

Socio-Cultural Impediments to Health Communication Research: A Study of the Polio Immunisation Campaign in Sokoto and Kaduna States in Nigeria

EZE, Cosmos Ikechukwu, *Ph.D.*

Department of Mass Communication Department
Ahmadu Bello University, Zaria, Kaduna State, Nigeria

Abstract

In northern Nigeria, undertaking health communication research is often hindered by socio-cultural, economic and political factors. Therefore, this study investigates some of the factors that made polio research in northern Nigeria (Kaduna and Sokoto States) difficult within the framework of the Knowledge Gap theoretical explanation. The study used a semi-structured questionnaire to gather primary data from 200 parents/guardians purposively selected from the two states. Qualitative data were also gotten from four Focus Group Discussion (FGD) sessions comprising 10 participants in each study area. The research participants for the FGD were parents who have children aged between one and five years old. The data were analysed using descriptive and inferential statistics. The regression results show that language barrier, religious beliefs, traditional values, and urban/rural background affect polio immunisation campaigns research in Northern Nigeria. Furthermore, the t-test results show no difference between the two states on the nature of the effect. It was recommended that health interventionists/promoters should engage health practitioners, religious leaders, opinion leaders, traditional leaders, victims, and parents in the fight against socio-cultural impediments. This is the practical way to achieve success in polio immunisation campaigns research.

Keywords: Socio-cultural, Political, Economic, Polio, Immunisation, Campaign, Research, North, Nigeria.

Introduction

Socio-cultural, economic and political situations have formed a hindrance to health communication research in the northern part of Nigeria. It cannot be denied that those impediments to the success of health communication research are traceable to the major problems associated with polio immunisation campaign in the region (Babalola & Aina, 2004; Bello, 2015). In other words, the challenges encountered by

health communication researchers are similar to those faced by polio immunisation campaigners.

The Global Polio Eradication Initiatives (GPEI) launched in 1988 to interrupt transmission of wild polio viruses around the world hinges mainly on advocacy at the sub national, national and international levels to raise public awareness and participation, political commitment and public and private sector spending (WHO, 1999). Within the larger global polio eradication programme, the polio eradication initiative began in Nigeria in 1996 with mass polio immunisation campaign for children under the age of five in northern Nigeria, which can be regarded as the hotspot of polio viruses in Nigeria (Ozohu-Suleiman, 2010; Renne, 2010).

However, the immunisation campaign was met with substantial resistance on the part of northern masses and elites (Renne, 2010). This resistance, which partly stemmed from the fear that the oral polio vaccine (OPV) is contaminated with anti-fertility hormones and HIV virus (Ozohu-Suleiman, 2010; Waisbord, 2010), became a clog in the wheel of projected complete eradication of polio virus in northern Nigeria.

Renne (2010, p. 39) explains this situation thus:

During this period of increased vaccination, open resistance to polio eradication initiatives emerged in Northern Nigeria, with parents refusing to allow health workers to enter their home or vaccinate their children, and sometimes physically and verbally abusing health workers. These parents distrust and resistance to the campaign, expressed in rumour that the polio vaccine was contaminated with contraceptive substances or HIV/AIDS, was reinforced in 2003 when safety of the oral polio vaccine was questioned by a range of individuals in Northern Nigeria, including medical doctors, University professors, Muslim scholars, as well as politicians.

This intense scepticism and refusal of parents to immunise their children led to official suspension of immunisation campaigns in Kano state (Renne, 2006; Yahaya, 2007), pending the confirmation of the safety of the polio vaccine in use. Consequently, the polio eradication initiatives lagged behind in the country and as at 2008, northern Nigerian was reported as having the highest number of confirmed polio cases in the world (Renee, 2010; Charturvedi, 2008). The situation report on polio in Nigeria as at 2011 was painted thus:

In 2011 Nigeria reported 62 cases due to wild poliovirus (47 due to WPV1 and 15 to WPV3), a three-fold increase over 2010. In addition, 33 cases due to circulating vaccine derived poliovirus type 2 (cVDPV2) were reported. Transmission of all three types was restricted to the endemic northern states, particularly Kano, Jigawa, and Borno, with significant transmission also in Sokoto, Zamfara, and Kebbi. In 2011, Nigeria continued to export virus to neighbouring countries (Niger and Cameroon). While the immunisation status of

children in northern Nigeria has continued to slowly improve in 2011, both the number and geographical extent of cases are increasing. In four infected states, less than 65% of children have greater than 4 OPV doses {Borno, Kano, Sokoto and Yobe}(Global Polio Emergency Plan, 2012-2013, p.11).

All these provided a fertile ground for a growing multi-players and multi-dimensional advocacy for polio immunisation in Nigeria en route a complete 'interruption of transmission of wild polio in human communities in the world (Chartuverdi, 2008). It is worth noting that the campaign against polio has never stopped in the country. But, the realities on ground are that there seems to be cultural, beliefs and attitudinal issues rendering campaign unsuccessful and health communication research uneasy. This study therefore investigates the factors that made polio research in northern Nigeria (Kaduna and Sokoto States) difficult.

Health Communication

Communication is an important part of contemporary health management. Schiavo (2007, p.17) has argued that "the first strategic awareness is disease awareness", which is usually achieved through communicating relevant aspects of health problems with the target audience. From the perspective of the challenges of polio immunisation in urban and rural Nigeria, it is imperative to look at health communication campaigns because these are the veritable mechanisms for taking the messages of immunisation to the people. Health communication makes it possible to educate relevant publics about serious health issues. A health communication campaign entails the use of communication strategies to inform and influence individual and community decisions to accept health campaign initiatives. From a broader perspective, a health communication campaign is the art and technique of informing, influencing, and motivating individuals, institutions, and public audiences about important health issues through strategic and targeted communication efforts (Pubmed, 2006). The scope of health communication includes disease prevention, health promotion, health literacy policy and the business of health care, as well as enhancement of the quality of life and health of individuals within the community.

Health Communication Campaign and Polio Eradication

Many health communication campaigns involving a wide range of innovations and investments have been launched by successive governments in Nigeria as a contribution to improvement in the quality of life of rural and urban dwellers. Programmes such as the National Programme on Immunisation (NPI), Control of Diarrhoeal Diseases (CDD), Roll Back Malaria, Population and Family Planning, Reproductive Health, STD/HIV-AIDS, condom social marketing, polio immunisation campaigns, have been launched by the Federal Government in consonance with the goals and objectives of the National Health Policy, which is

based on healthcare for all.

An evaluation of some of these programmes, which were proudly launched, reveals that they did not enjoy maximum acceptance, support and utilisation. Consequently, they did not achieve the targets set for them (Imoh, 1991). Even though public awareness of the existence and efficacy of many national health programmes is relatively high, some people will not utilise the health services provided, even if they are given free of charge. Several factors may be responsible for this anomaly. One major constraint to the effectiveness of these health communication campaigns at the national level is the lack of effective communication between the policy decision makers in the health sectors and users of health services (Imoh, 2007).

Health communication campaign strategies can help foster positive health practices individually and institutionally, and contribute to sustainable change towards healthy behaviours. In Northern Nigeria, for instance, the attitude of parents and guardians towards polio immunisation campaigns has been very lukewarm despite the efforts of government, non-governmental agencies and other groups such as Rotary International.

If appropriately carried out, health communication campaigns could help to identify the relationship that health workers have with the beneficiaries (parents, guardians, patients) because the individual approach would assist in making polio campaigns successful. There are instances where health workers were driven away on the suspicion that they were agents of some multinational bodies falsely accused of spreading contaminated vaccines. Communication is a persuasive tool that could be used purposely to alter the behaviour of the recipients in the direction desired by the communication source.

Health communication campaigns need not be restricted to only the mass media. Macauley and Salter (1995), Mboho and Iwokhagh (2006) have mentioned the importance of churches, schools, opinion leaders and parents in health campaigns. They observe that information obtained from the media is often incomplete, inaccurate and perhaps not convincing enough. A good health communication campaign strategy can be used to penetrate areas of high resistance to polio immunisation, especially in Northern Nigeria. It could suggest targeted use of other media forms to get the messages across to the hard – to - reach, and the hard - to - convince parents and guardians. Health communication campaigns can contribute to all aspects of campaign strategies with regard to disease prevention and health promotion.

Socio-Cultural/Environmental Challenges to Health Communication Campaigns

The implication of socio-cultural, economic and political issues affecting the effectiveness of health information transmission is likely to be a failure of health campaign. That informs the reason that Bird, Otero-Sabogal, Ita, and McPhee

(1986) and Geist-Martin, Ray and Sharf (2003) posit that health promotion programmes should not only demonstrate cultural sensitivity, but also should use culturally relevant symbols to communicate the message.

The concept of cultural sensitivity has been classified into two distinct dimensions: surface structure and deep structure (Resnicow, 1959). Surface structure refers to the extent that health resources match the intended population's social and behavioural features and appearances while deep structure reflects how cultural, social, psychological environment and historical factors influence health behaviours differently across racial and ethnic populations. In a nutshell, cultural sensitivity refers to the extent to which interventions fit with the culture, experience, and behavioural patterns of a target group.

On the other hand, deep structure reflects how cultural, social, psychological, and environmental and historical factors influence health behaviour. The factors form the basis for how the target audience perceives the cause, course, treatment of illness, how they perceive the determinants of specific health behaviour, and they appreciate the religion, family, society, the economy and the government (Glanz, 2002).

Studies have shown that religion has effectively worked as a coping and preventive strategy in health-related issues (Koenig 2001; Salem, 2006). Religion has an important role in social integration and control. Religion is part of the culture or the way of life of a society and it helps to maintain cultural traditions. By extension, religiosity has to do with the influence of social referents and this may be viewed as analogous to construct from the theory of planned behaviour (Kabir, 1998; Kagimu, 1998; Surur, 2000; Woldehanna, 2006).

Linking health messages to religion or spiritual themes, or using religious elements on messages, may be appropriate motivation strategies. This can be done through manipulation of social effects such as linking health behaviours to specific Biblical/Koranic commandments or using the norms of the faith as a source of positive or negative sanctions (Glanz, 2002). As noted by Ahmad *et al* (2008), empirical studies have shown an association between religiosity and positive (or less negative) healthy behaviour. Researchers have found negative correlation between religiosity and behaviour such as alcohol abuse and promiscuous sexual behaviour (Hasset, 1989; Wallace, 1991; Abraham, 1992; Bree, 2005). Regarding the relationship between religiosity and drug abuse, studies have found strong negative correlation (Adlaf, 1985; Burket, 1987; Lugoe, 1997, Amonini, 2006).

In the same vein, religion can also be a big barrier to successful health communication campaign. In Nigeria, religion plays a big role in polio immunisation campaign in northern Nigeria. Islamic scholars and non-scholars of Northern Nigeria extraction are generally opposed to western medicine. However, immunisation which requires the injection or ingestion of disease laden substances (either killed or attenuated viruses) may be seen as unclean or harmful practice which threatens children's health (Renne, 2005). In fact, in the northern states, Islamic scholars have

questioned the use of such drugs (Renne, 2006).

Babalola and Aina (2004) observe that environmental factors have a lot of influence on immunisation. Babalola and Aina (2004) also observe that environmental factors hinder immunisation activities. According to them, rural parents especially those who are farmers, are less likely than their urban counterparts to get other necessities like medical care and clothing. They observe that in the rural areas, there is a high level of unemployment, underemployment, delayed payment of salaries and the attendant widespread poverty.

Similarly, Belcher *et al* (2005) conducted a research on mass immunisation campaign in rural Ghana with emphasis on factors affecting participation. Some of these factors include: Social circumstances, Superstitions, Literacy level, Public trust, Socio economic issues, Urban/rural issues, Communication/transportation, and Gender issues.

Social Circumstances: Social circumstances also play a lot of roles in immunisation programmes. Hanlo, Byess, Yamuah, Hayes, Bennet and M'Boge (1988) conducted a research on factors influencing vaccination compliance in peri-urban Gambian. The vaccination statuses of 251 children within the aged bracket of 12-18 months in two Gambian communities were determined from their health cards. Two sub-groups were identified, children who were fully vaccinated and those who had received less than half their vaccinations. The social and environmental circumstances of those children were investigated to detect factors which were associated with poor vaccination compliance. Mothers of well vaccinated children were more inclined to bring them for non-curative services. Mothers of poorly vaccinated children had a poorer knowledge of the diseases against which their children should be vaccinated.

Superstitions: A lot of people attach superstitious belief to polio immunisation. Some of the views have to do with the cause of the disease and the belief attached to the immunisation. Ignorance and suspicion (based primarily on rumours) are factors found to hinder immunisation. Babalola and Aina (2004) note that this was more prevalent in the northern region of Nigeria than the southern region. According to Babalola and Aina (2004), ignorance in many cases, negative rumours peddled concerning immunisation led to many parents making decisions to avoid the practice. For example, there are rumours that certain vaccines (especially the oral polio) could cause paralysis in children; hence, many parents avoid them. There was not a single state that did not report on rumour about what some vaccines could do or not do.

Babalola and Aina (2004) went on to state that in Kano State (a predominantly Muslim community) and some parts of Maiduguri, rumour had it that oral polio vaccine was intended to reduce fertility among Moslem communities. Hence, most Moslem religious leaders, and fathers are in the forefront of the battle against oral polio vaccine for infants in these communities. For example, during a national

immunisation day exercise in Zamfara State in January 2007, parents agreed to let their children receive drops of polio vaccine but refused to allow their children be given Hepatitis B injections on the ground that it would cause paralysis (Renne, 2006). In fact, in the Northern States, Islamic scholars have questioned their use, as one scholar observed:

Immunisation does not belong to Islam because Allah has given humans protection in their appropriate best form. We have been created in the best of forms, in the best of constitutions – which is seen in the mental, spiritual and has endowed man with so many things. The physical composition of man is good. They are made of many systems, including immune system. Nature, is so kind, it has endowed man with so many things (Renne, 2006, p. 1855).

The superstitious beliefs attached to polio immunisation in the Northern States of Nigeria are very much different from the States in Southern, Nigeria.

Renne (2006, p.1857) cited one Zaria resident who observed thus:

Anyone that says Zaria residents reject immunisation is only saying something that is far from the truth. What we rejected was the polio immunisation because we saw no reason why they were disturbing us with polio immunisation when they did not effectively handle killer diseases like measles. Our point of contention is that it is only on rare occasions that one comes across death caused by polio or even a victim of it, then why the prominence. This is what we reject, not immunisation generally.

Literacy Level: The literacy level of parents, guardians and some stakeholders has a lot of impact on the success of polio immunisation campaign. In the Northern States, the programme fell short of expectation because of the literacy level of traditional/religious leaders. Literate parents brought their children for immunisation because they are aware of the benefits of polio immunisation (Renne, 2004).

Public Trusts: Public trust is essential in promoting public health. Such trust plays an important role in the public compliance with health interventions, especially with vaccination programmes, which target mainly healthy people. Where public trust is eroded, rumours can spread leading to rejection of health interventions (Jegede, 2007). Lack of trust was responsible for the failure of the polio immunisation campaigns in 2003. In many cases, negative rumours peddled about immunisation caused many parents to avoid the practice. For example, there were the rumours that certain vaccines (especially the oral polio) could cause paralysis in children, hence many parents avoided them.

Socio-Economic Issues: Provision of full immunisation coverage and reduction of infant and child mortality are high priority national public health objectives not only in Nigeria, but in Sub-Saharan Africa. Because children depend largely on their families to meet basic human needs, programmes aimed at reducing child mortality could be improved by the availability of better information on the

home environments in which children are most at risk of adverse health outcomes. The economic status of children is a major determinant of their health care status. Children from a rich household are often better exposed to good health care system (Gage, Elizabeth & Andrea, 1997).

Urban and Rural Issues: Urban campaigns have been usually stressful for many programmes. Foege (1990) provides an overview of urban immunisation links in cities. He submits that, urban campaigns have been unusually stressful for many programmes. Frequently, lack of social cohesion makes it difficult to mobilise segments of a geographic area. From the first polio campaign in 1950, through the small pox eradication programme into the current childhood immunisation campaigns, urban areas have presented special challenges. Often urban areas have required such labour intensive efforts that the expenditure per person is prohibitive. In addition, the diseases themselves may put urban areas at disadvantage.

Gender Issues: Gender is a demographic factor that has been a contentious issue whenever polio immunisation campaign in Nigeria is mentioned. In a study conducted by Aliede (2002) on media consumption patterns of selected urbanites, slumites and ruralites in Nigeria, he noted that majority of the people interviewed, 68% of the respondents agreed that such factors as gender, age, income level, educational background among others have influence on the pattern of their choice and consumption of media contents.

In a qualitative study conducted by Babalola and Aina (2004), it was observed that in the five states women tend to be more knowledgeable about vaccine preventable diseases than men. However, there were differences by age, education and religion, not only among the states but also among the communities and between men and women within the same state. The male participants in the study were on the average, better educated than their female peers. Moreover, the level of education of the participants was relatively higher in the urban locations compared to rural locations. The gender of the provider is another factor that affects polio immunisation. In all the communities studied, there is a preference for female immunisation service providers. Preference for female service providers is particularly strong in Kano, Jigawa, and in the predominantly Moslem rural community in Lagos. The attitude on the part of the end user could encourage or discourage parents from immunising their children. As pointed out by one service provider in rural Lagos (Babalola and Aina, 2004).

Theoretical Framework

The knowledge-gap hypothesis theoretically guided this study. Propounded by Tichenor, Donohue and Olien in 1970, the knowledge-gap hypothesis is concerned about the inequalities that exist among a given population with regard to information accessibility. It also explains how social structure affects communication process. As media output grows in a given society, so will the knowledge gaps between privileged

and underprivileged social group decreases. The theory maintains that increase in media output, rather than even out differences between the information-rich and the information-poor, actually accentuates those differences, since those at higher socio-economic levels acquire information much faster and much more easily than those at the lower levels.

The problem of inequality is explained by the differences in the socio-economic status and other demographic characteristics of various segments of a population. Several variables associated with these differences include: literacy level, income, racial, ethnic, religion, rural-urban and residence status. Researches have shown that those who are better educated take more advantage of new sources of information than those who are less educated. For example, if radio or newspapers should emphasise and carry more stories on the control of polio in Northern Nigeria, the better educated will learn more even though it is the less-educated who are in greater need of the information (Yahaya, 2003).

Research Objectives

1. This study intends to find out if language barrier affect polio immunisation campaign research in Kaduna and Sokoto States.
2. The study also seeks to determine if religious beliefs affect polio immunisation campaign research in Kaduna and Sokoto States.
3. This study aims to evaluate the effects of traditional values on polio immunisation campaign research in Kaduna and Sokoto States.
4. This study aims to determine if urban/rural background or locale affects polio immunisation campaign research in Kaduna and Sokoto States.

Methodology

The study adopted survey as the main research method. Survey is combined with In-depth interview (IDI) and Focus Group Discussion (FGD) in order to ensure high data quality and reliability. Krueger and Nueman (2006) assert that use of three or more approaches is the process of observing something from different angles or view point in order to get a fixed or true picture of the issue.

With the overall aim of evaluating socio-cultural challenges affecting polio immunisation campaign research in Kaduna and Sokoto states, this study's population comprises nursing mothers, parents, guardians, health workers such as nurses, midwives and immunisation officers, UNICEF/WHO officials and media health workers involved in the design and implementation of polio immunisation campaigns. According to the 2016 National Population Commission population estimate, Kaduna has 8,252,366 and Sokoto 4,998,090 people respectively.

Locale of Study

This study was conducted in Kaduna and Sokoto States. In Kaduna state, Kwarbai ward which is an urban area in Zaria city, Zaria Local Government Area and Biye, a rural settlement in Giwa Local Government Area were studied. The Emir of Zaria resides in Zaria city while Biye is a rural settlement in Giwa local Government Area, Kaduna State. Biye is situated just a few kilometres from the Ahmadu Bello University Teaching Hospital, Shika. Also, Sokoto municipal area and Dange Shuni village in Dange Shuni Local Government Area were studied in order to evaluate the communication strategies in use.

The significance of these aforementioned areas is that polio was still endemic until middle of last year when World Health Organisation declared that Nigeria was no longer among the endemic countries. Prior to the declaration, polio was still ravaging children aged one to five despite the considerable efforts made through various communication strategies. In four affected states (Borno, Kano, Sokoto, Yobe) and recently Kaduna, less than 65% of children have greater 4% oral Polio Virus (OPV) doses (Global Polio Emergency Plan, 2012-2013, p.11).

Sampling Technique and Sample Size

In selecting respondents for the study, subjects were picked, using the purposive sampling technique for both the quantitative and qualitative data. Wimmer and Dominick (2000) define a purposive sample as subjects selected on the basis of specific characteristics or qualities and thus eliminating those who fail to meet the criteria. In this regard therefore, subjects were selected based on the level of participation in the polio immunisation programme in the two studied states.

For the quantitative data, purposive sampling technique was used in selecting those who are experienced in polio campaign. This was done in two stages. The first stage was the selection of a homestead or a family house in each of the wards selected in the aforementioned areas of the study. The researcher used the National immunisation plus days chart to arrive at this. However, the random number of homestead in the ward was divided into two equal sections and due to the nature of the study locales, especially as it pertains to culture; the researcher hired the services of a local representative to assist the researcher. The researcher purposively selected twenty five respondents from each of the two divided homesteads in the Ward, thereby bringing the total number of respondents in each ward in the aforementioned areas to fifty. In addition, snow-ball technique was used to supplement the purposive sampling during the interview. Snow-ball is a sampling technique that allows the researcher to ask a respondent during an interview to suggest another affected person for interview. The Immunisation Plus Days are held twice every month in the study states. During the Immunisation Plus Days, nursing mothers, parents /guardians attend clinics for immunisation. With the assistance of health workers, these respondents were purposively selected. Each ward or villages have their immunisation days.

Eligibility to participate in the survey depended on the following: mothers /parents having children aged between 1 day and 2 years, participated in polio immunisation, willingness to participate and resident in the ward for at least a year. The National Population Commission census figure guided the researcher to determine the total number of people in each ward. Fifty respondents (50) were selected in each ward for the survey. Therefore, a total of 200 respondents were selected in all the four wards of the study areas in the two states that were studied. Of the whole 200 copies of the self-administered questionnaire, 197 copies of the questionnaire representing 98.5% were returned and used for the analysis.

The respondents for the in-depth interview comprise health workers, media men and women involved with health reporting, parents/guardians, UNICEF/WHO officials and opinion/religious leaders from the two states. However, eligibility for participation in the in-depth interview depended on their level of involvement in polio immunisation. Two sets of Focus Group discussions were conducted with nursing mothers within the age range of 17-40 years in each of the study states. The justification for using this age range is because in Northern Nigeria, girls marry as early as 17 years and usually stop child bearing when they are 40 years old (Eze, 2013). Also, nursing mothers and parents within the age range of 17-40 years were administered questionnaire that was interpreted to them in Hausa language for those who are not fluent in English.

Data Analysis

Quantitative data were analysed with the use of SPSS 20.0 for frequency, percentage, standard deviation, and T-test while the data from the In-depth interview (IDI) and Focus Group Discussion (FGD) were analysed qualitatively.

Table 1: Perceived effect of Socio-Cultural challenges to Polio Health Communication Research in Kaduna State

	Mean	Std.Deviation
Language barrier affect polio immunisation campaign research	3.8	1.2
Religious belief affect polio immunisation campaign research	3.9	1.1

Traditional values affect polio immunisation campaign research	4.1	0.9
Urban/Rural background affect polio immunisation campaign research	3.4	1.4
Total	3.8	1.15

Source: Researcher's field work 2017

Socio-cultural variables such as language (M=3.8, SD=1.2), religion beliefs (M=3.9, SD=1.1), traditional values (M=4.1, SD=0.9) and urban/rural background (M=3.4, SD=1.4) are perceived by residents of Kaduna to affect polio immunisation research. This data is supported by the qualitative result. The In-depth Interview with a Health Officer for polio with Kaduna State Government has this to say:

The problem we faced is the same to that of health practitioners which is lack of education, ignorance, religion and some traditional inclination among the locals have been a constraint to polio eradication campaign. So it is very difficult to educate these kinds of people virtually because of falsehood knowledge they have about family planning and infertility. This is cause through brainwashing they have received from the people they consider as their leaders. I think the best approach is to also employ religious leaders who are properly grounded in both Islamic and western education who apparently know the benefit to help educating their followers.

Table 2: Perceived effect of Socio-Cultural challenges to Polio Health Communication Research in Sokoto State

	Mean	Std. Deviation
Language barrier affect polio immunisation campaign research	4.2	0.8
Religious belief affect polio immunisation campaign research	4.3	0.7
Traditional values affect polio immunisation campaign research	4.1	1.0
Urban/Rural background affect polio immunisation campaign research	4.2	0.8
Total	4.2	0.8

Source: Researcher's field work 2017

Generally, socio-cultural variables such as language (M=4.2, SD=0.8), religion beliefs (M=4.3, SD=0.7), traditional values (M=4.1, SD=1.0) and urban/rural background (M=4.2, SD=0.8) are perceived by residents of Sokoto to affect polio immunisation research.

Table 3: T-test Showing difference in Socio-Cultural challenges to PolioHealth Communication Research between Kaduna and Sokoto States

Socio-Cultural Issues	States	N	M	SD	T	df	P
Language barrier affect polio immunisation campaign research	Kaduna	99	3.8	1.2	0.643	97	.521
	Sokoto	98	4.2	0.8			
Religious belief affect polio immunisation campaign research	Kaduna	99	3.9	1.1	1.044	97	.298
	Sokoto	98	3.	0.7			
Traditional values affect polio immunisation campaign research	Kaduna	99	4.1	.9	1.275	97	.281
	Sokoto	98	4.1	0.8			
Urban/Rural background affect polio immunisation campaign research	Kaduna	99	3.4	1.4	0.692	97	.581
	Sokoto	98	4.2	0.8			

Source: Researcher's field work 2017

The result shows that there is no difference between Kaduna and Sokoto states on the effect of socio-cultural variables such as language, religious beliefs, traditional values, urban/rural background on polio immunisation campaign research in the two states in Northern Nigeria.

Conclusion

Socio-cultural issues impact the effectiveness of health information transmission and the possible application among end users. Accordingly, Bird, Otero-Sabogal, Ita and McPhee (1986), Geist-Martin, Ray and Sharf (2003), Kbir (1998), Woldehanna (2006), Ahmad et al (2008) and Babalola et al (2004), all recognise the significance of traditions, culture, religion and environmental factors as hindrance to the success of health behaviour change and most especially that of polio immunisation. The findings show that culture, beliefs, attitudinal issues acted as a challenge to health communication research such as polio immunisation campaigns in Northern Nigeria. It was recommended that health interventionists and researchers should engage health practitioners, religious leaders, opinion leaders, traditional leaders, victims, and parents in the fight against socio-cultural impediments to have success in polio

immunisation campaign research. It is also recommended that all health interventionists should adopt the use advocacy by using prominent and influential leaders, social mobilisation in respect of intensified ward communication strategy, compound meetings, sensitisation meetings, volunteer community mobilisation network and programme communication through various channels as their campaign strategies in northern Nigeria. If the public who are mostly semi-literate are enlightened on the benefits of polio immunisation, researchers would find data gathering easy.

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