



# HAND-WASHING KNOWLEDGE AND PRACTICE AMONGST HEALTHCARE PRACTITIONERS IN PRIVATE HOSPITALS IN IJEBU ODE,

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## ABSTRACT

The healthcare-related infection has been a foremost national and international public health concern with millions of people affected globally and thus constituting a grave matter for patient health, and as much as 5 to 10% of hospitals admissions in industrialized nations of the world (Pittet *et al.*, 2008), with the risk similarly as high as 19%, in developing nations and therefore presenting a very serious challenge to health care workers (Angel, 2015). As a result, this study evaluates healthcare practitioners' knowledge and practice of handwashing in private health care facilities in Ijebu Ode, Nigeria. A cross-sectional descriptive design was utilized, and the collection of data was through a structured questionnaire from 98 consenting participants selected through purposive sampling and was descriptively analyzed utilizing Microsoft Excel and a statistical tool for social sciences. According to the results, a good number of health practitioners in private facilities in Ijebu Ode have high knowledge and hand-washing practice with 96.9% and 837% respectively. Hence, the work concluded that health care practitioners in private hospital facilities in Ijebu Ode have adequate knowledge of hand hygiene and practice. The study, however, suggested that hospital authorities should ensure adequate motivation and amenities for hand-washing activities are made available to ensure its sustainability.

**Keywords:** Handwashing, Healthcare Workers, Ijebu Ode, Knowledge, Practice, Private Hospital

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## **INTRODUCTION**

Healthcare-related infections have been a grave matter of national and international public health concern with millions of people affected globally and therefore a grave matter for patient health, which constitutes around 5 to 10% of hospitals admissions in industrialized countries, and in under-developed nations, the risk is 2 to 20 times more and with the percentage of infected patients repeatedly exceeding 25% (Pittet *et al.*, 2008). According to Weinstein, (1998), more than 1.4 million patients in industrialized and unindustrialized nations are plagued by healthcare-related infections. The increasing likelihood of occurrence of these infections, according to Angel, (2015), is as high as 19%, in developing nations and therefore presents a very serious challenge to health care workers.

A series of empirical investigation has demonstrated that healthcare workers' hands are the leading pathway of communication of healthcare-related infections, and in this regards hand hygiene is a crucial and economically friendly means of ensuring a decline in the spread of healthcare-related infections. For instance, a meta-analysis by Aiello *et al.*, (2008), showed that improvement in handwashing reduces the occurrence of respiratory disorders by 21% and intestinal sicknesses by 31%. A similar empirical investigation also revealed that washing hands with detergents brings about a reduction of the chances of diarrheal illnesses by 42% to 47% and improving this may well save the lives of millions (Curtis & Cairncross, 2003).

Nonetheless, numerous works have clearly shown that the routine hand-washing practice by health professionals has been inadequate. For example; a study by Ojong *et al.*, (2014) opined that a proportion of 42.2 per cent of the health professionals practiced hand-washing always and 34.3% sometimes, while 23.5% do not. Similar observation shows that a proportion of 97.7 per cent of healthcare providers wash their hands more frequently upon touch or bedside process than before 61.4%, (Ekwere and Okafor, 2013).

## **JUSTIFICATION**

However, though several types of research on hand-washing knowledge as well as practices by healthcare givers have been well documented, relatively few such studies have evaluated hand-washing actions, especially in the private healthcare facilities, with potentially limited health system resources. This study will, therefore, prove valuable in finding knowledge gaps in handwashing and practice amongst health caregivers in private health facilities.

## **PURPOSE**

The work was carried out to ascertain knowledge of handwashing and practice amongst Health Givers in Private healthcare facilities in Ijebu Ode, Nigeria.

## **OBJECTIVES**

Objectively, this work seeks to:

- ✓ Examine knowledge of handwashing by Professional Health Givers in Private Health-facilities in Ijebu, Nigeria.
- ✓ Evaluate the level of practising of handwashing by Professional Health Givers in Private Health-facilities in Ijebu, Nigeria.

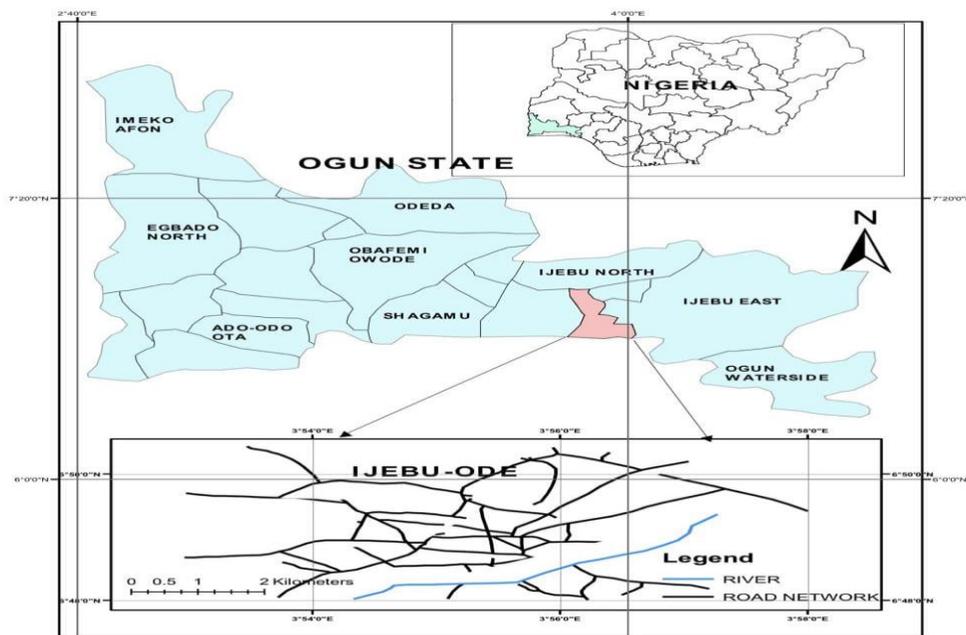
## RESEARCH QUESTIONS

1. What is the knowledge level of handwashing by professional Health care Givers in a Private owned Hospital in Ijebu Ode, Nigeria?
2. What are the levels of self-reported hand-washing practice by professional Health care Givers in a Private Hospital in Ijebu Ode, Nigeria?

## MATERIALS AND METHODS

### STUDY AREA

Hand-washing knowledge and practice by health professionals were conducted in the City of Ijebu Ode, Ogun State, Nigeria, which is located some 60km north-west of Lagos, and with an estimated population of 154,032 according to the 2006 National Census (see fig. I).



**Figure 1:** Ijebu Ode Spatial Map. **Source:** Oke and Oyebola (2015)

### SAMPLE AND SAMPLING TECHNIQUES

Ninety-eight (98) respondents were purposively selected to include all consenting healthcare workers from ten (10) of the randomly selected private health facilities in Ijebu Ode, Nigeria.

### RESEARCH DESIGN AND PROCEDURE FOR DATA COLLECTION

The investigation adopted a descriptive cross-sectional study to examine Knowledge of handwashing and Practice by private-sector healthcare personnel in Ijebu Ode, and primary data for this study were acquired using structured questionnaires administered to the ninety-eight (98) selected respondents, to elicit information on hand-washing knowledge and Practice.

## **METHOD OF DATA ANALYSIS**

Data were descriptively analyzed using Microsoft Excel and a statistical tool for social sciences and the result was presented by using frequency tables, graphs, and charts.

## **CLASSIFICATION OF HAND-HYGIENE LEVEL OF KNOWLEDGE AND PRACTICE**

These were appraised using hand-washing practice variables which comprise "Yes" or "No" and "I Don't Know" questions on general hand-washing knowledge, "Always" or "Sometimes" and "Never" on hand hygiene Practice, and the score of over 75% was regarded as good, 50-75% fair and less than 50% low. This was adapted from a previously published study by Kudavidanage, *et al.*, (2011), cited in Mbroh (2019).

## **SELECTION CRITERIA**

All health personnel from the selected private health facilities who were available and interested in participating during data collection were included, and others who are not interested were left out.

## **ETHICAL CONSIDERATION**

Official approvals from the hospitals were received, and informed consent was also received from all participants who agreed to take part in the investigation with the assurance of confidentiality.

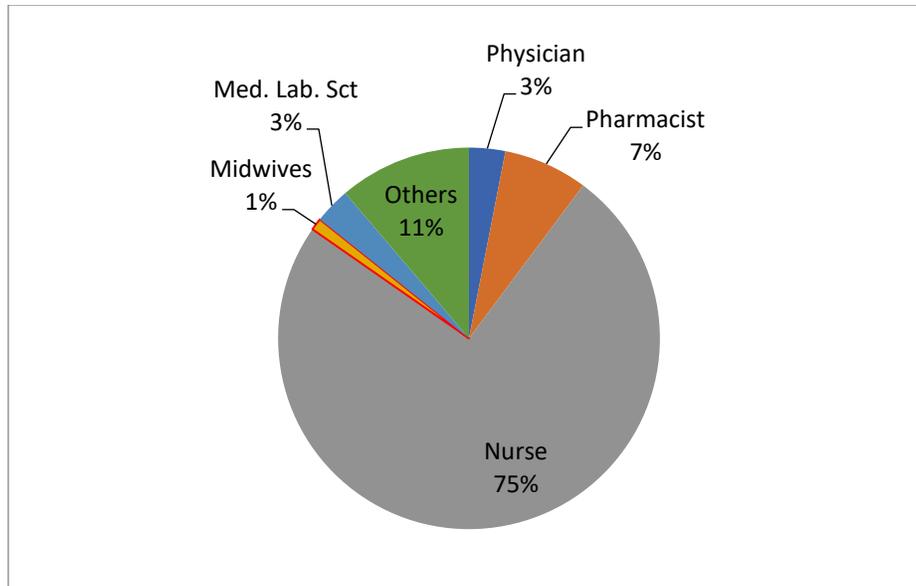
## **RESULTS**

Table 1 revealed that 39.8% were within the ages of 21-25 years, 24.5% were less than 21 years, 18.4% were 26 – 30 years, while 7.2% and 10.2% were within 31 – 35 years and 36 years and above respectively. Minority 12.3% were males while 87.8% were females. Similarly, the majority 71.4% were single while 28.6% were married. 73.5% were Christians, while 26.5% were Islam. In profession, the majority 74.5% were Nurses, 7.2% were Pharmacists, while both Physicians and Laboratory Scientists were 3.1%, respectively, and 9.2% (see fig. 2).

Table (2) shows that a high number of 98.0% of participants provided the right answers to the test questions on proper and consistent hand washing and preventing diseases in health facilities. Immediately following this was that appropriate hand-washing entails moistening, applying soap, friction, rinsing and drying effectively, and health professionals should wash hands or apply antibacterial hand rub before wearing or upon removal of gloves with 96.9% respectively. Similarly, the question that elicited the lowermost figure of accurate responses with 8.2% was "one does not require hand-washing for those who perform their activity with caution". However, the general hand-hygiene knowledge shows that a significant number 96.9% have high knowledge of handwashing (see fig. 3).

**Table 1: Demographic Data (N = 98)**

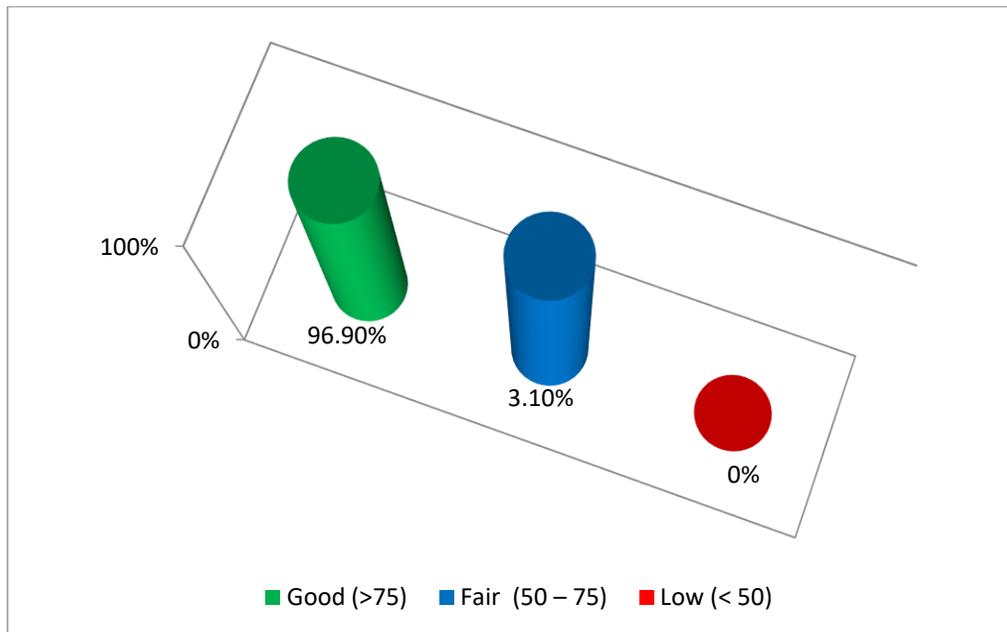
<b>Age</b>	<b>Freq.</b>	<b>Perc.</b>
< 21	24	24.5
21 - 25	39	39.8
26 - 30	18	18.4
31 - 35	7	7.1
>36	10	10.2
<b>Total</b>	<b>98</b>	<b>100.0</b>
<b>Sex</b>		
Male	12	12.2
Female	86	87.8
	<b>98</b>	<b>100</b>
<b>Marital Status</b>		
single	70	71.4
married	28	28.6
	<b>98</b>	<b>100</b>
<b>Religion</b>		
Christian	72	73.5
Islam	26	26.5
Tradition	0	0
	<b>98</b>	<b>100</b>
<b>Profession</b>		
Physician	3	3.1
Pharmacist	7	7.1
Nurse	73	74.5
Midwives	1	1.0
Med. Lab. Sct	3	3.1
Others	11	11.2
	<b>98</b>	<b>100</b>



**Figure 2:** Participants Distribution by Profession

**Table 2:** Knowledge of Handwashing of Study Participants (N = 98)

S/N	Variables	Yes		NO		I Don't Know		Total
		F	%	F	%	F	%	
1	Direct or indirect contact is one of the essential pathways for the spread of hospital-related infections	89	90.8	1	1.0	8	8.2	100.0
2	Regular and effective handwashing inhibits disease spread in health facilities	96	98.0	1	1.0	1	1.0	100.0
3	You do not require handwashing for those who carry out their activity with carefulness	8	8.2	86	87.8	4	4.1	100.0
4	One does not require handwashing when hand-gloves are effectively worn	28	28.6	68	69.4	2	2.0	100.0
5	Health professionals should regularly wash hands always on arrival at the health facilities	94	95.9	2	2.0	2	2.0	100.0
6	Handwashing should be practiced consistently even when hand-gloves are worn	87	88.8	9	9.2	2	2.0	100.0
7	Appropriate hand-washing entails moistening, applying soap, friction, rinsing and drying effectively	95	96.9	1	1.0	2	2.0	100.0
8	Washing hands should be for at least for 10 – 15 seconds	94	95.9	2	2.0	2	2.0	100.0
9	Applying disinfectants when washing hand suppresses microbial concentration on the hands	90	91.8	4	4.1	4	4.1	100.0
10	Health professionals should wash hands or apply antibacterial hand rub before wearing or upon removal of gloves	95	96.9	1	1.0	2	2.0	100.0
11	Alcohol can kill microbes when compared to water	82	83.7	11	11.2	5	5.1	100.0
12	Handwashing is a sure and most effective mechanism to inhibit the transmission of infection	93	94.9	3	3.1	2	2.0	100.0
<b>General Hand-hygiene Knowledge</b>								
<b>Good (&gt;75)</b>								<b>96.9%</b>
<b>Fair (50 – 75)</b>								<b>3.1%</b>
<b>Low (&lt; 50)</b>								<b>0.0%</b>



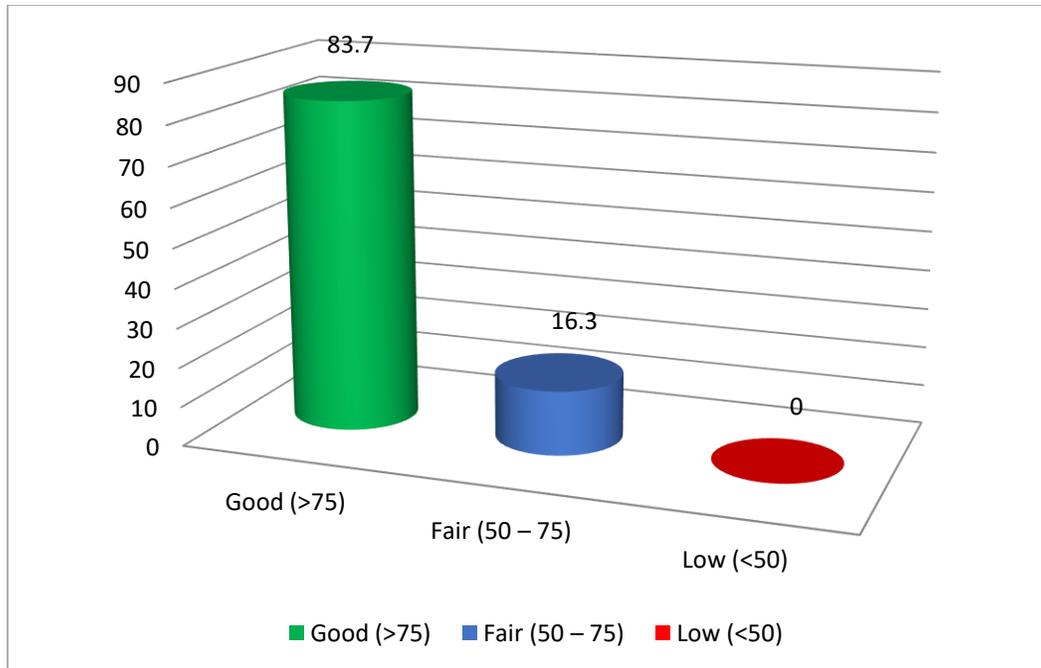
**Figure 3: Distribution of Hand-hygiene knowledge by Participants**

**Table 3: Practice of Handwashing by Participants (N = 98)**

S/n	Practice variables	Always		Sometimes		Never		Total
		Freq	%	Freq	%	Freq	%	
1	Wash hands before contacting patients	78	79.6	19	19.4	1	1.0	100.0
2	Wash hands after contacting patients	96	98.0	2	2.0	0	0.0	100.0
3	Wash hands before and after contacting patients	93	94.9	5	5.1	0	0.0	100.0
4	Wash hands after contacting body secretions	91	92.9	7	7.1	0	0.0	100.0
5	Washing hands before carrying out any hygienic and aseptic procedures	93	94.9	3	3.1	2	2.0	100.0
6	Apply soap during hand washing	90	91.8	8	8.2	0	0.0	100.0
7	Moisten hands with water first and then apply soap	79	80.6	15	15.3	4	4.1	100.0
8	Apply alcohol-laden hand-hygiene rub to keep the hands germ-free	86	87.8	7	7.1	5	5.1	100.0
9	Dry hands after hand washing	82	83.7	10	10.2	6	6.1	100.0
10	Hand-washed prior to exiting the health facility	92	93.9	6	6.1	0	0.0	100.0
<b>General Hand-Washing Practice</b>								
<b>Good (&gt;75)</b>								<b>83.7%</b>
<b>Fair (50 – 75)</b>								<b>16.3%</b>
<b>Low (&lt; 50)</b>								<b>0.0%</b>

Analysis of data from table 3 revealed that hand-washing practice was highest after patient contact with 98.0% followed by, before performing any clean and aseptic procedure and before and after contacting patients with 94.9%

respectively. Conversely, only 79.6% of the participant reported having washed hands before patient contact, which is the lowest of the hand-hygiene practices. More so, the general hand-hygiene practice shows that significant numbers of the participants 83.7% have high hand-hygiene practice (see fig. 4).



**Figure 4:** Participants Distribution by Hand-hygiene Practice

## DISCUSSIONS

Analysis of data on knowledge of handwashing indicated that respondents have good knowledge of basic handwashing with 96.9% (see Fig. 3). A simple clarification for this result may be the educational and professional training received as professionals. The outcome is in line with that reported among healthcare practitioners with 83% knowledge of handwashing (Ekwere and Okafor 2013). Similarly, a study by Ojong *et al.* (2014) revealed that 82.4% of health givers had suitable knowledge of hand-washing. Also, the findings of a recent work showed that 82.9% of health practitioners had high hand-hygiene knowledge (Alemu *et al.*, 2015). However, in contrast, is the work done at Dubti Referral Hospital on hand-washing by Health Professionals with the result showing 65.9% hand hygiene knowledge (Jemal, 2018).

Nonetheless, though, participants in this current investigation possessed proper hand-washing knowledge, the findings showed insufficiencies in some areas of knowledge, most especially in the aspect of necessity for handwashing when performing an activity with caution at 8.2%, and the obligation for handwashing though gloves are effectively worn with 28.6%. In support of these findings, a recent empirical observation by Jemal (2018), demonstrated that 74.7% of the participants failed to realise that hand-washing was mandatory even when gloves were worn effectively, and also, 50.6% of the participants did not know that hand-washing was compulsory though when one is cautious.

Further analysis of empirical data on observed hand-hygiene practice by the participants in this present study revealed good practice regarding handwashing with 83.7%, (see fig. 4). It is believed that knowledge of proper handwashing by the participants, may have significantly influenced their overall hand-washing practice.

In contrast, numerous researchers have reported fair results, and the findings of the present research were comparatively inconsistent with the works carried out by Gulilat and Tiruneh (2014), Alemu *et al.*, (2015), and Ekwere and Okafor (2013), all which were 69%, 68.8%, and 69.5%, respectively. Similarly, a previous but recent observation showed that 42.2% of health professionals consistently practised handwashing (Ojong *et al.*, 2014). However, practising hand hygiene in this current work demonstrated that, participants wash their hands after touching the patient with the highest percentage of 98.0% while washing hands before contacting patients were the lowest with 79.6%. This was in agreement with a similar study which showed that 97.7% of respondents wash their hands more frequently upon contact or bedside process than before 61.4%, (Ekwere and Okafor, 2013).

## **LIMITATION**

The investigation adopted a descriptive cross-sectional design and thus, the results depict a single status report, which does not measure the change in the participants' hand-washing practice over time, and therefore, an imperative issue for future investigation.

## **CONCLUSION**

From the findings of the current investigation, the conclusion reached was that professional health givers in a private hospital in Ijebu Ode, have sufficient hand-washing awareness and practice. This by implication, therefore, signifies that the high level of their knowledge of hand hygiene will certainly impact the overall reduction of hospital-related infection occasioned by inadequate handwashing. However, to sustain the current hand-washing practice, it is, therefore, recommended that, hospital management should ensure adequate motivation and essential hand-washing facilities are made available with ease of accessibility to ensure the sustainability of the practice.

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## **COMPETING ATTENTION**

The writers state that competing interests do not exist.

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None

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