Effectiveness of Communication Channels for Maternal Healthcare in Delta State

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Abstract

This study on the effectiveness of communication channels for maternal healthcare is one of great concern with the increased health risks for women in their reproductive years of pregnancy and childbirth. This is especially true in developing countries such as Nigeria where thousands of women die yearly in pregnancy or childbirth. The qualitative and quantitative design method was applied in the study and the questionnaire was used for data collection from 399 respondents. The study found that the level of awareness of the programmes was encouraging for FMHCP and HeFAD; that the communication channels were adequate, and more than half thought they were effective in influencing participation in the maternal healthcare programmes. The findings provide healthcare professionals with an important insight into issues of effective communication therefore, recommend the continuous usage of communication channels to spread awareness of maternal healthcare programmes to enhance the provision of appropriate health information and maternity care to women

Keywords: *Effectiveness, Communication, Channel, maternal and Healthcare*

Introduction

The government used media outlets like radio, television, newspapers, posters, billboards, the State Ministry of Health, and the State Ministry of Information, churches and other organisations to disseminate awareness of the maternal healthcare programmes that were implemented in Delta State. This is in line with Essien and Yusuf (2016) suggestion that for maternal healthcare programmes to produce the desired results and convince targets of the genuineness of the programmes, the government must do a lot to disseminate information. Similarly, Sokey, Adjei, and Ankrah (2018) emphasised that communication guarantees acceptance of new ideas and also creates interest in participation. Abana (2017) noted that participation is only possible when targets are adequately informed and influenced to make the right decisions. Therefore, the place of communication that drives decisions about why, when, how, and where to contact antenatal, delivery and postnatal services cannot be overlooked. On the other hand, communication channels have been described as a means of achieving the objectives of programmes for maternal healthcare by assisting their targets in obtaining information that might inform them of problems and affect their involvement in such programmes (Benis, Barkan, Sela, & Harel,2020; Odesanya, Hassan & Olaluwoye, 2015). As a result, communication channels act as a conduit or conduit through which programme targets receive information. It is assumed that in this situation, communication channels can effectively transmit information that can evoke desirable responses. Based on this, the study aims to assess the communication channels to ascertain how well they can raise the level of awareness and influence targets to participate in maternal healthcare programmes in Delta State.

A major concern for maternal health is the care provided or received by a woman of reproductive age during pregnancy, delivery, and after birth. It has been identified as a key development issue because health issues are central to human development. In addition, maternal health indicates the quality of a country's healthcare system, and the level of its social conditions, and is the main determinant of the global ranking of the human development index (Odesanya et al., 2015). In the developing world, maternal health has become a major part of healthcare programmes due to the large population of women of reproductive age (21 percent), high maternal mortality, inadequate care during pregnancy and childbirth, poorly spaced or unwanted pregnancies, diseases, nutritional problems, and delivery in the hands of untrained birth attendants, among others. In Delta State, the government introduced its maternal healthcare programmes, namely the Free Maternal Healthcare Programme (FMHCP), which was launched in November 2007 by the administration of Emmanuel EwetanUduaghan, and the Health for All Deltans (HeFAD) by the administration of Arthur Ifeanyi Okowa in 2016. These programmes were part of the state government's efforts to reduce maternal mortality which stood at an unacceptable rate of about 800 per 100,000 live births (Delta State Ministry of Health, 2010); ensure equal access to maternal healthcare; promote healthy lifestyles, and make proper use of medical facilities during pregnancy, childbirth, and after childbirth.

Research Objective
The specific objective of this study is to;

1. determine the level of awareness of maternal healthcare programmes among women of reproductive age in Delta State.
2. ascertain the adequacy of communication channels in influencing the participation of women of reproductive age in maternal healthcare programmes.
3. determine the effectiveness of available communication channels in achieving the goals of maternal healthcare programmes.

Research Questions

1. What is the level of awareness of maternal healthcare programmes among the people of Delta State?
2. How adequate were the communication channels in influencing participation by women of reproductive age in the two maternal healthcare programmes?

How effective were the communication channels in the achievement of the objectives of the two maternal healthcare programmes?

Literature Review
Maternal Healthcare Communication Channels

Healthcare is the act of taking care of one's physical and mental well-being to enhance one's ability to work and lead a normal life. It includes antenatal care, skilled assistance in normal childbirth, referrals for women with obstetric complications, postnatal care, family planning, and reproductive health services, emergency obstetric care, cesarean sections, and emergency blood transfusions (Lungu, Chodzaza, Chikazinga & Jere, 2023; Ivwighren & Umukoro, 2022). Maternal healthcare communication channels refer to how information is spread or disseminated about health issues such as regular prenatal and postnatal visits, diet during pregnancy, birth in a medical facility, child spacing, complications during pregnancy, and when and where to seek emergency medical help. Crawford and Okigbo (2014) believe that both mass and interpersonal media are useful for health communication campaigns, with mass media ideal for creating awareness, while interpersonal channels are more effective for persuasion, attitude change, and behaviour change.

According to Odesanya. Hassan and Olaluwoye, (2015),Olubumi, Ofurun and Tob, (2016), "healthcare" is simply the act of taking care of one's physical and mental well-being to enhance one's ability to work and lead a normal life. It also incorporates treatments offered by medical professionals for prevention and cure. In this context, healthcare refers to the maintenance of women's reproductive health. The United Nations Fund for Population Activities (UNFPA, 2006), cited by Saleh (2015), stated that maternal healthcare includes the provision of antenatal care, skilled assistance in normal childbirth, appropriate referrals for women with obstetric complications, and postnatal care. A woman's health during pregnancy, childbirth, and the weeks after childbirth is therefore essential to ensuring the adequate well-being of the home and family, especially in matters related to childbirth, child care, breastfeeding, and domestic care, among others enhanced by communication to create awareness on areas of concern.

Rutten, Agunwamba, Greene, Mazor, Ebbert, Sauver and Dearing (2014), emphasied that although face-to-face communication is influential, the power of mass media in reaching audiences is still unquestionable. While mass media are ideal for creating awareness, especially in emergencies and crises, interpersonal channels are more effective in situations requiring persuasion, attitude change, and behaviour change. They believe it is useless to organise health communication campaigns that ignore interpersonal influence through face-to-face communication. Health communication plays a key role in creating and providing adequate information that is strong enough to discourage any negative sponsorship or practice, and to also advocate for government's commitment to providing essential maternal healthcare. There are several communication channels available for maternal healthcare programmes. Below are some examples of them:

Community seminars and Support Groups: Pregnant women have the chance to come together, hear from experts, exchange experiences, and get advice when they attend seminars and support groups in person. Topics including breastfeeding, newborn care, delivery preparation, and postpartum mental health may be covered in these sessions (Sseguya, Mazur, Wells, & Matsiko, 2015).

Public Service Announcements (PSAs): Government agencies and healthcare organizations can utilize TV, radio, and online platforms to broadcast informative PSAs on maternal healthcare. These announcements can raise awareness about the importance of prenatal care, vaccination, nutrition, and other essential aspects of maternal health (Savelyev & Sorokoumova, 2020; Khoshghadam, Kordrostami, & Liu-Thompkins, 2019).

Text Messaging Services: SMS-based services may be used to send pregnant women reminders, health messages, and instructional materials. Topics including prenatal care, nursing, postpartum recovery, and baby care may be covered in these communications. Reaching women in distant or underdeveloped regions with limited internet access can be facilitated via text messaging (Tolou-Shams, Yonek, Galbraith, & Bath, 2019).

Mobile Applications: Maternal health-focused mobile applications can provide a wealth of knowledge and resources. These applications can offer advice on prenatal care, eating habits, physical activity, and overall well-being. They can also send appointment reminders and provide tailored support based on the user's gestational age (Ponce, Méndez, & García-Peñalvo, 2014).

Social media and online forums: Online forums and social media groups can be useful outlets for communicating about maternal healthcare. These websites enable pregnant moms to communicate with medical experts, exchange stories with other women, and ask for guidance in a welcoming environment (Dong, Liang, & He, 2017;

Ojobor, Okpako&Ivwighren, 2022).

Adequacy of Communication Channels for Maternal Healthcare

The adequacy of communication channels for maternal healthcare is a critical aspect of ensuring the well-being of expectant mothers. Effective communication plays a pivotal role in disseminating important information, promoting awareness, and facilitating access to necessary healthcare services (Igbinoba, Soola, Omojola, Odukoya, Adeleye & Oduna, 2020). Key considerations regarding the adequacy of communication channels for maternal healthcare as suggested by Odesanya, et al., (2015); Kodero, (2017); Wang, Etowa, Ghose, Tang, Ji, Huang, (2021) and Tolou-Shams, Yonek, Galbraith, & Bath, (2019) are: (1) Accessibility. All expectant women must have access to communication channels, even those who live in rural or underdeveloped regions. This calls for maintaining accessibility across several platforms, including mobile devices, internet connectivity, and actual places like hospitals or community centers. (2)Language and Cultural Sensitivity. The target population's variety in linguistics and culture should be taken into account when choosing communication mediums. To guarantee successful comprehension and engagement, information should be presented in languages that the majority can understand and in a way that is sensitive to cultural differences. (3) Timeliness. The delivery of information through communication channels must be quick and satisfy the unique requirements and phases of pregnancy. This includes sending out prompt reminders for important medical appointments such as vaccines, pregnancy checkups, and other necessary procedures. (4) Accuracy and Reliability. Healthcare practitioners should vouch for the accuracy and reliability of the information provided through communication channels. Confusion and potentially dangerous judgments might result from inaccurate information. Collaboration with organizations and healthcare professionals can aid in ensuring the accuracy of the data presented. (5) Two-way Communication. A two-way flow of information should be made possible via effective communication routes. Expectant moms should be given the chance to query healthcare specialists, get their questions answered, and obtain specialized advice. Helplines, interactive websites, and in-person consultations can all be used to do this. (6) Educational Resources. The instructional resources available through communication channels should be extensive and simple to grasp. Such subjects as prenatal care, nutrition, labor preparation, nursing, postpartum recovery, and baby care may be covered by these materials. Pregnant women can be empowered to make knowledgeable decisions about their own and their children's health by receiving clear and straightforward information. (7) Community Engagement. The efficiency of communication channels can be increased by including the neighborhood and utilizing local networks. Assisting in the dissemination of knowledge and promoting active involvement in maternal healthcare initiatives may be done through collaboration with community leaders, organizations, and support groups.

Continuous Evaluation and Improvement

To fill gaps and enhance the efficacy of communication channels, regular review is essential. Feedback from healthcare professionals and pregnant moms can help identify the communication channels' strengths and limitations and help make the required corrections and changes. By making sure that the channels of communication for maternal healthcare are adequate, greater awareness, knowledge, and access to necessary services are promoted, eventually leading to improved mother and child health outcomes.

Effectiveness of Communication Channels for Maternal Healthcare

The effectiveness of communication channels available for achieving the goals of maternal healthcare programs is a critical aspect to evaluate (Allport, Johnson, Aqi, Labrique, Nelson, Kc, Carabas, Marcell, 2018; Bonfadelli, 2020). By so doing, various aspects, policymakers, and healthcare providers can identify strengths, weaknesses, and areas for improvement. This allows for the implementation of targeted strategies to optimize communication channels and enhance the overall impact of maternal healthcare programs. Zamawe, Banda, Dube, (2016): Sampson, Xu, Prabhu, (2022) and Ratna, (2019) outlined some key factors to consider below:

Awareness and Knowledge Dissemination

The degree of awareness and knowledge among target groups can be used to gauge the success of communication channels. Are expecting moms and their families well-educated about the programs, services, and advantages of maternal healthcare? Determining the effectiveness of communication channels in spreading critical information may be done by evaluating their reach and impact.

Behaviour Change

Pregnant women and their families should be able to adjust their behavior with the help of effective communication channels. This involves encouraging good health-seeking habits including going to prenatal appointments, leading healthy lives, following treatment plans, and getting help when needed. The efficacy of communication channels must be assessed in terms of how much behaviour change has been affected by them.

Utilization of Maternal Healthcare Services

The rates at which maternal healthcare services are used can be used to assess the efficiency of communication channels. Pregnant women are actively seeking out, accessing, and obtaining prenatal, postnatal, and other critical services. Monitoring the use of services can reveal information on how communication channels affect promoting usage.

Adherence to Guidelines and Best Practices

Effective means of communication should provide accurate and current recommendations and best practices in maternal healthcare. The degree to which pregnant women follow and are aware of these recommendations can reveal how well the channels of communication are working to encourage safe practices and well-informed decision-making.

Feedback and Satisfaction

It might be helpful to get feedback on how satisfied pregnant moms and healthcare professionals are with the channels of contact. Are people saying that the methods of communication are dependable, accessible, and helpful? Feedback may be used to pinpoint problem areas and make sure that communication channels are effective in reaching the intended audience.

Theoretical Framework

The ACADA (Assessment, Communication Analysis, Design, and Actions) Model is used in rationalizing this study. The ACADA model was developed by UNICEF to enable it to succeed in its polio eradication programme. It is based on the triple 'A' planning cycle - assessment, analysis, and actions (Heeneman, Jong, Dawson, Wilkinson, Ryan, Tait, Rice, Torre, Freeman, & Vleuten, 2021). According to Wogu, Omaka-Amani, Ugwu, Ugwuoke, and Agu (2019), the ACADA model holds that for development and behaviour modification to be achieved, there must be programme communication through strategically selected communication channels. This, as observed by scholars, is what enables people to change. Chun, & Cho (2015) added that programme communication brings about the desired change in attitude and practice among development programme beneficiaries. In other words, when a programme is not communicated to the targets, its success could be hampered. This could be one of the reasons why development communicators/agents ensure that new programmes are well communicated to the targets. Thus, it could be stated that the government of Delta State aligned with the ACADA Model when adequate awareness of maternal healthcare programmes was created.

The prime focus of the ACADA model is to promote and help targets understand the health messages better, and accept and practice them for a long time, (Sotirova, Bureva, &Sotirov, 2016). It also shows the vital steps/procedures that must be followed to achieve the set goals of a programme. Meanwhile, Wogu, Omaka-Amani, Ugwu, Ugwuoke, and Agu (2019) noted that the model is meant for communication planning needs; help in the achievement of the integration of programmes such as the FMHCP and HeFAD among targets, and ensure the strategic selection of communication channels that are credible enough to achieve set objectives of a programme. Meloni &Murroni, (2015), mentioned that achieving this requires the assessment of the communication channels to ascertain their usefulness in terms of reach; the Strength, Weaknesses, Opportunities, and Threats (SWOT) of the channels, effectiveness, and appropriateness of the channels, and the available sources of information in the community where the targets are located. Relating this to the study focus, it could be deduced that the communication channels of radio, television, newspapers, social media, posters, billboards, and the others used are assumed to have been strategically selected since it was reported that the objectives of the maternal healthcare programmes were achieved (Heeneman, Jong, Dawson, Wilkinson, Ryan, Tait, Rice, Torre, Freeman, & Vleuten, 2021).

Furthermore, Chun, & Cho, (2015), described the ACADA Model as a framework that presents a step-by-step process in communication planning. One such step in communication planning is channel analysis. According to scholars, communication channels could be used at different levels to spread information about a health programme. They identified such communication channels to include the mass media of radio, television, newspaper, billboards, posters, jingles, drama, and songs, among others. Again, this confirms that the communication channels used in maternal healthcare programmes are in line with those listed in the ACADA model. Thus, the model enables the researchers to evaluate the communication channels through which targets of the maternal healthcare programmes were reached (Wogu, Omaka-Amani, Ugwu, Ugwuoke, &Agu, 2019).

Method

The study employed two data-gathering instruments: a questionnaire and a key informant interview. The questionnaire was for women who gave birth within the period of the programmes and had open and closed-ended questions with 31 items. The key informant interview had semi-structured questions with 10 items related to the study and the research questions. It was administered to stakeholders in the maternal healthcare programmes. The population of the study was 194,826 women of reproductive age (15-49) residents in Delta State who gave birth at government-owned health facilities. The sample size was 399 and the respondents were drawn from 25 local government areas, three senatorial districts, six central hospitals, and 59 general hospitals. Descriptive and inferential data analysis methods were adopted to analyse the frequency, percentage, and tables used to answer specific research objectives.

Results and Discussion

Demographic Variables

The variable of age, marital status, dependants, educational qualification and occupation provided insight into the sampled respondents. The demographic details are presented below:

Table 1: Age of Respondents				
Values for Age	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid 15- 19 years	42	11.1	11.1	11.1
20-24 years	62	16.2	16.4	27.5
25-29 years	58	15.1	15.4	42.9
30-34 years	83	21.7	22.0	64.9
35-39 years	62	16.2	16.4	81.3
40 -44 years	38	10.0	10.1	91.4
45 -49 years	32	8.4	8.5	100.0

		Frequency	Percent	Valid Percent	Cumulative Percent
	Total	377	98.7	100.0	
	No response	6	0.3		
Total		383	100.0		

Source: Field survey, 2020

Table 1 above shows the age distribution of respondents. based on the data presented, the majority of the respondents fall within the age intervals of 30 to 34 years. those who are between the ages of 45 to 49 years are the least. all respondents fall within the period of childbearing age, this implies that the respondents also fall under the demography that is susceptible to maternal health-related conditions and interventions.

Table 2: Marital Status of Respondents

		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Values for Marital Status					
Valid	Single	64	16.7	17.0	17.0
	Divorced	22	5.7	5.8	22.8
	Married	292	76.2	77.2	100.0
	Total	378	98.6	100.0	
	No response	5	1.4		
Total		383	100.0		

Source: Field survey, 2020

In Table 2 above, most of the respondents are married and it is indicative they are living within a family structure in which they have legally recognized partners. These marital statuses are meaningful for family-related outcomes.

Table 3: **The number of respondents' dependants**

		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
The values for Dependants					
Valid	1-3	295	77.0	77.4	77.4
	4-6	60	16.1	15.7	93.2
	7 and above	26	6.8	6.8	100.0
	Total	381	99.5	100.0	
	No response	2	.5		
Total		383	100.0		

Source: Field survey, 2020

In Table 3, the majority of the respondents have one to three children. This implies that the sampled respondents fall within the purview of reproductive age and are therefore targets of the maternal healthcare programmes

Table 4: **Educational qualification of respondents**

Educational Qualification		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary school	58	15.1	15.4	15.4
	SSCE/O'level	114	30.0	30.2	45.6
	Tertiary	205	53.5	54.4	100.0
	No response	6	1.4	100.0	
			1.0		
Total		383	100.0		

Source: Field survey, 2020

Table 4 shows the data on the educational qualification of respondents. The majority of the respondents have tertiary education qualifications while those with primary education are the least. The data, therefore, suggest that the majority of the respondents are educated.

Table 5: Occupation of Respondents

Values for Occupation		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Farming	45	11.7	11.0	11.8
	Trading	104	27.2	27.2	40.3
	Civil servant	109	28.5	28.5	67.5
	Self-employed	124	32.4	32.5	100.0
	No response	1	.2		
Total		383	100.0	100.0	

Table 5 has values for the socio-economic variable of occupation, the majority of the respondents are self-employed. Occupational distribution is an important determinant of the economic variables implicated in access to maternal healthcare programmes. From the foregoing, the vast majority of respondents have an occupation that can impact the demands placed on pocket expenditure for health.

Table 6: Location of respondents

Location		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural	180	47.1	47.4	47.6
	Urban	200	52.2	52.6	100.0
	Total	380	99.3	100.0	
	No response	3	.7		
Total		383	100.0		

Table 6 above shows the location of respondents who live in rural and urban areas. The data presented shows that the majority of the respondent lives in urban areas. Rural and Urban areas have distinct issues in terms of access to healthcare. Location has some importance on health and life outcomes hence it is an important variable.

Awareness of Maternal Healthcare programmes

Table 7: Responses on exposure to health promotional information

Have you heard, read or viewed Information on free maternal Healthcare programmes?		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	374	97.7	97.7	100.0
	No	9	2.3	2.3	2.3
	Total	383	100.0	100.0	
Have you heard, read or viewed Information on Health for All Deltans?		**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	Yes	308	80.4	80.4	100.0
	No	75	19.6	19.6	19.6
	Total	383	100.0	100.0	

Source: Field survey, 2020

Table 7 above presents data of responses on whether respondents have heard information about the programmes or not, respondents indicated that they have heard about the Free Maternal Healthcare Programme while others affirmed they have heard of the Health for All Deltans. The respondents have heard of the two programmes.

Table 8: Responses on the perceived adequacy of communication channels

Do you think the messages were adequate for the programmes		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Yes	260	67.9	68.2	100.0
	No	121	31.6	31.6	31.6
	No response	2	.5		
Total		383	100.0	100.0	

Table 8: The majority of the respondents indicated that the communication channels were adequate. In other words, the message encompassed information they needed to know about the programmes.

Table 9: Responses on the assessment of the communication channels

What is your assessment of the		Frequency	Percent	Valid	Cumulative

			Percent	Percent	
Communication channels used?					
Valid	They were effective in influencing people to participate in the programmes	320	83.6	84.1	100.0
	They were not effective in influencing people to participate in the programmes	61	16.0	16.0	16.0
	No response	2	.5		
Total		383	100.0	100.0	

Source: Field survey, 2020

In Table9, The majority of the respondents indicated that the communication channels were effective in influencing participation.

Discussion

Research Question 1: What is the level of awareness of maternal healthcare programmes among the people of Delta State?

The research question on the level of awareness of the two maternal healthcare programmes was asked. The majority of respondents (97.7%) were aware of the programmes, but not able to recall the media content of the messages they received. Awareness is central to access and utilisation of healthcare programmes, especially among vulnerable groups. Essien and Yusuf (2016) and Feely and Chen (2013) agree that awareness of healthcare programmes is important for health promotion, disease prevention, healthcare policy, and the improvement of quality of life. Additionally, Famulusi and Owoeye (2014) believe that communication sustains development by providing the needed awareness for people to take the right decisions. This study found that awareness of maternal healthcare programmes was encouraging enough to elicit positive responses from the targets.

Research Question 2: How adequate were the communication channels in influencing participation by women of reproductive age in the two maternal healthcare programmes?

The data presented showed that communication channels were adequate in influencing participation by women of reproductive age. Data showed that 76.1% of respondents perceived the communication channels as reliable, and 63.7% participated in the maternal healthcare programmes after receiving messages through the communication channels, Kodero, (2017). This corroborates the assumption of the ACADA model, which stipulates that for development and behaviour modification to be achieved, there must be programme communication through strategically selected communication channels (Sotirova, Bureva, &Sotirov, 2016). Additionally, it affirms the stand of Wang, Etowa, Ghose, Tang, Ji, Huang, (2021) it is possible for a reduction in maternal mortality rates when programmes are introduced, indicating that pregnant women adopted the innovation by participating. The key informants admitted that the objectives of the programmes were to reduce maternal mortality rates, and most respondents found the channels and message adequate. The findings fall in line with the suggestion of Tolou-Shams, Yonek, Galbraith, & Bath, (2019) and Odesanya, Hassan, &Olaluwoye, (2015) that the importance or attachment people give to an issue is linked to the information they received through the communication channels and that traditional media should be adopted for more effective results in the delivery of the message and participation in the programmes.

Research question 3: How effective were the communication channels in the achievement of the objectives of the two maternal healthcare programmes?

All of the key informants acknowledged that the programmes' main goals were to lower maternal death rates by offering maternal healthcare services. To increase awareness of the programmes, the existing communications channels were used. The primary informants attested to the accomplishment of this goal. The results from the responses to the second and third study questions also show that the majority of respondents thought the channels and message were appropriate in agreement with the study of Sampson, Xu, Prabhu, (2022). It is established, using the facts above and the Agenda Setting Theory, that people's priority or connection to a problem is related to the information they learned through communication channels. According to Bonfadelli (2022), Allport, Johnson, Aqi, Labrique, Nelson, Kc, Carabas, Marcell (2018), and Ratna (2019), the use of communication channels to spread knowledge about programmes for maternal healthcare may draw attention to them and affect how they think and act. In this study, their involvement in the programmes is graded as their reaction. Similarly to this, a substantial number of respondents (67.1%) said that the programmes' goals could not have been met if the chosen communication channels had not been utilized. Overall, the majority of respondents expressed a desire for the programmes to continue while urging the use of conventional media to achieve more successful message delivery and programme participation. Thus, it is clear in line with Zamawe, Banda, Dube, (2016), that most respondents had a favorable opinion of the healthcare programmes and the methods used to disseminate information.

Conclusions

The study assessed the effectiveness of Delta State's maternal healthcare communication channels. Based on the study's findings, the researchers conclude that communication channels can raise awareness, affect participation, and be useful in attaining the goals of programmes for maternal healthcare. This became required as a result of the government's effort to promote awareness of the programmes and encourage participation by using the available communication channels. The study examined if people were aware of the maternal healthcare programmes, whether the channels of communication were adequate for raising awareness of the two programmes, and whether the communication channels were successful in helping the programmes achieve their goals. Therefore, the research was designed to assess the healthcare communication channels utilized to reach out to women of reproductive age for the anticipated participation in the maternal healthcare programmes.

Contribution to Knowledge

The study aims at evaluating the maternal healthcare communication channels in Delta State. The objectives of the maternal healthcare programmes include the reduction of maternal mortality and the encouragement of steady utilisation of approved health facilities by women of reproductive age. As part of its strategies for eliciting positive responses and participation in maternal healthcare programmes, multiple communication channels were evaluated to ascertain if they create adequate awareness of the programmes. They are assumed to have created adequate awareness and influenced women of childbearing age to respond positively to the programmes. The study has contributed to knowledge in the following ways:

1. The study has no doubt contributed to the literature on health communication, particularly in the area of the evaluation of maternal healthcare communication channels. Thus, the adequacy of communication channels in spreading awareness of maternal healthcare programmes has been empirically established. Health communication experts now have additional empirical evidence to use.
2. The study also provides new insight into the effectiveness of communication channels in ensuring the success of maternal healthcare programmes.

References

Abana, A. (2017). Press coverage of maternal health issues in selected Nigerian newspapers. MCC. 1 (1). www.unimaid.edu

Allport B.S., Johnson S., Aqil A., Labrique A.B., Nelson T., Kc A., Carabas Y., Marcell A.V. (2018) Promoting Father Involvement for Child and Family Health. *Acad. Pediatr.*18:746–753. doi: 10.1016/j.acap.2018.03.011.

Benis, A., Barkan, R., Sela, T., &Harel, N. (2020). Communication Behavior Changes Between Patients with Diabetes and Healthcare Providers Over 9 Years: Retrospective Cohort Study. *Journal of Medical Internet Research.*

Bonfadelli, H., (2022) Literacy and Trust as Influencing Factors of Health Communication Online DOI: 10.5772/intechopen.105883, https://www.intechopen.com

Boydstun, A., Glazier, R., & Phillips, C. (2013). Agenda Control in the 2008 Presidential Debates. *American Politics Research.*

Chun, J., & Cho, J. (2015). QFD Model Based on a Suitability Assessment for the Reduction of Design Changes in Unsatisfactory Quality. *Journal of Asian Architecture and Building Engineering.*

Crawford, E.C. &Okigbo, C. C. (2014). Strategic Communication Campaigns. In C.C. Okigbo (ed): *Strategic Urban Health Communication.* 11-23. DOI 10:1007/979-1-4614-9335-8_2.

Delta State Government. (2015). *Delta State Development Performance Health Sector Report:* (1991 – 2013). www.undp.org

Delta State Ministry of Health. (2013). *Governor Emmanuel EwetanUduaghan's Human Capital Development Agenda: The Critical Role of Healthcare.* 1(2).

Dong, T., Liang, C., & He, X. (2017). Social media and internet public events. *Telematics Informatics.*

Essien, C. F. & Yusuf, A. A (2016): Re-Appraisal of Media Campaign for Eradication of Ebola Virus in Nigeria. *Global Media Journal*, 14(27).

Heeneman, S., Jong, L., Dawson, L., Wilkinson, T., Ryan, A., Tait, G., Rice, N., Torre, D., Freeman, A., & Vleuten, C. (2021). Ottawa 2020 consensus statement for programmatic assessment – 1. Agreement on the principles. *Medical Teacher.*

Igbinoba, A. O., Soola, E. O., Omolaja, O., Odukoya, J., Adeleye, O. &Salau, O. P. (2020).Women's mass media exposure and maternal health awareness in Ota, Nigeria. *Cogent Social Sciences, 6*(1), 1-12.

Ivwighren, H.E., &Umukoro, E.S. (2022) Use of Public Relations For Improving Staff-Patients Relationship In Eku Baptist-Government Hospital, Delta State, Nigeria; at: https://www.researchgate.net/publication/367240371

Khoshghadam, L., Kordrostami, E., & Liu-Thompkins, Y. (2019). Experiencing nostalgia through the lens of life satisfaction. *European Journal of Marketing.*

Kodero J. (2017). An investigation of the communication channels used in promoting maternal health among women in Kawangware, Nairobi country. A research submitted for the award of Master of Science in Communication, University of Nairobi.

Lungu, G.G., Chodzaza, E., Kamanga, M., Chikazinga W. & Jere, D. (2023) Status of information, education, and communication as perceived by clients receiving antenatal care at Chiradzulu District Hospital in Malawi. *BMC Women's Health***23**, Article number: 53

Odesanya, A., Hassan, S. &Olaluwoye, D. (2015). Mass media and maternal healthcare: A critical discourse. *New Media and Mass Communication*.34, 63-71.

Ojobo, O. L., Okpako, A. E., Ivwighren, H. E., (2022) Covid-19 Pandemic Misinformation and Disinformation on Social Media: A Study of Abraka Metropolis; *Innovations*, Number 70

Okowa's Scorecard (2019). https://ngfrepository.org.ng

Olubumi, A. P., Ofurun, O. & Tob, E. (2016). Analysis of case studies in public health communication channels in Nigeria. *Research Journal of Mass Communication and Information Technology.* 2(2), 19-30.

Ponce, L., Méndez, J., & García-Peñalvo, F. (2014). Analysis of certificated mobile application for medical education purposes

Ratna, H., (2019) The Importance of Effective Communication in Healthcare Practice; HPHR Vol. 23 (FALL SUMMER 2019), pp. 1-6 (6 pages)

Rutten, L., Agunwamba, A., Greene, S., Mazor, K., Ebbert, J., Sauver, J., & Dearing, J. (2014). Enabling patient-centered communication and care through health information technology. *Journal of Communication in Healthcare*.

Sokey, P.P., Adjei, E. &Ankrah, E. (2018). Media use for health information dissemination to rural communities by Ghana Health Service. *Journal of Information Science Systems and Technology.* l2 (1), 1-18.

SAMPSON M, XU W, PRABHU S. (2022) TAILORING PERINATAL HEALTH COMMUNICATION: CENTERING THE VOICES OF MOTHERS AT RISK FOR MATERNAL MORTALITY AND MORBIDITY. INT J ENVIRON RES PUBLIC HEALTH. (1):186. DOI: 10.3390/IJERPH20010186. PMID: 36612508; PMCID: PMC9819297.

Savelyev, N. V.&Sorokoumova, G.V.(2020). Study of Peculiar Features of Russian Public Service Announcements. Internationa Academic Journal; Development of education2(8), 88-92. EDN: WSHMFX. https://doi.org/10.31483/r-75602

Sotirova, E., Bureva, V., &Sotirov, S. (2016). A Generalized Net Model for Evaluation Process Using InterCriteria Analysis Method in the University.

Sseguya, H., Mazur, R., Wells, B., &Matsiko, F. (2015). Quality of participation in community groups in Kamuli District, Uganda: implications for policy and practice. *Community Development.*

Tolou-Shams, M., Yonek, J., Galbraith, K., & Bath, E. (2019). Text Messaging to Enhance Behavioral Health Treatment Engagement Among Justice-Involved Youth: Qualitative and User Testing Study. *JMIR mHealth and uHealth.*

Wang Y, Etowa J, Ghose B , Tang S , Ji L, Huang R (2021) Association Between Mass Media Use and Maternal Healthcare Service Utilisation in Malawi Volume 14 Pages 1159 — 1167 DOI https://doi.org/10.2147/JMDH.S304078

Zamawe, C.O.F, Banda, M., Dube, A.N. (2016) The impact of a community-driven mass media campaign on the utilisation of maternal health care services in rural Malawi. *BMC Pregnancy Childbirth.* doi:10.1186/s12884-016-0816-0