

Knowledge, Attitude and Practice of Hand Washing among Mothers of Children 0-59 Months of Age in Lagos Nigeria

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Abstract This study examined the knowledge, attitudes and practice of hand washing among mothers of children 0-59 months of age in Lagos Nigeria. The descriptive survey method was used to gather data for the study. The study was conducted in three local government areas of Lagos. The local government areas are Eti-Osa, Lagos Mainland and Alimosho. 934,886 female residents of the three local government areas formed the population of study while 406 respondents formed the sample size. Purposive sampling technique was used to select the respondents. The study found that 7 in 10 mothers of children 0-59 months of age had high exposure to the campaign about the danger of dirty hands (73.8%). About 6 in 10 of them similarly had high knowledge of the subject matter and as a result, mothers who were knowledgeable about hand washing practiced it. It concluded that has been a gap between recommendations on improving hand washing practice and actual actions on such recommendations. Hence, this study recommends that intervention efforts should address the infrastructure gaps that negatively impact on the availability of these hand washing-boosting factors, particularly, access to water, if improvement is to be achieved in terms of practice.

Keywords Hand Washing, Knowledge, Attitude, Practice, Child Survival, U5MR

1. Introduction

There is high mortality rate among children less than five years in Nigeria. According to the National Population Commission and ICF International, the Nigeria Demographic and Health Survey, mortality rate was 157 per 1000 live births and child mortality rate was 75 per 1000 live births in 2008. In 2013, the figure was 128 and 69 deaths per 1,000 live births, respectively [16]. India's 24

percent and Nigeria's 11% together constitute more than 30% of children less than five years mortality rate globally. Child mortality figures released by UNICEF in September 2013 show that some 2,000 children under five years of age die each day from diarrheal diseases, with a vast majority of them contracting these diseases as a consequence of lack of safe water, sanitation and basic hygiene. [15] The global figures suggest that at an average of 121 children of under five years' deaths, Sub-Saharan Africa is the worst-hit region, followed by South-East Asia, the Eastern Mediterranean Region, and the Western Pacific Region, and lastly the European region [10].

Globally, infectious diseases remain leading causes of childhood morbidity and mortality. They are also account for 64% of all deaths in children under five years of age [9]. Diarrhea is responsible for 19% of all childhood mortality while pneumonia is the cause of 16% those deaths. Similarly, respiratory tract infections joins as the most familiar causal factors for morbidity and mortality among under five years children, especially those in low and middle-income countries, and it is the children in the lowest socio-economic cadre who suffer the highest morbidity and mortality rates [11] [12] [13]. It is human contact with bacterial pathogens through contaminated hands or generally sub-optimal hygiene that that directly causes these diseases [8] [14].

One of the most effective and least disruptive hygiene-promoting practices is hand washing. Hand washing, especially with soap, is considered to be one of the most cost-effective practice which can enhance personal and ultimately, public health [19]. Different studies have shown that hand washing is key in hygiene management in a bid to reduce under five years mortality [13] [20]. Simple action of washing hands with soap (with particular reference to washing hands at the critical times) can break off the transmission of the pathogens that cause diarrhea and pneumonia. Reviews of epidemiological studies suggest that common practice of hand washing with

soap could decrease the threat of severe diarrhea by 48% and the possibility of any diarrhea by 47%. Further reviews conclude that hand washing with soap could reduce the risk of conditions like pneumonia by up to 23%. [22] [23] [24] Most recently, the Ebola pandemic has hit some countries in Africa, Nigeria inclusive, killing over 8,000 people [25] [26]. In the awareness campaigns to ensure proper health behavior in controlling the spread of the virus, hand washing, when done right, has been identified as one of the key means of achieving this objective [27] [28].

Assuming that the number of lives saved is comparative to the reduction in disease risk, one can infer that that the lives of 0.603 million children aged 1-59 months may possibly be saved annually from diarrhea and pneumonia by hand washing with soap [2] [29] [30].

However, beyond just washing hands, the emphasis in most literature is on the critical times that hand washing must be undertaken. Hand washing is considered as properly done when it is:

- Done for a minimum of 30 seconds
- Done with a combination of soap or ash and, preferably, running water
- Done at critical times including (a) before eating, (b) after handling child's faeces, e.g. changing diapers, (c) before preparing food, (d) before feeding a child, (e) after defecating.

In Nigeria, according to a study conducted in 2013 by Isibor, the average rate of hand washing after using the toilet stands at a 3% in rural Nigeria, which is a far way beyond the global average of 17% [31]. In Ghana, the National BCC Strategy for 2011 cites results of studies done on reported patterns of hand washing, especially during critical times, and reports that after average rates after using the toilet (90%), before meals (86%), after meals (62%), after changing dippers (29%) and after visiting the urinal (23%). In Malawi, hand washing practice after using toilet is around 35 percent. A study in Bangladesh found that at critical times, hand washing rates stood at 34% after defecation, while only 1% of rural dwellers were observed to wash their hands before feeding a child, which was not the case in Ghana^[32]. It went on to note that in most cases, hand washing was only engaged in when the hands were perceived to be dirty, as evidenced most times by the presence of dirt under the fingernails.

Literature on effective hand washing highlights the importance of stemming the faecal-oral contact as this was the major means by which diarrhea can be contracted. Contact between contaminated hands and food (and the face) is also mentioned, especially with reference to both diarrheal and respiratory infections as well as eye infections. It is therefore expected when studies show that hand washing at the above-mentioned critical times, especially when faeces are contacted, reduces diarrheal prevalence in under five years children by up to 47%^[2] and respiratory infections by up to 30%^[26]. There are several

studies which show the extent to which compliance to hand washing at crucial times.

Hence, study of knowledge, attitude and practices (KAP) of hygiene (hand washing) remains essential in African countries, especially with the different intervention programmes being championed by government, multinational companies – via a shared values approach to corporate social responsibility (CSR), community-based groups and philanthropic individuals. These interventions are designed to respond to the gaps in KAP, especially given the degree to which regular hand washing is accepted as a norm. This research study is therefore on knowledge, attitude and practice of hand washing among mothers of children less than five years in Lagos State.

2. Methodology and Data Collection

The aim of this study was to determine the extent to which mothers of children less than five years in Lagos State know of handwashing as a practice and the extent to which this knowledge influenced hand washing practice among them. The study focused on the opinion of mothers of children who were less than five years on their hand washing knowledge and practice.

Research Design

The research approach was non-experimental, quantitative and descriptive.

Method

Survey method was employed to gather data in three purposively selected local government areas in Lagos State. The three local government areas are Alimosho, Eti Osa and Lagos Mainland. They were selected based on socio-economic category (SEC) to include high income (Eti-Osa), middle income (Lagos Mainland) and low income (Alimosho). Inclusion criterion covered nursing mothers with children less than five years.

Population

The study population comprised all the women in these three local government areas. The census conducted in 2006 by the Nigerian government puts the population at 934,886. The breakdown is as follows:

Eti-Osa = 156,132
Lagos Mainland = 124,933
Alimosho = 653,821
Total=934,886

Sample Size

The sample studied was 406, determined based on proportion relative to the total population of women in each

of the local government areas. The distribution per local government area amounted to 51 (Eti Osa), 80 (Lagos Mainland) and 275 (Alimosho).

Inclusion/Exclusion Criteria

Only mothers with children of less than five years were selected while women who were unmarried, either as a result of loss of husbands, divorce or separation, or not nursing any child under the age of five years, were left out.

Sampling Technique and Procedure

A purposive sampling technique was adopted to select the respondents. Purposive sampling is one of the non-probabilistic sampling techniques, which allows researchers to set inclusion/exclusion criteria for respondents-to-be. For this study, the sampling technique ensured that only relevant women with children less than five years were selected as respondents.

The respondents selected on face to face basis. In Lagos state, like other states in Nigeria, local government areas are subdivided into wards. For instance, Alimosho is divided into seven wards, Eti Osa has eight wards and Lagos Mainland has nine wards. Each of these wards has an average of 15 streets. To make it manageable, four wards were selected in each of the local government areas with survey carried out within their streets. Not all houses in the selected wards had mothers with children who were less than five years, purposive sampling ensured that there were more streets to choose from to select the respondents in their houses.

Research Instrument

The instrument used for this study was questionnaire. The questionnaire contained 18 relevant variables, including demographics. The questionnaire was designed with close-ended variables.

Response Rate and Data Analysis

A response rate of 92% was achieved as out of the 406 questionnaire copies administered. This indicates 374 were properly filled and suitable for analysis. Collected data were subjected to statistical analysis using SPSS 20 which looked to test awareness and knowledge level as well as practice of hand washing among mothers of children that were less than five years in age.

3. Results

Variables on awareness, knowledge and practice were recorded during analysis into high, low or no awareness, knowledge and practice. The following are the results.

Table 1. Hand washing awareness level

Number of respondents	
Awareness, n %	(n = 374)
High awareness	276 (73.8%)
Low awareness	90 (24%)
No awareness	8 (2.1%)

Table 1 shows that majority of mothers with children less than five years had become aware of the information about hand washing. This has created high awareness such information.

Having established that majority of the mothers of children less than five years were well aware of information on hand washing, their knowledge of it was tested with statements that emanated from hand washing information. The statements were recoded into high, low and no knowledge. Would high awareness result in high knowledge? The result is presented in table 2 below.

Table 2. Hand washing knowledge level

Number of respondents	
Knowledge, n %	(n = 374)
High knowledge	253 (67.7%)
Low knowledge	121 (32.3%)
No knowledge	0 (0%)

Table 2 shows the level of knowledge possessed by mothers of children less than five years about hand washing. What the table indicates is that about 6 in 10 mothers sampled had high knowledge of what hand washing means (67.7%). Another group of less than 40% had knowledge but such knowledge was low. What this shows is that there is a mix display of knowledge by the respondents. But the table means those who had adequate knowledge of what hand washing is all about, and its implications, are in the majority. The indication that has emerged here is that high awareness has led to high knowledge.

Furthermore, the study tried to establish the attitude of mothers with children less than five years to information about hand washing. Some statements were used to test the attitude of sampled mothers. These statements were then recoded into positive, negative and neutral attitude. The table below established the attitude held by mothers over hand washing.

Table 3. Attitude of mothers

Number of respondents	
Attitude, n %	(n = 374)
Positive attitude	348 (93.2%)
Negative attitude	24 (6.3%)
Neutral attitude	2 (0.5%)

Table 3 shows the attitude of mothers with children less than five years to information on hand washing. As the table indicates, most of the respondents, about 9 in 10 of them, had what could be described as positive attitude towards hand washing as they regarded hand washing as a healthy practice they will engage in because it is necessary for mothers. Only about 6% showed a not so encouraging

attitude some of them said hand washing is important but time wasting or that they washed their hands when it is suitable.

With positive attitude established, the study investigated further the practice of hand washing among the mothers of children are who are less five years. Would they practice hand washing? The next table shows that about 8 in 10 mothers with children less than five years practiced hand washing (81.4%).

Table 4. Hand wash practice

Number of respondents	
Practice, n %	(n = 374)
Practicing	301 (81.4%)
Not practicing	22 (5.9%)
Not sure if practicing	47 (12.8%)

The respondents were asked to demonstrate what they did and for how long. Table 5 below established the pattern of hand washing practice.

Table 5. Pattern of hand washing practice

Number of respondents	
Pattern, n %	(n = 374)
I do for between 1 and 9 seconds	120 (32.3%)
I do for between 10 and 19 seconds	113 (30.5%)
I do for between 20 and 29 seconds	74 (19.9%)
I do for up to 30 seconds and more	64 (17.3%)

Although the respondents practiced hand washing, those who did it in a wrong way were more than those who did rightly. Table shows that only 17.3% of mothers were doing proper hand washing. This indicates while the practice of hand washing was high among mothers of children less than five years in Lagos, they really were not doing it the hygienic way because when they washed their hands, they were not doing so long enough to prevent diseases.

4. Discussion of Findings

This study has made some revelations and they are presented as follows:

1. Most of the mothers of children less than five years had been greatly exposed to information on hand washing and this awareness has led to high knowledge of it as a good way to combat diarrhea and other children life threatening diseases.
2. It has been discovered that the attitude of mothers of children less than five years is positive. Access to information by the mothers is important in terms of influencing behaviour. Both Health Belief Model and the diffusion of innovation theory have information dissemination and knowledge sharing as key behavioural determinants. Exposure to hand washing information has created high knowledge and this has led to positive attitude and reception.
3. Most of the mothers of children less than five years have been found to practice hand washing.

However, such practice, when investigated further, did not match the recommended ways of doing. Only a few of them engaged in proper hand washing. While available information ensured that mothers of children less than five years had awareness and knowledge, as well as positive attitude to engage in hand washing, the findings have shown that such awareness and knowledge were inadequate as what they did was in opposite of what information on hand washing taught them.

4. The outcomes of this study corroborate those from the study conducted by Pittet and Boyce (2001) and the study of Bello, Effa, Okokon and Oduwale (2013) on the factors that influence hand washing practice. The studies in question established that hand washing practice may be influenced by an interplay of knowledge, belief, attitude and socioeconomic factors. In a similar vein, this study has established a nexus between awareness, knowledge and attitude of mothers of children less than five years and their practice of hand washing.

5. Conclusions

Hand washing is clearly an international agenda domesticated in individual countries, including Nigeria, to influence hygienic behaviour among mothers of children less than five years. A number of studies have produced a volume of literature on the benefits of hand washing, not just to reduce mortality rate of children less than five years, but also to combat common diseases, especially those with a faeco-oral transmission pattern. From the findings of this study, it is been established that although awareness, knowledge, attitude and practice was high, except hands of mothers are washed properly in accordance with instructions from hand washing information, desired results will not be achieved. The conclusions that can be reached from the findings are that one, the information provided on hand washing was not adequate or its intent was not clear for mothers to understand it. Chances are also, that everything could be right the information provided on hand washing but some beliefs held by the mothers prevented them from heeding the recommendations, thereby creating an impossible scenario maintain a proper hand washing culture.

6. Recommendations

1. The outcome recorded by this study suggests that with room for improvement, the campaigns from international organisations are influencing the way mothers of children less than five years to become aware and knowledgeable about the need to practice regular hand washing. However, there is still about a quarter of mothers of children less than

five years who either low or no awareness and knowledge, it is recommended that the sponsors of the campaign should intensify efforts and increase exposure slot in the mass media in order to get more caregivers know about the benefits of hand washing.

2. The study has revealed that the practice of hand washing among the mothers of children less than five years is impressive but not properly done. It therefore means there is room for improvement. Efforts should therefore be made through the international agencies with supports from local authorities in the country to make more mothers practice and engage in washing their hands properly and at all times in order to prevent diseases of different types to children under five years.

Beyond mass media campaigns, there is the need also for interpersonal and community campaigns as a means of ensuring that hand washing becomes a part of popular culture. Opinion leaders, socio-political leaders, and even celebrities can form part of the campaign to encourage people, especially mothers of children less than five years, to practice hand washing, not as a passing fad, but as a survival lifestyle.

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