, poor community engagement, lack of social amenities, inadequate health funding, and audience identification (Adamu, 2020; Agboola & Ahmed, 2020; Gebre et al., 2018; Granger et al., 2018; Gugsa et al., 2016). However, the roles of health stakeholders (government, media practitioners, non-governmental organizations, international donors, and health personnel) are critical in mitigating these challenges.

LIMITATIONS

This review excluded studies that focus on the use of social media. This highlights the need for exploration of the impact of social media on maternal health given the surge in the uptake of social media globally. Again, the study included only peer-reviewed articles from 2010 to 2021. Therefore, older studies with significant effects of mass media on maternal health due to reduced use of social media may have been missed.

CONCLUSION AND RECOMMENDATION

Africa has grappled with systemic health inequities throughout its history. These inequities continue to negatively impact many underrepresented and vulnerable groups, especially in rural areas. Historically, this population has been denied appropriate and equitable health-care access, as well as health information. The media as a major stakeholder in the health sector plays a critical role in tackling the systemic health inequalities in Africa, especially by promoting the sharing of maternal health information with citizens. This will no doubt help to improve outcomes in women's health and pregnancy through the expansion of access and the adoption of preventive care, promotion of good health practices, and behavior. There is a need for collaboration among all health stakeholders, including a sustainable relationship between media practitioners and health authorities, for the promotion of good maternal health in Africa.

AUTHOR CONTRIBUTIONS

Conceived and designed the study: Ephraim K. Senkyire and Magdalena Ohaja. *Analysis and interpretation:* Ephraim K. Senkyire and Magdalena Ohaja. *Critical revision:* Olabanji Ewetan, Ernestina Asiedua and Dominic Azuh. *Approved the final version for publication:* Ephraim K. Senkyire, Magdalena Ohaja, Olabanji Ewetan, Ernestina Asiedua and Dominic Azuh. All authors agreed to be accountable for all aspects of the work.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

ETHICS STATEMENT

No approval from the ethics committee of the University or an Institutional Review Board was sought for this study.

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