

Public Communication Campaigns on Clubfoot Symptoms and Early Treatment: A Kap Analysis of Parents in Imo State

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Abstract: This study examined public communication campaigns on clubfoot symptoms and early treatment of children. The health belief model served as the theoretical foundation of the study. A mixed-methods research design was employed with the aid of a survey and an in-depth interview. Descriptive analysis and explanation-building techniques were used for data analysis. Findings revealed that in Imo State, parents are aware of public communication campaigns on clubfoot symptoms and early treatment to a moderate extent and same applies to their knowledge level. Also, public communication campaigns have influenced the engagement of Imo State parents towards health care practises that could help treat children with clubfoot. It was recommended that there is a need to fully utilise all manner of channels for public campaigns by stakeholders so that the level of awareness will increase tremendously. Special care, in terms of information, needs to be given to parents by healthcare providers so that it will build their knowledge on several issues that have to do with clubfoot in children.

Keywords: clubfoot, children, public communication campaigns, early treatment

1. Introduction

Globally, around 100 000 children are thought to be born annually with clubfoot, and of those, 80% live in low- and middle-income countries including Nigeria (Harmer & Rhatigan, 2014). Babies born with clubfoot have a congenital disability that affects one or both feet. In medical terms, this is described as ‘equinovarus’, which means that feet point downwards at the ankle and are twisted inwards. This does not spontaneously resolve. Untreated clubfoot can be painful, impair function including mobility, limit participation in everyday life and, in some cases, result in ostracism from the community (Alavi et al., 2012).

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Clubfoot is a condition that affects the development of a child's foot, causing it to twist. It is a common musculoskeletal birth defect that occurs in proximately one out of every 1,000 live births worldwide (Pigeolet et al., 2022). Without proper treatment, clubfoot can lead to significant physical and functional disabilities, (Harmer & Rhatigan, 2014). It may even lead to lifelong disability where the affected person may not be able to wear shoes and may experience severe pain during walking (Rasheed et al., 2017). Early diagnosis and intervention are crucial for successful treatment and improved outcomes even without surgery (Oliveira et al., 2023). However, delayed management of the condition makes it difficult to offer non-surgical treatment (Burfat et al., 2013).

Clubfoot is mainly detected clinically, and radiography is not essential for diagnosis. In addition, ultrasound can be used for antenatal diagnosis (Iqbal et al., 2021). Several treatment methods are available for managing clubfoot, and these can be classified into non-operative and operative techniques. Serial manipulation and casting are non-operative treatments of clubfoot, and several methods have been described (López-Carrero et al., 2023; Drew et al., 2016). One of these is the Ponseti method, which is considered the gold standard used in most countries and is reported to have a high success rate (Pigeolet, et al., 2022). Operative methods are used in cases of late detection or after failure of non-operative methods. In both operative and non-operative treatments, regular follow-up is mandatory to assess improvement, prevent relapse, and monitor for complications. A child with clubfoot has a risk of relapse up to 7 years of age, irrespective of the treatment method. Thus, it is important that parents are compliant with treatment and well educated about the condition and its prognosis in order to decrease the risk of relapse.

In Nigeria, clubfoot is a pressing public health concern, and specifically, Imo State is no exception as there have been reported cases of Clubfoot by Miracle feet NGO in the state which makes the state part of the region suffering from the issue of clubfoot. Despite the availability of effective treatment options, many children with clubfoot in Imo State do not receive appropriate care due to various barriers, including limited awareness among parents. Public knowledge and perception of clubfoot are key to early management of the condition (Pigeolet, et al., 2022), while lack of awareness is considered a barrier to treatment (Rasheed et al., 2017). In situation like this public communication has a lot to play. Public communication campaigns play a vital role in raising awareness, disseminating information, and promoting early treatment-seeking behaviour (Bünzli & Eppler, 2018). Therefore, it is essential to evaluate the knowledge, attitudes, and practices (KAP) of parents in Imo State regarding clubfoot symptoms and early treatment to design effective communication strategies and improve access to care.

1.1. Statement of the Problem

A United States-based non-governmental organisation, MiracleFeet, has said that Nigeria records an estimated 9,000 new cases of clubfoot every year (Omogbolagun, 2022). Despite the availability of effective intervention, many children with clubfoot in Imo State do not receive timely and appropriate care, leading to significant physical and functional disability. This disability appears to cause some kind of stigma and social exclusion for the child. In some instances, some of them end up on the street as beggars. The burden of this disability impacts society negatively as a whole, and as such, the problem of untreated clubfoot should be viewed as a public health concern that must be addressed. It appears that children with clubfoot in Imo State have limited access to treatment; this may be as a result of the awareness and knowledge level of parents regarding public communication campaigns on clubfoot symptoms and early treatment of children. Proper information is one of the key ways to tackle an issue such as this, and public communication

campaigns are the channel through which this information can be passed. Public communication campaigns are aimed at enlightening parents on the issues of clubfoot concerning children so as to increase knowledge, change attitudes, and enhance the practise of taking children affected by clubfoot for treatment, but the question is: Are parents in Imo State exposed to public communication campaigns?

Objectives of the Study

The general objective of this study is to examine how public communication campaigns on clubfoot influence parents' attitude towards positive health practice of early treatment of children with clubfoot. The specific objectives were to:

1. Find out the level of awareness of Imo State parents to public communication campaigns on clubfoot symptoms and early treatment.
2. Ascertain the level of knowledge of Imo State parents on public communication campaigns on the symptoms and treatments of clubfoot in children.
3. Examine the attitude of Imo State parents to public communication campaigns on the symptoms and treatments of clubfoot in children.
4. Ascertain whether exposure to public communication campaigns influenced the engagement of Imo State parents towards health care practices that could help to treat children with clubfoot.

2.1 Theoretical Framework

The health belief model served as the study's foundation. A team of social psychologists from the US public Health service created the health Belief Model (HBM) in the 1950s to describe the phenomenon related to issue pertaining health. Even though the service was provided without charge and in a different convenient location, they looked into why so few people participated in illness prevention and detection programmes. The model gained more understanding thanks to the research of researchers who came to the conclusion that six main construct influence people's decisions about whether to take action to prevent screening, control illness. The six constructs are perceived susceptibility (belief that they are susceptible to the condition), perceived severity (belief that the condition has serious ramifications), perceived benefit (belief that acting would lessen their susceptibility to the condition or its severity), perceived barriers (belief that the costs of acting outweigh the rewards), cue to action, and self efficiency.

This theory holds that people's beliefs, attitude affect how they behave in terms of their health. The belief that people have about their health affects how they behave. Geoffrey Hochbaum first established the Health Belief Model in the 1950s, and Becker, Haefner, and Maiman added to it in 1977. With a focus on assessing health behaviour of individuals through examination of perceptions and attitudes someone may have towards disease and detrimental results of certain actions, it is a theory that addresses personal knowledge and beliefs and is used in health promotion to design intervention and prevention programmes (Mbiereagu & Etumnu, 2020).

According to HBM, certain conditions must be met in order for behaviour to change. They consist of "incentive," "risk," and "benefits." These indicate that a person needs a motivation to alter their behaviours. The individual must believe that continuing their current behaviour carries a "risk." For a change to occur, the individual must feel that the "benefits" of the change will outweigh the "barriers". To modify their conduct, a person needs the "confidence" (self-efficacy) to do so. This can come up in a chat with a buddy or during a show on television (Moseret al, 2005).

This theory is relevant to this study because it assumes that parents make decisions about the health of their children in accordance with the health beliefs they have developed as a result of exposure to health messages. This theory also explains why parents will respond swiftly when they perceive their children to be in a vulnerable position or why there is a notion that their health or physical condition would be in danger if they do not act in a certain way that is healthy that is by undergoing early treatment of clubfoot.

3. Method and Procedure

Research Design

This study adopted mixed-method research design. This design helps in collecting quantitative data and then qualitative data with a goal to elaborating or explaining the quantitative results. In the mixed method, the researchers used survey and in-depth interview in this study. According to Creswell and Creswell (2018), using multiple methods in a single study helps to limit the flaws that come with using just one method. Also, the use of mixed method helps to strengthen findings in a study as views of respondents will be gotten from two perspectives and then enrich the results of the study. There is need to use mixed method due to the fact that parents of victims and medical practitioners need to be study to enable the researchers have good insight into the problem of the study.

Population of Study

The population of this study consists of 5,167,722 residents in Imo State according to the National Bureau of Statistics (2020) bulletin. Therefore, the quantitative population of this study is 5,167,722. For the qualitative aspect of the study there are 24,640 medical practitioners in Nigeria according to Statista Research Department (2022). To get the population for Imo State, the researcher divided the number (24,640) into 37 states including Federal Capital Territory (FCT), which turns out to be 666. Therefore, the qualitative population of this study is 666 medical practitioners.

Sample Size and Sampling Technique

The Wimmer and Dominick online sample size calculator statistical tool was used to determine the sample size. At a confidence level of 95% and 5% error limit the sample size was 384. For the in-depth interview, the researcher purposively selected 12 medical practitioners. These 12 medical practitioners were selected because they are paediatrician and orthopedician. Their area of expertise will aid in providing useful information in this study. Therefore, a total of Twelve (12) individuals were selected for the interview.

In this study Multi- stage sampling technique was used. Imo State was divided into 3 senatorial districts or clusters. The 3 zones or clusters were further divided into 27 Local Government Councils or clusters. Simple random sampling technique was used to select to two Local Government Areas from each of the senatorial districts. Multi-stage sampling technique was used. Imo State is made up of 3 senatorial districts or clusters. Each of the senatorial districts or clusters consist of Local Government Areas or clusters.

Stages in the sampling technique

Stage One:

The senatorial districts were grouped accordingly.

- a. Imo East Senatorial District (Owerri zone);
- b. Imo West Senatorial District (Orlu Zone);
- c. Imo North Senatorial District (Okigwe Zone).

Stage Two:

From each of the senatorial districts, three LGA were randomly selected

- a. From Imo East: Aboh Mbaise, Owerri North and Ikeduru;
- b. From Imo West: Ideato South, Orsu and Njaba and
- c. From Imo North: Okigwe, Onuimo and Isiala Mbano.

Stage Three:

From these LGAs, two communities were randomly selected; they are as follows: Aboh Mbaise-Enyiogugu, and Mbutu; Owerri North- Orji, and Egbu; Ikeduru- Atta and Ngugo; Dikenafai and Isiekenesi; Orsu- Ihitte- Nansa and Ebenator; Njaba- Okwudor and Nkume; Okigwe-Aro-Okigwe and Umuokpara; Onuimo- Okohia and Okwelle and Isiala Mbano- Umuelemai and Umuduru communities.

Stage Four:

In the selected communities, in each of the LGAs 43 residents were selected to form the respondents of the study using the snowball sampling technique. This procedure was adopted in the selection of parents as any persons that questionnaire was given suggested other parents that the instrument was administered this was done until the required number was exhausted. For the qualitative aspect of the study the researcher adopted the purposive sampling technique to selecting interview participants. The criterion was that you are either orthopaedician or paediatrician before you will be included as participants.

Instrument for Data Collection

Questionnaire and interview schedule were used as instruments for data collection. The questionnaire helped to elicit quantitative data while the interview schedule served as a guide towards generating qualitative data respectively. The questionnaire was structured in close-ended questions to generate responses from respondents. While for the interview guide, questions were structured in line with the research questions. Room for follow up questions were provided in the instrument. The instrument was structured in simple English devoid of ambiguity.

Validity and Reliability Instrument

In validating the measuring instruments a communication expert in the Department of Mass Communication in Imo State University examined the research instruments to ensure that they are structured in the right way that will be in line with the study research questions. Corrections that were made were incorporated in the instruments. To establish the reliability of the instrument, the

researcher carried out a test retest method. Here, the research’s questionnaire was first administered to a group of respondents in Imo State. After two weeks the same questionnaire was re-administered again to respondents having same characteristics with the first respondents. The test scores of the two responses were subjected to Cronbach alpha test to ascertain the level of internal consistency of the instrument. The reliability test result showed .71 meaning the instrument is reliable. Meanwhile, member checking method was adopted to check for the level of dependability of the qualitative data instrument. The consistency in the transcription of recorded interview between members showed that the instrument trustworthiness is high.

Method of data collection and analysis

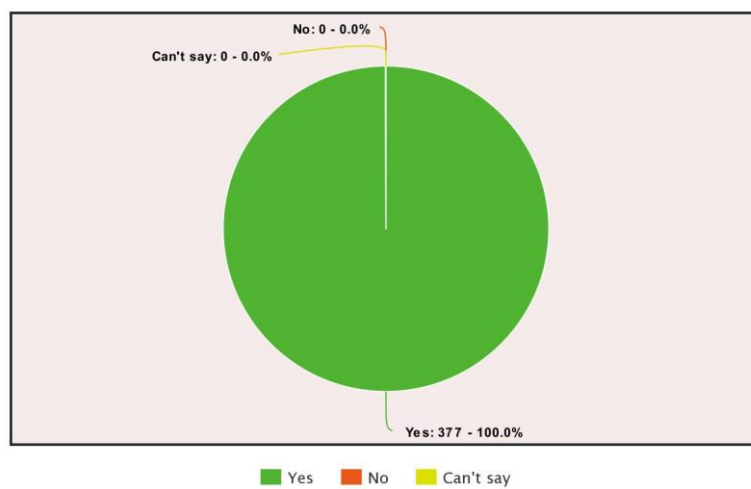
The questionnaire as instrument for data collection was distributed on a face-to-face basis within a period of four weeks with the aid of research assistant. After administering the questionnaire to the respondents, the researcher still employed the services of a trained research assistant that assisted in collecting the filled instrument so as to make a good number of usable copies. As for the qualitative aspect of the study the researchers carried out the interview session with the selected medical practitioners at different occasions in the state at their own convenient time. The interview session averagely lasted for about 20-35 minutes. Meanwhile, the researchers adopted the simple percentage and mean analysis to analyse results. As for the qualitative analysis the explanation building technique was used present and analysed data.

4. Results

This section deals with data presentation and analysis. A total of three hundred eight four (384) copies of questionnaires were distributed to residents in Imo State after which, 377 (98.1%) were returned and found usable whereas 7(1.8%) were not returned. This means that 7 questionnaire copies were not used. The return rate is 98.1% therefore the analysis was done with the 377 copies of questionnaire. Meanwhile, qualitative analysis was done in line with the research questions. The quantitative data was presented first before the qualitative data.

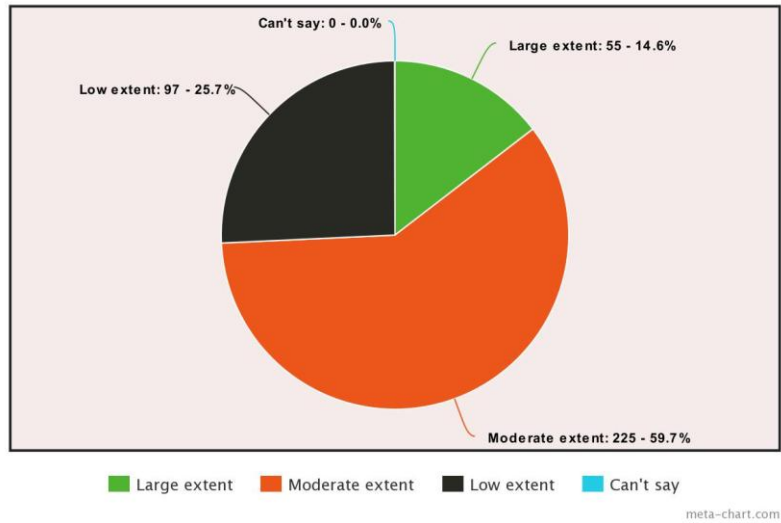
Research Question One: To what extent Imo State parents are aware of public communication campaigns on clubfoot symptoms and early treatment?

Figure 4.5 Responses on whether respondents are aware of mass media messages on clubfoot symptoms and treatments



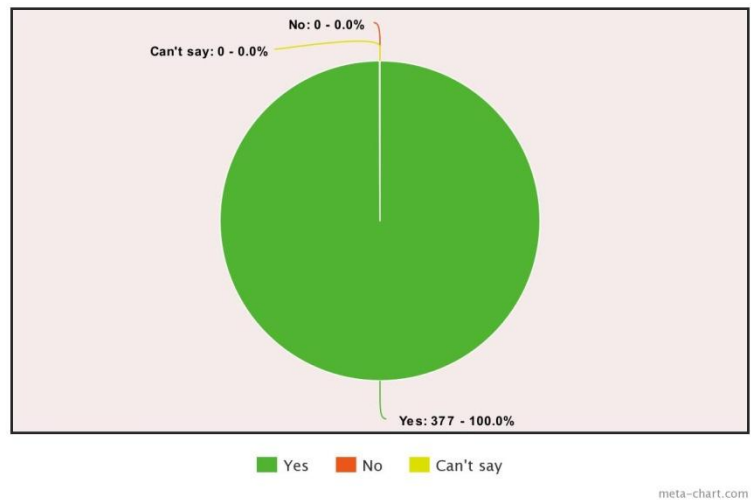
Analysis of data from Fig. 4.5 revealed that 100% of respondents are aware of mass media messages on clubfoot symptoms and treatments. This implies that all the respondents are exposed to mass media messages on clubfoot symptoms and treatments.

Figure 4.6 Responses on the extent respondents are aware of the mass media messages



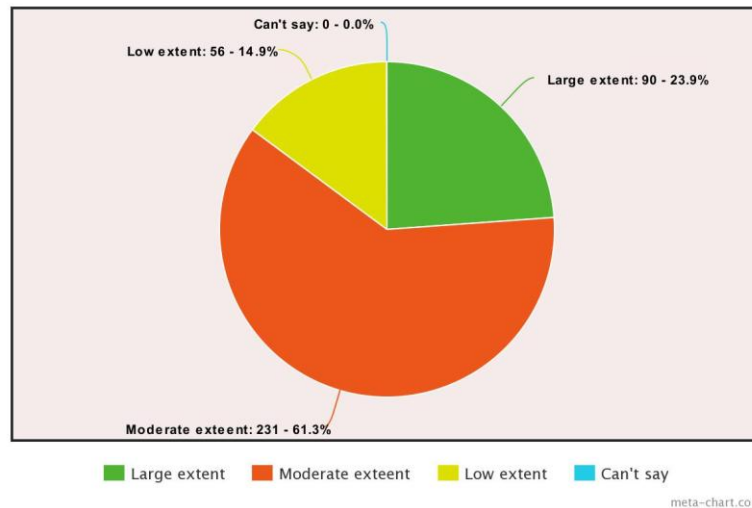
Analysis of data from Fig. 4.6 showed that 59.7% of respondents are aware of the mass media messages on clubfoot symptoms and treatments moderately. This implies that respondents are moderately exposed to mass media message on clubfoot symptoms and treatments.

Figure 4.7 Responses on whether respondents are aware of messages on clubfoot symptoms and treatments through posters/handbill/brochure



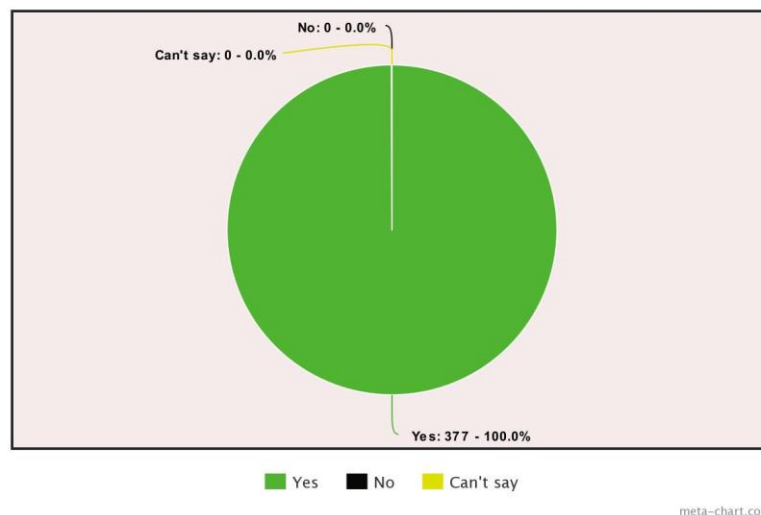
Analysis of data from the above table 4 showed that 100% of respondents are aware of messages on clubfoot symptoms and treatments through posters/handbill/brochures. This shows that the respondents are aware of messages on clubfoot symptoms and treatments through posters/handbill/brochures.

Figure 4.8 Responses on the extent respondents are aware of messages on clubfoot symptoms and treatments through posters/handbill/brochure



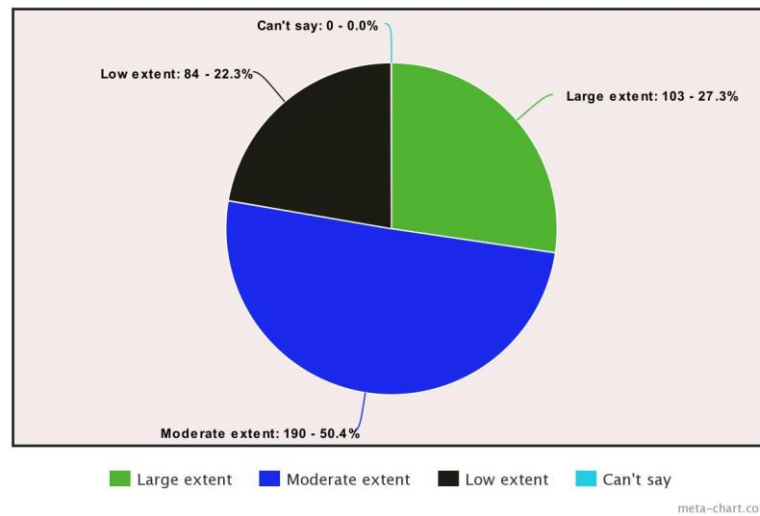
Analysis of data from Fig. 4.8 revealed that 61.3% of the respondents are aware of messages on clubfoot symptoms and treatments through posters/handbill/brochure at a moderate extent. This implies that the respondents are aware of messages on clubfoot symptoms and treatments through handbills/posters/ brochure.

Figure 4.9 Responses on whether respondents are aware of messages on clubfoot symptoms and treatments through interpersonal/group discussion from healthcare giver



Analysis of data from fig. 4.9 above indicated that 100% of the respondents affirmed that they are aware of messages on clubfoot symptoms and treatments through interpersonal/group discussion from healthcare giver. The implication of the above analysis clearly delineated that the respondents are aware of messages on clubfoot symptoms and treatments through interpersonal discussion from healthcare giver.

Figure 4.10 Responses on the extent respondents are aware of messages on clubfoot symptoms and treatments through interpersonal/group discussion from healthcare giver



From Fig. 4.10 above, it is clearly evident that 50.4% of the respondents attested that they are aware of messages on clubfoot symptoms and treatments through interpersonal/group discussion from healthcare giver to a large extent. This implied that the respondents are aware of messages on clubfoot symptoms and treatments through interpersonal/group discussion from healthcare giver to a large extent.

Research Question Two: What is the level of knowledge of Imo State parents on public communication campaigns on the symptoms and treatments of clubfoot in children?

Table 1: Responses on the level of knowledge of Imo State parents on public communication campaigns on the symptoms and treatments of clubfoot in children?

S/N	Item	\bar{X}	TF	Decision
1	clubfoot are mostly common with children	3.1	377	Accept
2	clubfoot is life threatening	3.5	377	Accept
3	children with clubfoot can have a better life after treatment	3.3	377	Accept
4	surgical procedure is the best way of treating clubfoot	3.0	377	Accept
5	the symptoms of clubfoot are usually seen at the abdomen region	3.0	377	Accept
6	early treatment of clubfoot will not require surgery	3.0	377	Accept
Grand mean		3.1		Accept

These questions were designed to measure the level of knowledge of Imo State parents on public communication campaigns on the symptoms and treatments of clubfoot in children. In order to achieve this, the researcher designed six leading questions and from the responses gotten the researcher concluded that the respondents' level of knowledge is moderate at a grand mean of 3.1(N=377).

Research Question Three: What is the attitude of Imo State parents to public communication campaigns on the symptoms and treatments of clubfoot in children?

Table 2: Responses on the attitude of Imo State parents to public communication campaigns on the symptoms and treatments of clubfoot in children

S/N	Item	\bar{X}	TF	Decision
1	I take those health messages on clubfoot seriously	3.2	377	Accept
2	All forms of communication messages have been effective in shaping my attitude towards clubfoot issues	2.9	377	Accept
3	Base on the health messages on clubfoot I am willing to seek early treatment for my child	3.1	377	Accept
Grand mean		3.1		Accept

Question raised under this section were aimed at ascertaining the attitude of Imo State parents to public communication campaigns on the symptoms and treatments of clubfoot in children. Analysis

of data reveal that at a grand mean score of 3.0 (N=377) respondents have positive attitude to public communication campaigns on the symptoms and treatments of clubfoot in children.

Research Question Four: To what extent exposure to public communication campaigns have influenced the engagement of Imo State parents towards health care practices that could help to treat children with clubfoot?

Table 3: Responses on the level of knowledge of Imo State parents on public communication campaigns on the symptoms and treatments of clubfoot in children?

S/N	Item	\bar{X}	TF	Decision
1	To reduce the risk of clubfoot I don't encourage smoking or using recreational drugs during pregnancy because of my exposure to health messages on clubfoot.	3.1	377	Accept
2	I encourage the use of ultrasound during pregnancy to check whether the child has clubfoot because of my exposure to health messages on clubfoot.	3.1	377	Accept
3	Once I spot any sign suggesting clubfoot I take my child to hospital because of what I have been told about clubfoot	3.0	377	Accept
4	I visit healthcare centre with my partner to ensure my baby is safe after delivery	3.2	377	Accept
Grand mean		3.1		Accept

Question raised under this section were aimed at ascertaining the extent exposure to public communication campaigns have influenced the engagement of Imo State parents towards health care practices that could help to treat children with clubfoot. Analysis of data reveals that at a grand mean score of 3.1 (N=377) exposure to public communication campaigns have influenced the engagement of Imo State parents towards health care practices that could help to treat children with clubfoot.

Summary of Qualitative Data Presentation (In-depth Interview)

This section focuses on the qualitative data analysis. Questions asked were in tandem with the research questions and it was presented in like manner. The researcher asked question centering on the extent Imo State parents are aware of public communication campaigns on clubfoot symptoms and early treatment. Participants' responses are summarised below

“We do well to tell them all the need to know about clubfoot. I can say they are aware.”

“I must say a big thank you to MiracleFeet NGO they are complementing our role of informing parents of clubfoot. From all indications parents are becoming aware gradually no doubt.”

“Well, I believe they are becoming aware day by day because we do carry out sensitisation among them to awaken their consciousness concerning clubfoot at several occasion.”

“Look around you will see posters about clubfoot they are all gear towards raising awareness and I must confess they are really helping to raise awareness among parents.”

“Unlike before I will say they gradually becoming aware now compare to the past. Thanks to the NGO helping out.”

“Parents sometimes feel somehow at the discovery that their child has clubfoot but that has been changing owing to the sensitization we put out to raise awareness.”

“If I am to rate them currently, I will say they are at moderate level”

From these responses one can infer that Imo State parents are aware of public communication campaigns on clubfoot symptoms and early treatment at a moderate extent.

What is the level of knowledge of Imo State parents on public communication campaigns on the symptoms and treatments of clubfoot in children?

The researcher asked the participants the level of knowledge of Imo State parents on public communication campaigns on the symptoms and treatments of clubfoot in children. Few of the major answers that those interviewed gave were presented below:

“Well, some know what clubfoot is all about especially parents who have a child with the condition. But those of them who don’t have children that have clubfoot don’t usually pay attention.”

“Well, there was one woman who was crying because the child was diagnosed with clubfoot. I tried calming her down but she kept saying that she is in real trouble. She didn’t know that clubfoot is not a death sentence for the child. If she had good knowledge she wouldn’t have been feeling that way”

“Honestly, I will say we are doing our best to inform them about everything concerning clubfoot”

“I think they have a common knowledge about the condition especially now Miraclefeet is carrying out series of campaigns to increase the level of knowledge by the parents.”

“If I am rating I will boldly say they have moderate knowledge of clubfoot especially the parents who don’t have any affected child.”

In line with the responses from interview participants it is confirmatory that the level of knowledge of Imo State parents on public communication campaigns on the symptoms and treatments of clubfoot in children is at moderate level.

What is the attitude of Imo State parents to public communication campaigns on the symptoms and treatments of clubfoot in children?

The researchers asked the participants the attitude of Imo State parents to public communication campaigns on the symptoms and treatments of clubfoot in children. The answers those interviewed gave were presented below

“Oh yes! Their attitude is commendable they react positively to the messages they receive on clubfoot.”

“They are now willing to seek for intervention more than ever and that is awesome I must say. They appreciate the health messages they get here.”

“From my experience they welcome most of the hint will give them through interpersonal and group discussion. We will not relent because in collaboration with Miraclefeet we tend to create massive awareness with the aim of influencing the attitude of parents. So far, it is positive.”

“Hmmm! It is quite interesting to see the way they cluster here with the aim of finding a solution to their child. That is the drive. Such drive is motivated by positive attitude and I must tell you their attitude over seeking early treatment for children with clubfoot.”

From these responses it can be confirmed that the attitude of Imo State parents to public communication campaigns on the symptoms and treatments of clubfoot in children is positive.

To what extent exposure to public communication campaigns have influenced the engagement of Imo State parents towards health care practices that could help to treat children with clubfoot?

The researcher asked the participants the extent exposure to public communication campaigns have influenced the engagement of Imo State parents towards health care practices that could help to treat children with clubfoot. The answers those interviewed gave were presented summarised below:

“To the best of my knowledge the exposure have influenced them positively because every now and then you see parents who always inquire to know the chances their child have not get clubfoot.” *(Researcher interjects)* what is actually the cause of clubfoot? “Well, there is no known cause but women are always advise to stay away from

unhealthy practice that can be harmful to an unborn child such as smoking or taking un-prescribed drugs.”

“Parents seek intervention for their child as soon as they suspect clubfoot and I am sure that can be link to their recent awareness level of clubfoot within the state”

“... Yes, they pay keen attention when they come for counseling. Recently, couples do ultrasound to see their unborn child and know whether they are free from clubfoot”

“I am not surprise at all; parents are trying in bringing their affected child for treatment. This is not the case previously.”

“One of these days as I was coming to work I heard one man like that telling someone whose child has clubfoot, I supposed, to visit the hospital without delay. Such act is commendable informed parents wouldn't waste time if they suspect things like this.”

In line with the responses from interview participants it is clear that to large extent exposure to public communication campaigns have influenced the engagement of Imo State parents towards health care practices that could help to treat children with clubfoot.

Discussion

The objective of this question was to measure the extent to which Imo State parents are aware of public communication campaigns on clubfoot symptoms and early treatment. Quantitative findings revealed that at an average of 57.1% in Imo State, parents are aware of public communication campaigns on clubfoot symptoms and early treatment to a moderate extent. In a similar vein, the qualitative result showed that parents are equally aware, though to a moderate extent. This can be seen in the responses from interview participants: "I must say a big thank you to MiracleFeet NGO; they are complementing our role of informing parents of clubfoot. From all indications, parents are becoming aware gradually, no doubt." "Well, I believe they are becoming aware day by day because we do carry out sensitization among them to awaken their consciousness concerning clubfoot on several occasions." "Parents sometimes feel somehow at the discovery that their child has clubfoot, but that has been changing owing to the sensitization we put out to raise awareness." This finding is not in consonance with the study of Drew (2016), who found that among the factors that hindered treatment-seeking for clubfoot and community-level interventions to improve engagement in low- and middle-income counties were insufficient information about treatments and challenges following treatment, and that at the level of public policy, two-tiered healthcare systems made it difficult for some groups to access timely care. In a similar vein, the study of Alsiddiky et al. (2019) revealed that, in total, 520 of the respondents (69.7%) had never heard about clubfoot syndrome. Among the participants, 5.4% had a child with clubfoot syndrome, and 4.6% were aware of clubfoot because they had an affected child. Also, Iqbal et al. (2021) found that the awareness level regarding clubfoot among the primary caregivers in the Indian scenario is low and has an impact on successful treatment and compliance. The inconsistency with the current study result could be a result of improved efforts to create awareness among parents. In the area of Imo State where this study was carried out, there have been deliberate efforts by stakeholders such as Miracle Feet NGO to create awareness among parents in the state; this could be why the level of awareness is moderate compared to Saudi Arabia, India, etc., where the other studies were carried out. The implication of this finding is that parents are gradually coming out of the dark as regards cases that have to do with clubfoot, especially in Imo State, where this study was carried out.

The aim of this objective was to ascertain the level of knowledge of Imo State parents about public communication campaigns on the symptoms and treatments of clubfoot in children. Findings from the quantitative angle of this study revealed that, at a mean average of 3.1 (N = 377), the level of knowledge of Imo State parents on public communication campaigns on the symptoms and treatments of clubfoot in children is moderate. In like manner, the qualitative study findings share

similarities with the quantitative findings, as seen from the responses of the interview participants. "Honestly, I will say we are doing our best to inform them about everything concerning clubfoot." "I think they have common knowledge about the condition, especially now that Miracfeet is carrying out a series of campaigns to increase the level of knowledge among the parents." "If I am rating them, I will boldly say they have moderate knowledge of clubfoot, especially the parents who don't have any affected children." This finding is in consonance with Alam et al. (2015), who found that in the case of knowledge of parents' roles in the treatment of clubfoot, about 91.2% of parents have knowledge of a weekly visit for treatment, 86.3% know the plaster care, and 52.9% (n = 54) lack knowledge about how to use the brace.

Also, Rasheed et al.'s (2017) results showed that 113 parents participated in the study. Out of them 86(72.3%) knew what is clubfoot, 46(38.7%) replied that they don't know what actually the clubfoot is. However, Iqbal et al. (2016) found that approximately 57.40% of participants had no prior knowledge of clubfoot at all until they had a child born with the deformity in the family. In a similar vein, the study of Alsiddiky et al. (2019) revealed that a total of 520 of the respondents (69.7%) had never heard about clubfoot syndrome, which shows there is low public knowledge of clubfoot, which may be attributed to a lack of awareness campaigns. They went further to note that a lack of public knowledge regarding clubfoot can delay treatment. Based on the findings, it can therefore be inferred that the extent of awareness will determine the level of knowledge of a parent. This study is equally in tandem with the health belief model this study was anchored on.

The quantitative data reveal that, at an average mean score of 3.0 (N = 377), respondents have a positive attitude towards public communication campaigns on the symptoms and treatments of clubfoot in children. The qualitative data is in tandem with the quantitative findings, as seen from these excerpts: "Oh yes! Their attitude is commendable; they react positively to the messages they receive on Clubfoot." "They are now willing to seek intervention more than ever, and that is awesome, I must say. They appreciate the health messages they get here." "From my experience, they welcome most of the hints I give them through interpersonal and group discussion. We will not relent because, in collaboration with Miracfeet, we tend to create massive awareness with the aim of influencing the attitudes of parents. So far, it is positive." In line with this finding, the study of Bugshan et al. (2022) found that health awareness campaigns for improving public health have played a major role in improving a positive, healthy attitude that is capable of improving quality of life and preventing disease. They equally found that awareness campaigns on health issues help influence human behaviour and decision-making when it comes to health issues and their solutions. Bugshan et al. (2022) further revealed that health awareness programmes that include the use of different forms of communication media and the provision of health-related products are effective in changing people's attitudes and behaviours. In a similar vein, Morin et al. (2014) found in their study that a positive rather than negative communication style coupled with the family education paradigm of parents can result in a lower rate of deformity recurrence when treating children with clubfoot using the Ponseti method. Also, the study of Oliveira et al. (2023) revealed that family satisfaction with the Ponseti method of treatment contributes to the positive attitude of parents towards clubfoot treatment of children. In the study of Pigeolet et al. (2022), it was revealed that certain factors can influence parents attitudes: poverty, physical accessibility of clubfoot clinics, the presence of support systems, the educational level of the parents, household-level factors, and cultural norms.

This finding is strongly in consonance with the health belief model this study was anchored on. The health beliefs of an individual will go a long way in influencing some of his decisions concerning health issues.

The objective for this question was aimed at ascertaining the extent exposure to public communication campaigns have influenced the engagement of Imo State parents towards health care practices that could help to treat children with clubfoot. Analysis of data reveals that at an average mean score 3.1 exposure to public communication campaigns have influenced the engagement of Imo State parents towards health care practices that could help to treat children with clubfoot. On the other hand, the qualitative finding is in line with the quantitative finding. The responses give a clearer

picture "To the best of my knowledge the exposure have influenced them positively because every now and then you see parents who always inquire to know the chances their child have not get clubfoot." ... "Well, there is no known cause, but women are always advised to stay away from unhealthy practises that can be harmful to an unborn child, such as smoking or taking un-prescribed drugs." "Parents seek intervention for their child as soon as they suspect clubfoot, and I am sure that can be linked to their recent awareness level of clubfoot within the state." "... Yes, they pay keen attention when they come for counselling. Recently, couples have done ultrasounds to see their unborn child and know whether they are free from clubfoot. "I am not surprised at all; parents are trying to bring their affected child for treatment. This was not the case previously."

In agreement with this finding, the study of Bünzli and Eppler (2018) did note that public communication campaigns are capable of creating social change by influencing audiences' behaviours and thus helping them fulfil their desires. They did not dispute the fact that these campaigns, however, often fail to deliver their anticipated impact. Bugshan et al. (2022) Public health campaigns are used worldwide for a variety of purposes, and when people are exposed to them, they influence health practises that can promote good health. They also noted that through behavioural modification, health communication can reduce mortality and morbidity, thus reducing disease burden. Adegbehingbe et al. (2010) revealed that major clubfoot surgery was not commonly indicated among patients treated with the Ponseti method. The Ponseti clubfoot technique has reduced total care costs, cast utilisation, and clubfoot surgery frequency, and it has also changed the patterns of surgery performed for clubfoot in Nigeria.

The implication is that extensive exposure to public communication campaigns will aid in influencing good health care practises that can lead to early treatment of clubfoot in children. There is no doubt this finding corroborates the position of the health belief model this research study is framed on.

One of the key limitations of the study is getting data for parents as well as data for healthcare providers in Imo State. This posed a big challenge to the study, though the researchers made use of the total population of medical practitioners in Nigeria. Due to the unavailability of data specifically for parents in Imo State, the researchers made use of the general population of residents in Imo State, though parents were selected with the aid of sampling techniques. Though, this sampling technique may introduce bias in the responses from respondents and this constitutes a limitation in the study. The researchers suggested that the fact that this study focuses only on Imo State a more inclusive study where other states in the southeast can be included and then study. Also, researchers can consider undertaking a study from the angle of the social implication of clubfoot in society.

5. Conclusion and Recommendations

Public communication campaigns in this context are geared towards promoting healthcare practises that can lead to the treatment of clubfoot in children. Based on the findings of this study, it can therefore be concluded that parents in Imo State are aware of public communication campaigns on clubfoot, though at a moderate level. The extent of exposure has equally contributed to the level of knowledge about clubfoot. Inasmuch as awareness and knowledge are moderate, they have somehow contributed to the positive attitude of parents towards public communication campaigns on clubfoot symptoms and early treatment of children. This positive attitude of parents, which is predicated on their level of awareness and knowledge, has no doubt significantly influenced health care practises that can lead to early treatment of clubfoot in children, thereby giving them a better chance to live without any form of deformity. In line with the conclusion, it is clear that the findings support the health belief model this study was underpinned. By way of showing that when people become aware and the awareness translate to knowledge there is the propensity to affect attitude that can give rise to a particular health behaviour which the HBM upholds. In summary, this study has been able to validate the postulation of the health belief model based on empirical findings. In line with the findings the following recommendations are put forward:

1. The fact that parents are aware to a moderate extent is not encouraging. There is a need to fully utilise all manner of channels for public campaigns by stakeholders so that the level of awareness will increase tremendously.
2. Special care, in terms of information, needs to be given to parents by healthcare providers so that it will build their knowledge on several issues that have to do with clubfoot in children.
3. Public communication campaigns should be persuasive in nature so that they will keep influencing the positive attitudes of parents, especially towards health messages.
4. Parents should be encouraged to always avail themselves of health messages on clubfoot from certified sources so that they will always be on the right track towards health care practises that will not be detrimental to their children.

For the study implications, the results of this study will have significant implications for public health policy and practice in Imo State and Nigeria as a whole. By identifying the specific knowledge gaps and misconceptions held by parents, public communication campaigns can be designed to target these areas and improve overall awareness. Additionally, understanding the factors that influence parents' treatment-seeking behaviours can inform the development of strategies to promote early detection and intervention for clubfoot cases.

Also, it will help the government, agencies like the Ministry of Health, World Health Organizations and non-governmental agencies to ascertain the effectiveness of the public communication campaigns in promoting healthy living in the society.

To society, it will help them know the available health facilities, best practices in health matters, curative and preventive measures if necessary in tackling clubfoot cases in children.

The findings of this study will contribute to the existing body of knowledge on clubfoot in Nigeria and help identify gaps in parental awareness and practices. It will be a resource material for researchers who may wish to carry out studies in similar areas. This study has been able to extend the literature on the issue of clubfoot in Imo State and, by extension, Nigeria. Also, the adoption of mixed methods has significantly contributed, as previous studies were mostly cross-sectional surveys. This study has also been able to explore the area of public communication campaigns on clubfoot, as there is a dearth of studies in this regard, as empirical evidence revealed.

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APPENDIX I
Cronbach's Alpha Reliability Test Result

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.718	.757	8