

Assessment of CHAI's Communication Strategies Promoting Zinc+Lo-ORS Treatment for Childhood Diarrhoea in Kaduna

¹Fredrick Okhegwae, ²Ayodele Babatunde Joseph, (Ph.D.), ³Rasheed Olalekan Lateef, ⁴Hassan Otinau, (Lecturer),

¹Department of Mass Communication, School of Business Studies, Lighthouse Polytechnic, Evbuobanosa, Abudu, Benin City, Edo State, Nigeria.

²Department of Mass Communication, Kaduna State University, Kaduna, Nigeria.

³Department of Mass Communication, College of Social and Management Sciences, Wellspring University, Benin City, Edo State, Nigeria.

⁴Department of Mass Communication, College of Social and Management Sciences, Wellspring University, Benin City, Edo State, Nigeria.

DOI: <https://doi.org/10.5281/zenodo.7973910>

Published Date: 26-May-2023

Abstract: This research work titled: An Assessment of the Communication Strategies Used in the Implementation of Zinc and Lo – ORS as Treatment of Choice for Childhood Diarrhoea Programme by Clinton Health Access Initiative (CHAI) through an implementing partner (IP) Centre for Family Health Initiative (CFHI) in Kaduna State, Nigeria (A Study of Kaduna Metropolis: Kaduna North, South, Igabi and Chukun LGA). The study adopted three (3) theories for the research; Persuasion theory; Stages of Change (Trans – Theoretical Model) theory and Diffusion of Innovation theory. In-depth interview methodology was used and twelve (12) interview questions administered to a sample size of twelve (12) respondents which includes; Traditional/Religious leaders, Female Vanguard Group leaders, Traditional Birth Attendants (TBAs), Community mobilisers, Healthcare workers/Providers who were involve in the campaign in the study area. A purposive sampling technique was used based on specific characteristics/qualities of the selected sample, and the method of analysis used was narrative and thematic analysis approach. The study revealed that, the funders used a variety of communication strategies integrated into the existing community/traditional structure in the area of study to influence collective community action, participation, ownership and promote acceptance of the campaign. It also, discovered that the vulnerable groups can be better reached through inter – personal communication strategy with health workers at the respective facilities in their communities. The study also find out that the campaign has changed the views, beliefs and perceptions of majority of the people about the use of WHO recommended Zinc and Lo – ORS as an effective treatment of choice for Childhood diarrhoea management. In this regard, the study recommends that the government should ensure a repeat of the campaign in areas where low successes were recorded due to issues of insecurity. It also recommended that there should be systematic evaluation of all diarrhoea interventions and other similar health campaigns within the State and the entire Country so as to constantly assess the outcome or impact of such programmes across the various areas (LGA/Wards) and population.

Keywords: Childhood, Diarrhoea, Zinc, Health, Communication Strategies.

1. INTRODUCTION

Over time, disease has been a long term companion of mankind, concern for personal health and the strive to enjoy a state of well-being, free of conditions which sickness inflicts has been a natural human characteristics, indeed, concerns pertaining to healthcare is very significant because, it supports enhanced productivity; be it personal or collectively; this has made issues of health a global concern especially when it is perceived to be life threatening etc. Ternenge, (1999) in Mojaye et al., (2008) has simply posit the potency of communication across all human endeavour; especially because it will help to improve public health awareness; it has the capacity to cause behavioural change following the belief that, when communication strategies are adequately applied during an intervention, the targeted audience are persuaded to adopt something new over time.

The key focus of the mass media in any nation is primarily to inform, entertain, educate, persuade, promote, increase intention to act, encourage behaviour change, reinforce behaviour change; build citizens confidence/optimism for a rebirth. These responsibilities are geared towards national development. This is so because, the mass media can have a major health impact given how many people they can touch via the print, radio, internet, television, outdoor transit folk media, and mobile technology. Okunna, (2000) cited in Onosu, & Umolu, (2009) affirm that any government that does not take the rural dwellers into consideration in her programme is grossly inadequate. Hence the media support is germane for any intervention whether by the government or development program. The major concern of any government is based on pursuit, achievement of the realization of nation's development and interest. The media have come to occupy a prime place in the society, economic and political realms. Also, the media serve as an instrument used by those who possess and operate apparatus of power to illicit the people cooperation.

Preventive medicine is realistic and a sure way to promoting healthy living through promotion of health communication messages; sensitization, campaigns and advocacies. It can also help reduce the burden of cost or sourcing funding from international development partners(s) for preventable intervention like diarrhoea. Therefore, health communication is an essential catalyst in disease prevention and control. Arguably, health communication contributes to disease prevention and health promotion; doctor patient relations, the design of public health campaign/literatures; the dissemination of health risk through the media, with a resultant effect of the change in individual or public attitude and behaviours.

In the same vein, effective health communication can help raise awareness of the health risk and equip the target audience with the skills to mitigate this risk. For the public, health communication can influence the public agenda; advocate for policies and programmes, and promote positive change in attitude cum environment; improve the delivery of public healthcare services; change the social climate to encourage healthy behaviour and endorse beliefs, values and social norms that benefits health and quality of life in the long run. However, strategically designed media communication, pre - intervention and post- intervention of diarrhoea disease in affected states and or LGA/wards will play a significant role in taking diarrhoea programming to scale. This is because every intervention generally has a media and or communication strategy been adopted when there is a need to create or change awareness, knowledge attitude, social norms, skills cum expectations. Also, Prilutski, (2010) in Victor, (2014) states that effective health communication has the capacity to prevent infectious diseases in the developing world, due to its poor literacy level. Based on this concept Prilutski added that the best communication strategy for developing countries is that based on the idea of integration with the community.

According to the national demographic health survey (NDHS 2013), 1 in every 15 Nigerian children die before reaching age 1 and 1 in every 8 do not survive to their fifth birthday. Nigeria is one of the 7 WHO countries with under five mortality rate about 100 deaths per 1000 live births. The North West zone of the country has the highest under -five mortality rate with 15 deaths per 100 live births. Even though there had been 31% decline in less than 5 mortality rate between 2008 cum 2013, the country was unable to achieve the MDG target of 64 deaths per 1000 live births. It is estimated that children in Africa and the developing world suffer, more than 1 billion episodes of diarrhoea each year. About 0 to 70% is acute cases; characterized by watery stools often accompanied by vomiting and fever. In some cases, the loss of fluids and imbalance in essential chemicals is so severe that the child dies in a matter of hours (USAID, 1990) in Imoh, (2013).

Diarrhoeas diseases are amongst the most frequent childhood illness and the third largest single cause of childhood deaths in Nigeria despite the existence of simple, effective treatment with the potentials to over nearly 90% of these deaths. This is largely due to poor access to portable drinking water, poor sanitation practices, thereby resulting in contaminated food and water sources (NDHS, 2013). Globally, there are nearly 1.7 billion cases of diarrhoea diseases every year, which result

in 760,000 deaths of children under-five. national demographical health survey (NDHS,2003) revealed that only 10% of children suffering from diarrhoea diseases received increase fluid, 35% were given antibiotics drugs, while 21% received no treatment between 2009and 2013. The result also shows that slightly higher than 2% of diarrhoea cases in children was treated with Zinc supplementation.

According to the FMOH/ NPHCDA- Essential Childhood Medicine Scale - up Plan (2012- 2015 pp41), “nearly 600,000 children under the age of 5 die annually in Nigeria due to pneumonia, diarrhoea and malaria which together represents 55% of Nigeria under 5 mortality. While Nigeria has made promising reductions in child mortality in the past decade these gains must be accelerated to reach the fourth millennium development goal of cutting child mortality by two third between 1990 and 2015. Specifically, Nigeria must increase the annual rate of reduction in child mortality from 2% per year to 13% per year in order to achieve its goal of 71% per 1000 live births by 2015.” This rapid progress will only be possible through ambitious, concredited actions that address the drivers of child mortality in diarrhoea, malaria, and pneumonia. All of these statistics are not mere figures but, Nigerians; the supposedly future and said leaders of the next generation being technically wiped off by a preventable disease due to poor management of common childhood illness like diarrhoea in Nigeria.

Meanwhile, Gloria, O. (2013 pp6) says that nearly 420,000 children under the age of 5 die annually in Nigeria due to pneumonia, diarrhoea and malaria which together represent 48% of Nigeria under 5 mortality. For all these conditions, effective treatment exist that could prevent that majority of the remaining deaths. Similarly, the majority of caregivers seek treatment outside the home; only 25% of children with diarrhoea receive oral rehydration salt (ORS) and less than 1% receives Zinc; the two recommended treatments. World health organization and UNICEF have released revised recommendations aimed drastically at reducing the number of deaths due to diarrhoea. These new recommendations take into account two significant recent advances – demonstration of the increased efficacy of as new formulation for ORS containing lower concentration of glucose and salt and Zinc supplementation for reducing the severity and duration of diarrhoea, as well as the reducing of the incidence of diarrhoea in the subsequence 2-3 months after the initial episode of diarrhoea. Zinc is a micro nutrient that is essential for a child health and development. Deaths associated with diarrhoea in Nigeria, is estimated at 150,000 yearly, mainly amongst children under 5 due to unsafe water, poor sanitation cum hygiene practice. According to UNICEF, this loss “is equivalent to the number of people lost by a bi passenger aircraft crashing every day.” Similarly, the diarrhoea prevalence in Nigeria is 18.8% and is one of the worst in sub Saharan African and above the average of 16% as stated by UNICEF in SHOPS Nigeria training manual for health workers on the management of diarrhoea in children (July, 2013).

Statement of The Problem

Mothers in rural areas use a sophisticated classification scheme for treatment, which is almost always inconsistent with the biomedical model of diarrhoea. They often set aside ORS and give home traditional remedies, enemas, and herbal portions that are considered more efficacious. Similarly, when the child does not get better, they go to the clinic. Once the mother believes in the traditional approach to treatment, ORS is non-committal. Therefore, addressing the misconceptions and traditional beliefs about diarrhoea management is critical to reducing the incidence of childhood diarrhoea in Africa. With this this research see the need to identify and address the factors that contribute to the high incidence of childhood diarrhoea in Africa especially in Nigeria using Kaduna as a study of research. This research therefore adopts four objectives to carry out this. Diarrhoea remains one of the major childhood killer diseases in Africa. Nigeria is one of the most affected countries as it stands today. Despite interventions to reduce the incidence of the disease, the effectiveness of program interventions in Nigeria and Africa as a whole has been constrained by a range of deficiencies, some of which lie within the community and child caretakers, while others lie within health workers and the health system. As a result, the disease remains a reoccurring decimal, and its impact on children's health and well-being is devastating. Also Mothers' unhealthy behaviour is another area of concern, as only one out of three children with diarrhoea are taken to the clinic for treatment. There is a need to understand what triggers mothers to start seeking help when their children have diarrhoea. In rural areas, mothers use a sophisticated classification scheme for treatment study and they are:

- To examine the major communication strategies employed in the demand creation intervention programme on the use of Zinc/Lo - ORS as treatment of choice for childhood diarrhoea management.
- To ascertain the extent of the application of the respective communication strategies in the intervention.

- To determine the level of source confidence among the vulnerable group.
- To find out how the campaign has been useful in changing attitude towards diarrhoea prevention among the vulnerable population.

2. LITERATURE REVIEW AND CONCEPTUAL EXPLANATIONS

Diarrhoea Control in Nigeria at a Glance

According to a UNICEF report in 2015, efforts to improve access to appropriate diarrhoea treatment in Nigeria have been minimal despite the incorporation of Zinc and lo-ORS in the national treatment guidelines as recommended by WHO/UNICEF. However, a UNICEF-led operation research study was conducted in 12 states to assess the effectiveness of improving community awareness and public sector supply as an intervention to increase the uptake of Zinc and Lo-ORS. This phase of activity has since ended, but a second operations research was implemented in four southern states in 2012, which led to a massive drive for the use of Zinc and Lo-ORS in different states, mobilizing target beneficiaries towards project goals and objectives.

According to Imoh (2013), a national control of diarrhoea disease (CDD) program has been put in place in many African countries, including Nigeria, with four main strategies. The first strategy is the empowerment of mothers/caretakers with knowledge, skills, and attitude to take preventive measures against diarrhoea. The second strategy is building capacities for health workers to enable them to provide correct case management for children with diarrhoea. The third strategy is to ensure that children with diarrhoea have access to ORS sachets and receive proper feeding and home-based fluids during the diarrhoea episode. The fourth strategy is the establishment of ORT carriers in all health facilities. To achieve these strategies, information and educational materials were developed and distributed to mothers at the health facility level, while health workers were trained on how to prevent and treat diarrhoea in children based on the CDD policy guidelines.

Diarrhoea diagnosis in Nigeria is typically done systematically by public and private primary healthcare providers and retailers based on the characteristics and frequency of the child stools. The nationally recommended treatment for diarrhoea is ORS and Zinc supplement. However, the coverage rates for ORS and Zinc are low, with only 25% of caregivers using ORS to treat diarrhoea and less than 1% using Zinc tablet. Caregivers treat diarrhoea by either using antibiotics, giving home remedies, or with no treatment at all. Private sector retailers serve as a major outlet for treatment, with 29% of caregivers seeking treatment from these pharmaceutical retailers. However, 36% of caregivers also access treatment in the home, presumably due to cultural or community preferences for alternative therapies, perceptions of disease that underestimate the danger of certain types of diarrhoea, or concerns about the affordability of treatment (USAID, 2011) cited in Essential Childhood Medicines Scale-up Plan (2015).

Effect of Diarrhoea

Diarrhoea disease is a major cause of childhood illness and death in Nigeria, despite the existence of simple, effective treatment that can prevent nearly 90% of deaths. Poor access to portable drinking water and poor sanitation practices lead to contaminated food and water sources. Globally, there are nearly 1.7 billion cases of diarrhoea disease every year, resulting in 760,000 deaths of children under five. The National Demographic and Health Survey (NDHS) in 2013 showed that only slightly over 2% of diarrhoea cases in children were treated with zinc and Low Osmolarity ORS Supplementation.

The under-five mortality rate in Nigeria is above 100 deaths per 1000 live births, and one in every 15 Nigerian children dies before reaching age one, while one in every eight does not survive to their fifth birthday. The North West zone has the highest under-five mortality rate with 185 deaths per 1000 live births. Even though there was a 31% decline in under-five mortality rates between 2008 and 2013, the country was unable to achieve the MDG target of 64 deaths per 1000 lives. Federal Ministry of Health (FMoH) and National Primary Healthcare Development Agency (NPHCDA) - Essential Childhood Medicines Scale up Plan, (2012-2015 pp 7 - 8) showed that nearly 600,000 under-five children die every year in Nigeria from diarrhoea, pneumonia, and malaria, representing 55% of the more than one million under-five children who die annually in Nigeria. These three diseases represent the most significant opportunities for preventing the needless deaths of Nigerian children.

To Alex (2004) in Mojaje, et al., (2008) The Federal Government of Nigeria (FGN) initiated the campaigns against diarrhoea disease (CDD) in the late 1970s with the objective of providing Oral Rehydration Salt (ORS) to prevent dehydration and

its consequences (WHO, 1984). Experiments have shown that the Oral Rehydration Therapy (ORT) can prevent 90-95% of death from dehydration because it helps to prevent water loss (Bwibo, 1989). Preventing diarrhoea is a priority for the Federal and State Governments, as well as health workers who see every day the threat it poses to children's health and the distress it causes families. The use of a National Action Campaign for Child Health, incorporating mass media messaging and health diplomacy through national and community opinion leaders to address caregivers' perceptions and preferences, can dramatically increase immediate care-seeking behaviour in the short term. In the long term, it will lead to increased treatment coverage for all three diseases, improve the competitiveness of private sector markets, and lead to a downward pressure on the price of providing increased incentives for expanded distribution.

Diarrhoea has a significant impact on economic growth indices, contributing to lower economic growth through a decrease in human capital, higher health spending, exacerbated dehydration and loss of electrolytes, which can be further complicated by malnutrition, leading to reduced resistance to infection.

Communication in Diarrhoea Control

Communication plays a critical role in public health interventions such as the prevention and management of diarrhoea. Through advocacy, marketing, and mobilization, communication can help individuals and organizations take diarrhoea seriously, leading to preventive actions and appropriate treatment. Effective communication is essential for generating political will and resources to tackle the debilitating effects of the disease (WHO, 2002). As such, communication should be viewed as a vital tool in diarrhoea programming, contributing to achieving prevention, treatment, and management goals in a variety of ways. A first step in communication planning is to analyse and select priority challenges, which vary depending on the specific intervention, population, and context Nwosu, (2008). To maximize impact, strategic communication strategies should be developed and correctly applied to health communication sector development in Nigeria.

Lettenmaier, (2003), notes that Communication is no longer an isolated intervention, but rather an integral part of a comprehensive approach to diarrhoea interventions. A well-designed communication piece can help scale up prevention, management, and control efforts at the individual/household, community, and health delivery levels. Communication strategies should not be treated as an afterthought or add-on but should be integrated from the start into development strategies for any health intervention, such as diarrhoea programs. Additionally, communication strategies should not be allocated insufficient resources or implemented with untrained personnel. Communication has become a vital strategic component of health programs, representing not only the positive part of most preventive health programs but also the strategic themes to enhance the significance of health programs policy makers and the public alike Piotrow, et al., (2003) in Victor, (2014).

In Nigeria, the diarrhoea communication methodology follows the principles of communication for development (C4D), which articulates the roles of mass media in obtaining expected results. According to FMOH and NMCP (2010:8) cited in Victor, (2014), the media, especially radio and television, have been successfully used in several countries to bring regular messages on oral rehydration therapy (ORT), breastfeeding, and advocate for policy support for CDD programs. Reducing infant mortality resulting from diarrhoea relies on well-informed parents, as diarrhoea disease is preventable. Using multiple channels of communication, such as advocacy, interpersonal communication, community mobilization, behaviour change communication, entertainment education, and mass media, is effective in promoting attitudinal change suited to individual levels.

Advocacy is essential for leadership direction and influencing policy, while community mobilization strengthens dialogue among community members. Behaviour change communication is a research-based process that addresses knowledge, attitude, and practices, promoting behavioural change among families and communities. Interpersonal communication is designed to promote behavioural change among families and communities. Entertainment education is a communication strategy that first captures the attention of the masses by entertaining them and then educates them in a manner that is easily understood. Mass media, outdoor media, and folk media are significant in raising mass awareness and promoting critical behavioural change. These forms of communication form the ideals of communication for development, which brings about anticipated social change through theory-based interactions designed based on research to bring about and sustain the anticipated change post-intervention.

Health Communication Strategies

Amuseghan, Ayenibara, & Orimogunje, (2010) cited in Victor, (2014), Nigerians require a systematic health communication strategy to sensitize and re-orientate them towards discarding their counter-productive age-long beliefs. This strategy should aim at ensuring that targeted audiences move with the tide of time towards healthier behaviours. Communication has been a tested and trusted process that has the capacity to promote changes in knowledge, such as safe contraceptive use, fertility control, and new health behaviour. Effective communication can also address health issues by targeting individuals and considering broad social and environmental factors for change.

Health communication employs various strategies that aim to promote better health outcomes. These approaches or methods are crucial in promoting effective communication in the field of healthcare. The use of health communication strategies can help in reducing the prevalence of diseases and the promotion of healthy living. The effectiveness of these strategies is often influenced by the ability of individuals to understand the health messages communicated to them. Some of the strategies used in health communication include the use of traditional media, such as television and radio, social media, community mobilization, and interpersonal communication.

The use of traditional media remains a popular health communication strategy. Television and radio have been effective in disseminating health information to a broad audience. Social media has emerged as a significant health communication strategy, especially among younger generations. Community mobilization has also proven effective in mobilizing people to take action to prevent diseases and adopt healthy behaviours. Interpersonal communication is another important strategy that has been shown to be effective in changing behaviours, particularly when delivered by trained healthcare professionals. Therefore, the use of different strategies in health communication is critical to the success of health promotion and disease prevention efforts. Therefore, some of these approaches or methods (strategies) currently used in the field of health communication are as follows:

- **Advocacy**

The African decade of persons with disabilities (2006) defines advocacy as a set of targeted actions in support of a cause or issue with the aim of building support for it or influencing others to support it. Advocacy campaigns can have multiple aims and purposes, such as sensitizing the public or decision-makers on special issues, persuading or influencing decision-makers in a particular direction, providing a solution to a problem that affects the target beneficiaries, or defending a right or benefit. To be effective, an advocacy strategy should address essential questions like the level of knowledge of a particular vulnerable group or population about the issue, the ramifications of the problem, and how each of these impacts directly on each participant of the vulnerable or target population. According to UNICEF (2005), the purpose of advocacy is to effect changes in policies, systems, and attitudes that will positively impact vulnerable groups and populations. An effective advocacy strategy is based on a thorough understanding of the issue or problem, the target beneficiaries or population, and the environment in which the problem exists. It is essential to identify the key stakeholders who can influence the issue or problem and build partnerships and networks to support the advocacy campaign. Advocacy strategies should also incorporate the use of various communication channels, including social media, to reach a broader audience and build public awareness and support for the cause or issue.

An effective advocacy strategy must also be based on a thorough analysis of the political, social, and economic factors that influence the issue or problem. This analysis should include an understanding of the power dynamics that exist between different stakeholders, the existing policies and systems that govern the issue or problem, and the broader social and economic contexts in which the issue or problem exists. The ultimate goal of an advocacy strategy is to bring about systemic changes that will positively impact the target beneficiaries or population. To achieve this, advocates need to work strategically, building alliances with like-minded organizations and individuals, and engaging in sustained advocacy efforts that focus on long-term change.

- **Community Mobilization**

The importance of community mobilization in the implementation of development programs in Africa, particularly in addressing the issue of childhood diarrhoea, which remains a major cause of death. The process involves bringing together various stakeholders and allies in a participatory manner to determine the felt need, raise awareness, and demand for a particular development objective (Pact-Tanzania, 2005) in Victor, (2014). The goal is to increase community participation and ownership, thereby strengthening self-reliance and sustainability of achievements UNICEF, (2012).

According to UNICEF (2005), social mobilization is a process that involves enlisting the participation of different actors, including groups, institutions, networks, and communities, in identifying and managing resources towards achieving development objectives. It is a key indicator in numerous communication efforts worldwide and has been integrated with other communication approaches to maximize positive impact on policy makers and participation by all coalition members while minimizing responses from the opposition.

The demand creation program for the use of Zinc + Lo - ORS as a treatment of choice for childhood diarrhoea management by Clinton Health Access Initiative (CHAI) in Kaduna state, Nigeria, utilized community mobilization, particularly the use of key influencers such as traditional and religious leaders, women vanguard groups, healthcare workers, and community stakeholders, to drive sustainability plans and act as champions of change during and after the campaigns. This highlights the importance of community participation and ownership in the success of development programs, particularly in addressing the issue of childhood diarrhoea in Africa.

- **Behavioural Change Communication**

According to UNICEF (2005), behaviour change communication (BCC) is a process that involves addressing knowledge, attitudes, and practices through identifying, analysing, and segmenting audiences and participants' programs by providing them with relevant information and motivation through well-defined strategies. BCC is an examination-based advice-giving process that uses a mix of interpretational, group, and media channels, including hands-on methods. The primary purpose of BCC is to increase awareness, stimulate the exchange of ideas, encourage attitudinal change, reduce shame and perception, generate a mandate for information and services advocacy, advocacy, support services for stoppage, care and support, and develop skills and self-efficiency. This methodology was popularized by the Family Health International (FHI) as a means through which people could be convinced on the appropriate behaviour to exhibit in the face of the challenges posed by the lack of cure for HIV/AIDS.

The arrival of the HIV/AIDS pandemic made it essential to make concerted efforts to pass appropriate behavioural change messages to people. According to Adeyanju, (2008), this further emphasizes that the development of the BCC methodology was essential. The BCC methodology was developed by the Family Health International (FHI) as a means through which people could be convinced to exhibit appropriate behaviour in the face of the challenges posed by the lack of cure for HIV/AIDS. The BCC approach aims to create an enabling environment for change through communication strategies that address knowledge, attitudes, and behaviours. It is a systematic process that involves identifying, analysing, and segmenting audiences and participants' programs by providing them with relevant information and motivation through well-defined strategies.

BCC methodology has been developed to perform some basic roles, according to Adeyanju, (2008). These roles include increasing awareness, stimulating the exchange of ideas, encouraging indispensable attitudinal change, reducing shame and perception, generating a mandate for information and services advocacy, advocacy, supporting services for stoppage, care and support, and developing skills and self-efficiency. The BCC approach is a critical element in achieving behaviour change and creating an enabling environment for change through communication strategies that address knowledge, attitudes, and behaviours. The BCC methodology is an effective tool for behaviour change communication, and its principles can be applied to different areas, including health, agriculture, and education.

- **Interpersonal Communication**

Several approaches have been used to increase knowledge about childhood diarrhoea prevention in low-income countries. One such approach is the use of Zinc and Low Osmolarity Oral Rehydration Solution (Lo-ORS) in treating the disease. Zinc has been found to significantly reduce the duration and severity of diarrhoea and can prevent future episodes. Lo-ORS, on the other hand, is an effective and low-cost solution for treating diarrhoea, reducing the need for hospitalization and improving child survival. Together, Zinc and Lo-ORS are a potent combination in the management of childhood diarrhoea in low-income countries.

Another approach to childhood diarrhoea prevention is exclusive breastfeeding. Breast milk is the best source of nutrition for infants and helps protect them from infections, including diarrhoea. The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months of life and continued breastfeeding up to two years and beyond. Promoting exclusive breastfeeding can significantly reduce the incidence of childhood diarrhoea and improve child health outcomes.

In addition to Zinc/Lo-ORS and exclusive breastfeeding, promoting the use of boiled or treated water, hygiene, and sterility is crucial in preventing childhood diarrhoea. Boiling or treating water can help eliminate harmful pathogens that cause diarrhoea, while good hygiene practices, such as hand washing and proper sanitation, can help prevent the spread of the disease. Promoting sterility can also reduce the risk of infection, particularly in healthcare settings. By increasing knowledge about these preventative measures and stimulating behavioural change among families and communities, the incidence of childhood diarrhoea can be reduced, and child health and survival improved.

- **Entertainment Education**

A strategy that can help in disseminating messages related to Zinc/Lo - ORS, exclusive breastfeeding, use of boiled/treated rainwater, hygiene and sterility. The strategy suggests that the messages should be propagated through means that are informative, pleasurable, and popular within the community. To achieve this, the use of role-play and community drama is effective methods for communicating health-related messages to the public. The idea is to make the format of the messages locally popular, so that they can be easily understood and accepted by the target audience. By using these methods, the messages can be delivered in a way that is both engaging and informative, making them more likely to be retained by the audience.

The use of locally popular formats for conveying health messages has been shown to be effective in many settings. For example, a study conducted in Bangladesh found that using folk songs to promote maternal and child health practices led to improved health knowledge and practices among the participants. Similarly, a study conducted in India found that using puppet shows to promote hand washing improved hand hygiene practices among the participants. Therefore, by using locally popular formats like role-play and community drama, the proposed strategy can effectively communicate health messages to the target audience and improve their knowledge and practices.

Mass Media, Outdoor Media and Folk Media

The above strategy will be suitable to raise mass consciousness, bring the issue into the public and also help encourage critical behaviour and programme gen. simultaneously; it would also provide support and reliability to interpersonal and community deployment efforts.

THEORETICAL FRAMEWORK

This section attempts to review the relevant theories which could serve as a basis for the accomplishment of this study, and they include the following:

- **Persuasion Theory**

Persuasion can be well-defined as the process whereby an attempt is made to induce change in attitudes and behaviour through the involvement of person cognitive and affective processes Brady, (1984) in Folarin, (2002). Early development of persuasion theory claim that success hinges on three key fundamentals; Hovland et al., (1953) cited in Victor, (2014) which are (i) The believability of the speaker (source), (ii) The articulateness of the argument (the message); and (iii) The receptiveness of the audience (the audience). The ideal assumes that the disclosure to information leads to a change in attitude which in turn leads to a change in behaviour. Many past and recent public information movements are based on this 'information-deficit-model' whereas the underlying assumption is that people do not have enough or the right information. Consequently, if people are provided with detailed information to a special target audience, it will enable them to change their behaviour or make the right or reasonable decisions moving forward. While, it sounds believable, empirical evidence fails to support this hypothesis and significant limitations of linear model been recognized McKenzie-Mohr, (2000); Petty et al., (2002). On the contrary, evidence suggests that learning (i.e. change in behaviour) can occur without any change in attitudes, and that attitudes (and behaviour) change can occur without any assimilation of the persuasion messages Prager, (2012). Despite the limitations of this theory, the importance of the key elements still appears in behaviour.

- **Stages of Change (Trans - Theoretical Model) Theory**

Seasoned psychologist established the stages of change theory in 1982 to compare smokers in therapy and self-changers along a behaviour change processes. The motivation behind 'staging' people, as such was to tailor therapy to a people's needs at his or her particular point in the change process; Prochaska, Diclements and Norcross, (1992). As a result, the four

original components of the stages of change theory (SCT) (Pre - contemplation, Contemplation and Maintenance) were identified and presented as a linear process of change. Since then, a fifth stage (Preparation for action) has been incorporated into the theory, as well as ten processes that help predict and motivate individual movement across stages. In accumulation, the stages are no longer considered to be linear; rather, they are component of a cyclical process that varies on each individual Prochaska, et al (1992).

As further elaborated by Prochaska, Johnson and Lee (1998), the pre contemplation, is the stage in which people are not intending to make change in the near future (next 6 months). Contemplation is the stage where people intend to change (within the next 6 months) people in this stage are aware of the pros of changing but also can identify the cons. Preparation is the stage where people have a plan of action and intend to take action in the immediate future (within a month).

Action is the stage in which people make the behaviour change and maintenance represent the stage where people work to prevent relapse. Lastly, termination represents that stage where individual have 100% efficacy, and will maintain their behaviour. This stage is most difficult to maintain so many people remain a lifetime in maintenance. "The stages of change model have been applied to variety of individual behaviour; as well as to organization change. The model is circular, not linear. In other words, people do not systematically progress from one stage to the next, ultimately graduating from the behaviour change paradigm. Instead, they may enter the change paradigm at any stage; relapse to an earlier stage, and begin the process once more. They may cycle through this process repeatedly, and the process can truncate at any point (National Cancer Institute" NCI, (2005).

• Diffusion of Innovation Theory

This theory was proposed by B. Ryan and N. Gross; Everett Roger, (1960). The diffusion of innovation theory discourses how ideas, products and social practices that are perceived as "new" spread throughout a society or from one society to another. According to Rogers, (1995) diffusion of innovation is "the process by which an innovation is interconnected through certain channels over time among the members of a societal system." Diffusion of innovation theory has been used to study the adoption of a wide range of health behavior and programmes, including condom use, smoking cessation and use of new tests and technology by health practitioners NCI, (2005). According to Anaeto, Onabajo and Osifeso, (2008) the under listed constitute assumptions of the theory; Diffusion study centres on the conditions which increases the likelihood that a new idea, product or practice will be adopted by members of a given culture.

Diffusion of innovation theory predicts that media as well as inter-personal contact provide information and influence opinion and judgment. Opinion leaders wield influence of audience behaviour via their personal contact, but additional intermediaries (called change agents and gate keepers) are also included in end process of diffusion.

Thus, operational diffusion requires practitioners to use both informal and formal communication networks and spectrum of strategies for different sets. Publicizing an innovation in a variety of ways increases the likelihood that it will be adopted and institutionalized. Communication usually should include both mass media and inter-personal interaction. Through the two - step - flow of communication; information from the media moves in two stages. First, opinion leaders, who pay close attention to the media, receive the information. Second, they convey their own interpretations, as well as the media content to others. This process affirms the value of social networks for influencing adoption decision NCI, (2005).

Anaeto, et al., (2008), opine that many discoveries undergo radical changes from their original intentions, under local control. At the local level, individuals need to have power to influence how the discovery is used in the sphere of interest. More so, Daramola, (2003) concludes that, the diffusion of innovation theory is a theory which seeks to disseminate information about new discoveries to the masses of a social set - up. According to him, certain factors such; as lack of mass media; lack of access to the media systems, the code (language) of the media, hinders the effectiveness of the role of the media in diffusion of innovation process.

3. METHODOLOGY

This study used in-depth interviews to gather information from key influencers who were involved in the communication strategies used during the implementation of Zinc + Lo-ORS programme from 2015-2016 in Kaduna Metropolis. In-depth interviews were chosen as the method of data collection because they provide more accurate responses on sensitive issues and are suitable for qualitative research. The study was conducted in Kaduna Metropolitan area, a culturally diverse city in

northern Nigeria with a high prevalence of communicable diseases, including diarrhoea, which is a leading cause of under-five mortality. A total of 12 respondents who are Traditional/Religious leaders, Female Vanguard Group leaders (MWA, CAN, FORMWAN, IMWAN, NCWS, NISSA'U SUNNA, VCMs), Voluntary Community Mobilisers, Traditional Birth Attendants (TBAs) cum Healthcare workers/Providers (HCWs/HCPs) and were involved in the Zn/Lo-ORS intervention within the period under review were interviewed across the four LGAs in Kaduna metropolis using purposive sampling technique. Narrative and thematic analysis were used to present and analyse qualitative data generated from the respondents.

4. DATA ANALYSIS AND INTERPRETATION

Presentation of Qualitative Data

Narrative and thematic analysis approaches were used to present and analyse qualitative data generated from respondents through the in – depth interviews conducted. Below are the presentations of qualitative data “*thematic analysis approach*” according to how the project was executed (phases of activities) from the pre - implementation to close-out.

1. The demand creation campaign on the use of Zinc/Lo – ORS Implemented in Kaduna State in 2015, 2016 and Scale – up in 2017

Prior to the demand creation programme on the use of Zinc and Lo – ORS implementation in Kaduna State (2015, 2016 and early 2017), relevant stakeholders were consulted and meeting held including community structures (key influencers) as it pertains the intervention for their buy – in, and to also mobilise the target beneficiaries for the various health talks session which held across the 23 LGAs, reaching the 255 political wards in Kaduna State with diarrhoea messaging.

2. Stakeholders Involvement in the Implementation of Zn/Lo – ORS in Kaduna

According to the programme design, there were various stakeholders involved in the implementation of the demand creation Zn/Lo – ORS programme in Kaduna State. Apart from the State Government, the State Ministry of Health and the Kaduna State Primary Health Care Development Agency were also involved in the planning and implementation of the campaign. The Ministry of Women Affairs was involved because women and children under age five are the vulnerable groups most affected by diarrhea disease. The Ministry of Chieftaincy Affairs was drafted in to access traditional rulers at every stage of the campaign due to their peculiarity and influence in their various LGAs cum wards. The Ministry of Environment was involved because of its role regarding sanitation exercise in the state. Also, community leaders, opinion leaders, women and youth leaders, female vanguard groups, religious and traditional leaders were also involved at every stage of the campaign and during the community forums held. One of the respondents attests to this saying:

*“We used traditional, religious, opinion leaders, youth leaders,
Female vanguard groups....we pass the information to the people
In churches, mosque female vanguard group meetings and during
Islamiya Schools (Healthcare worker)”*

3. Difficulties Encountered at the Level of Implementation of Zinc + Lo – ORS programme in Kaduna

The difficulties Encountered in the four local government areas making up the study areas of this research are similar. In Kaduna North LGA, for instance, the interviewees noted that the community forums and health talks session venues were too crowded, which could be due to under estimation of the number of participants earmarked per session. The experience was also similar in Kaduna South LGA where more than the number proposed for each session was witnessed as a lot of the women came to be part of the health talk session and were also reached with Zinc and ORS messaging. The challenges were also not different from the aforementioned LGAs. The effect of the large turnout was that, the refreshment could not circulate very well among the participants.

1. The Major Communication Strategies Employed in the Design and Implementation of Zinc + Lo – ORS Demand Creation programme in Kaduna State

There were legions of communication strategies employed at the different levels or stages of the implementation of the Zinc + Lo – ORS Demand Creation programme in the study area of this research, according to the in-depth interviews conducted. These others include:

Advocacy

According to UNICEF, (2005) in Victor, O. B., (2011), advocacy is “a continuous and adaptive process of gathering, organizing and formulating information into argument, to be communicated to decision – makers through various interpersonal and media channels, with a view to influence their decision towards raising resources or political and social leadership acceptance and commitment for a development programme, thereby preparing a society for its acceptance.”

Advocacy was mainly used at the pre – implementation stage to promote engagement of the people in the campaign. Advocacy here, took the form of a community visits, meetings and writing of letters to key stakeholders such as: religious leaders (pastors and Imams), traditional rulers, district heads, community leaders, opinion leaders, women and youth leaders and female vanguard group leaders and a host of other influential persons and or groups in the community. This was in order to sell the programme to them, thereby convincing them to mobilise their subjects, followers or subordinates to participate in the Zinc and Lo – ORS messaging/campaign. Also, the logistics partners in the project; Centre for Family Health Initiative (CFHI), were fully on ground during the advocacy meetings to key stakeholders in every LGA/wards.

Social Mobilisation

Social mobilization is the processes of bringing together all feasible and practical inter – sectorial social partners and allies to determine felt – need and raise awareness of, and demand for a particular development objective. It involves enlisting the participation of such actors, including institutions, groups, networks and communities, in identifying, raising and managing human and material resources, thereby increasing and strengthening self – reliance and sustainability of achievements; UNICEF, (2005). This message strategy was used in one dimension – community mobilization. Community mobilization describes interaction with the community before and during and after the campaign. It took the form of community forum for stakeholders and then health talks Sessions for the programme beneficiaries. Before the campaign, community mobilisation strategies were identified and priority was given to the most appropriate, feasible and cost effective channels. These include existing social channels and network such as gatherings at religious centres, Islamiyah schools, female vanguard group meetings and traditional council meetings/palace etc. This also buttresses the fact that community mobilization used current social and personal networks to influence collective public action and encouraged participation and promote acceptance of the intervention.

5. Information, Education and Communication (IEC) Materials

At the implementation stage, there were popular use of Information, Education and Communication (IECs) materials such as flip charts, leaflets, T – Shirts and Hijabs to create awareness at the different community and health talk’s session per LGA/Wards. A lot of large flip charts and leaflets were printed with pictures etc. *Different sections showing how diarrhoea is contracted, how it can be prevented. You can also see how to prepare ORS solution for your child and the treatment of choice that is recommended by WHO for the treatment of diarrhoea (Healthcare Officer).*

Other strategies used before and during the campaign include role plays and demonstrations to provide entertainment education for the participants on the preparation, prevention and management of diarrhea disease and the application of Zinc sulfate/tablet, according to healthcare facilitator in Chikun and Igabi LGAs. Above all, the team lead of CFHI, the logistics partner for CHAI agreed that there was collaboration between the Private Patent Medicine Vendors (PPMVs) in the various LGAs/Wards, and drug manufacturing companies to help in the subsidization of the cost of Zinc and Lo – ORS co pack for easy affordability.

Finally, comments from the majority of the respondents across the study area confirmed that the communication strategies used for creating demand during the campaign were suitable and has the capacity to sink deeper into the community owing to the fact that some of the hard to reach and security risk areas had been reached with diarrhoea messaging by simply involving the community actors/ key influencers who resides with the people and speak their language. Also, that some LGAs don’t have access to Radio signals from Kaduna, except from BBC, VON and from other neighbouring State to listen to news. This also was adequately defined and prevented, hence the need to use community structures which is more effective in this kind of intervention.

6. Levels of Employment of the Major Communication Strategies Applied in Executing the Zinc + Lo – ORS Demand Creation programme in Kaduna State

The interviewees generally noted that, the stakeholders involved in the Zn+Lo – ORS programme in Kaduna State used the aforementioned communication strategies to a large extent before, during and after campaign. In addition, one of the

facilitators in the state noted that the communication strategies discussed earlier were elaborately used to reach even the urban slums, highly risk and hard-to-reach LGAs/wards because the interest and participation of the people was very high, which signifies the acceptance of the programme by the people as theirs, hence the continuous cascading in the various places of worship (churches and mosques), and female vanguard group's meeting/association including Primary Healthcare Centres (PHCs). Another key influencer in Kaduna South LGA agreed that the communication strategies were used to an appreciable extent because, the language of the people was, according to her employed by the facilitators (HCPs) during the campaigns and health talk sessions to reach them (participants) with diarrhoea messaging.

7. Outcome of the Communication Strategies Applied in Executing the Zinc + Lo – ORS Demand Creation programme in Kaduna State

According to Rabiun Abdulkadir (SMO/HCP Birnin Gwari LGA), the communication strategies used before, during and after the Zn+Lo – ORS campaign had positive results because the people understood and accepted the diarrhoea messaging brought to them. Other respondents across the study area agreed that the campaign was very successful because of the communication strategies used to execute the campaign. They also confirmed that there is reduction in diarrhoea disease outbreak/spread incidence in the state going by the available reports from different Primary Health Centres (PHCs) within Kaduna Metropolis. *The ideals of the campaign has some worth been achieved because the rate of sick patient due to diarrhoea has been low at the health facilities after the campaign (SMO Ikara LGA).*

In summary, the interviewees from the sampled four (4) Local Government Areas attested to the effectiveness of the communication strategies (community influencers) adopted and the overall success of the campaign. The evidence of these claims was, according to them, observed during and after the campaign. For instance, there has been on – going cascading sessions going on amongst the different female vanguard groups, religious and traditional institutions and Islamiyah schools (key influencers). All of which are social change agents.

5. DISCUSSION OF FINDINGS

The discussion of findings “*narrative*” is guided by the research questions based on the data collected from the in – depth interviews conducted.

RQ 1: What are the major communication strategies employed in the demand creation intervention on the use of Zinc/Lo - ORS programme?

The findings of this research indicated that different communication strategies were employed by Clinton Health Assess Initiative (CHAI), its logistics partner; Centre for Family Health Initiative (CFHI) and other key influencer/stakeholders before, during and after the implementation of the Zinc and Lo – ORS campaign in Kaduna Metropolis. For instance, the healthcare workers/facilitators from the four LGAs consisted in the study area stated that advocacy was the predominant communication strategy used during the pre – implementation stage to promote engagement of the people in the campaign. Advocacy here took the form of community LGA visits to PHC directors, meetings and writing of letters to key stakeholders such as: traditional rulers, community leaders, opinion leaders, youth and women leaders, religious leaders (pastors and Imams) and a host of other influential persons or group in the community. This agrees with the findings of Bingham et al. (2012) which showed that a communication methodology should also take into account the influential role played by traditional leaders and involve them as key communicators on issues related to diarrhoea messaging; prevention, treatment and management.

Consequently, advocacy can be said to be effective within the context of the geo – culture or the traditional communication pattern in Kaduna. The communication strategies at the community level that is, the traditional rulers, churches and mosques were very suitable to the people more than the mass media, as most of the households do not have time to listen to radio or even to watch television. So, they may not have the opportunity to hear whatever is said through the media. These communication strategies can be said to be effective within the context of the traditional communication patterns in Kaduna because it was integrated into the existing social channels and networks in Kaduna, to influence shared community action and encourage involvement in the campaign.

RQ 2: What was the extent of the application of the respective communication strategies in the intervention?

Investigations shows that the stakeholders involved in the Zinc and Lo – ORS campaign in Kaduna State used the aforementioned communication strategies to a very large extent before, during and after the campaign. This helped to promote the participation of the people and accounted for the mass turnout witnessed at the various community forums and

health talk sessions during the campaign, according to the interviewees. This also confirms the submission of Lettenmaier, (2003) which posit that message needs to be fully integrated into the broad scale of Essential Childhood Medicines like diarrhoea, Pneumonia and Malaria intervention; not seen as an isolated intervention, an after-thought or add-on.

In addition, a female vanguard group leader in Kaduna South confirmed that the communication strategies were used to an adequate extent because the language of the people was used to reach them during the community and health talk's session in their community. More so, Information, Education and Communication (IECs) materials such as posters, leaflets, banners, T-Shirts and Hijabs were used during implementation to create awareness at different forums in all the LGAs/ Wards earmarked for intervention.

RQ 3: What are the levels of source confidence among the vulnerable group?

The finding revealed a variation in the levels of source confidence among the vulnerable target population of the diarrhoea intervention on the use of Zinc/ Lo-ORS campaign in the study areas. Some of the respondent been that they are resident in the urban and semi – urban areas in the state posits that they got the diarrhoea messaging first from radio and television shortly after the diarrhoea episode in some LGAs in Kaduna were some children loss their live due to diarrhoea outbreak. But that was a one - time information which could be easily forgotten when compare to the use of traditional gatekeepers.

Going by the findings also, majority of the respondents in Kaduna North LGA got their message first from health talk session and community forums, while respondents in Kaduna South LGA got theirs from hospital through the Healthcare Workers. On the other hand, some of the respondents in Chikun LGA got their message first their female vanguard association monthly meetings through their leaders who participated in the health talk session, while respondents in Igabi LGA got theirs from both radio and the hospitals in their area. Therefore, it is clear that the mass media, even though it was not directly used in this program are still viable means of reaching the people with faster information and education on the ways to control, prevent and manage the spread of diarrhoea disease. This finding also shows that the vulnerable population has more confidence on health related information emanating from healthcare workers in the hospitals and partly key influencers in the community than any other source (s). This emphasizes the significance of the use of inter personal communication strategies in the fight against diarrhoea in Nigeria and other developing nations of the world where the literacy level is still at its lowest ebb.

RQ 4: How has the campaign been useful in changing attitude towards diarrhoea prevention among the vulnerable population?

Almost all the respondents either strongly agreed or agreed that the malaria campaign conducted in their area changed their perception on the use of Zinc and Lo-ORS as treatment of choice for childhood diarrhoea management and other beliefs regarding the treatment of diarrhoea with traditional solutions like rice water, pawpaw leaves etc. Only a microscopic few respondents disagreed.

Main while, majority of respondents in Kaduna North, Kaduna South and Igabi LGAs strongly agreed to this assertion compared to Chikun LGA where the majority merely agreed that the campaign has changed their perception on the use of WHO recommended Zinc and Lo-ORS as an effective and reliable treatment of choice for Childhood diarrhoea management. Based on this result, it can be said that the campaign had positive effect on the target population.

Thus, the Zinc and Lo-ORS campaign carried out in Kaduna Metropolis can be said to be successful because, more than 70% of the respondents indicated that they got the health education of diarrhea messaging during the campaign carried out in the respective wards, mosque, church, social meetings/networks in their respective areas. As mentioned earlier, the various key influencers are of the views that the communication strategies used where effective and contributed to the overall success of the exercise across the study areas.

The preceding result justifies the assertion of respondents in the in-depth interviews conducted that there is reduction in diarrhoea disease outbreak in the State especially in remote areas going by the reports of different Primary Healthcare Centres (PHCs) within Kaduna Metropolis. This also agrees with the findings of Atkinson, (2011) that public engagement and contribution has played a critical role in successful communicable disease control and elimination campaigns in many countries.

6. CONCLUSION AND RECOMMENDATION

Obviously, the findings in this study indicates that the proper use of communication in the process of diarrhoea prevention, control and management from the programme planning stage through the implementation and evaluation stages has the potential to influence public perception about the potency or otherwise of a disease. Therefore, health communication strategies should be community driven. For any health intervention to be successful, the communication strategies to be adopted must take the form of actions targeted at audiences at the community and household/individual levels. More so, the study justifies the basis of the Health Belief Model which states that, individuals will take action to undergo health prevention behaviour when they are ready; they see it as helpful; and the difficulty is not greater than what is to be gained. Therefore, the people participated and accepted the campaign on the use of Zinc and Lo-ORS as WHO recommended treatment of choice for childhood diarrhoea management because of the communication adopted before and during the campaign to influence their old aged belief and methods used in the treatment of diarrhoea disease. Similarly, this justifies the findings of Sexton, (2011) that consciousness and knowledge of benefits and proper use of Zinc and ORS will lead to consistent and correct use; consequently, increasing coverage and community wide belief on the potency of the use of Zinc/Lo- ORS as treatment of choice for childhood diarrhoea management. This will in turn erode their old practices and methods of tackling diarrhoea disease moving forward.

Recommendation

Founded on the findings of this research, the following recommendations are hereby proffered.

- The administration in Kaduna State would exhaustively use the respective health facilities in the State as a means of reaching the vulnerable group with Zinc and ORS messaging.
- The government should ensure a repeat of the campaign in areas where low success was recorded due to issues of insecurity. Also, that the various media of communication should be used to consistently inform and or educate the people on the ways to prevent, control and manage diarrhoea episode.
- There should be more focus and emphasis on behaviour change communication by the implementing partners, and other stakeholders so as to positively influence or change the knowledge, attitudes and practice of the people in the areas of using WHO only recommended drugs for treatment, prevention and management of diarrhoea.
- There is need for consistent outcome evaluation of all health campaigns within the State and the country, so as to consistently assess the impact of such programme.
- International development agencies/funders such as WHO, DFID, UNICEF, CDC, USAID which initiates such programmes should ensure that there is proper mechanism put in place for adequate and regular monitoring and assessment of health mediations in developing nations of the world, especially African Countries, so as to achieve the desired result.
- Besides, the communication strategies used for any health intervention must be integrated into current social and personal networks to impact collective community action and encourage participation in, and promote approval of such programme or intervention. This again supports the findings of Okeibunor et al. (2011) that community directed interventions may offer a simple and effective way to increase uptake of diarrhoea prevention.

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