Comparison of Hand Hygienic Practices in Nurses of Neonate and Pediatric Unit Allied Hospital and DHQ Hospital Faisalabad

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Abstract: The present study investigates the comparison of hand hygienic practices in nurses of neonate and pediatric unit allied hospital and DHQ hospital Faisalabad. Hand hygiene is a core element of patient safety for the prevention of Health Care Associated Infection (HAIs) and spread of anti-microbial resistance. Its promotion represents a challenge that requires a multimodal strategy. Hand hygiene prevents cross infection in hospitals, but Health Care Workers (HCWs) adherence to hand hygiene guidelines is poor. Easy, timely access to both hand hygiene and skin protection is necessary for satisfactory hand hygiene behavior. Alcohol based hand rub may be better than traditional hand washing as they require less time, acts faster, are less irritating, and contribute to sustained improvement in compliance associated with decreased infection rates [1].

Hand hygiene compliance rates among HCWs rarely exceeds 50% contact precaution are thought to increase HCWs hand hygiene awareness [2]. Health Care associated infections (HCAIs) are the major cause of morbidity and mortality. Hand hygiene is an effective preventive measure [3].

Pakistan ranks third, among the ten high burden countries and accounts for 7% of global neonatal deaths. The latest Demographic of Pakistan Health survey (PDHS) 2012–13 reported a neonatal mortality of 55 per 1,000 live births due to poor compliance of hand hygiene [4]. According to WHO [5], that HCAI is 2 to 20 times more in developing countries rather than developed countries [6]. Hand hygiene is a primary precaution to prevent infection during invasive procedure in neonatal unit therefore nurses liable to improve education about infection control measure and change behavior about hand

INTRODUCTION

Hand hygiene is a core component of patient safety for the prevention of Health Care Associated Infection (HAIs) and spread of anti-microbial resistance. Its promotion represents a challenge that requires a multimodal strategy. Hand hygiene prevents cross infection in hospitals, but Health Care Workers (HCWs) adherence to hand hygiene guidelines is poor. Easy, timely access to both hand hygiene and skin protection is necessary for satisfactory hand hygiene behavior. Alcohol based hand rub may be better than traditional hand washing as they require less time, acts faster, are less irritating, and contribute to sustained improvement in compliance associated with decreased infection rates [1].

Hand hygiene is the practice, which keeps the hands free from pathogens or decrease the amount prior to any procedure or touching the patient. Hand hygiene prevents cross – infection in hospitals, but HCWs adherence to hand hygiene is poor. Easy, timely access to both hand hygiene and skin protection is necessary for satisfactory hand hygiene behavior [1].

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hygiene compliances [7]. Adequate hand hygiene compliances in nurses will help in reducing the number of hospital acquired infection around about 15% to 30% [8].

Statement of Problem
Health care associated infections persist as a major problem in most Intensive Care Units. Hand hygiene is the most simple and effective method for the prevention of these. So assess the reported hand hygiene practices and observing is very much important to find out gaps, plan remedial measure to reduce HAIs. From this point of view the researcher decide to assess the hand hygiene practices among HCWs.

Objectives of the study
The objectives of this study were:
- To assess nurses compliance of hand hygiene related to new born care.
- To assess association between hand hygiene training and hand washing practice

Research Questions of the study
Three research questions were posed:
- Is nurses’ compliance to hand hygiene attending newborn?
- Do nurses perform hand hygiene compliance according to protocols?
- Is any association between hand hygiene training and hand washing practices?

Significance of the Study
There a lot of studies all over the world however, there is scarcity of information related to hand hygiene in Pakistan. This study will help in providing information about nurse’s compliance of hand hygiene attending new born babies. This study will help nurses to perform hand hygiene according to standard protocol and improve quality of care. This study finding will help the organization to improve practices of hand hygiene; it will decrease the infection, mortality and morbidity rate of newborn in Allied and DHQ Faisalabad. Hand hygiene may be effective and low cost method for nurses in hospital setting. In this way they reduce the number of like hood infection [9].

METHODOLOGY
This chapter provides a description of the research approach and design, philosophy study, study location, target population, sample and sampling method, sample size and data equipment’s.

Research design
A descriptive quantitative design was utilized for this study.

Study Population
A descriptive cross-sectional study was conducted in Allied hospital and DHQ hospital Faisalabad.

Sample Size
Sample size was calculated online relief application. 180 sample size calculated in nurses working in neonate and pediatric unit Allied hospital and DHQ hospital Faisalabad. But 150 questionnaires returned back.

Sampling Technique
A convenient non-probability sampling technique was adopted. In the first stage, the questionnaires based on calculated sample was distributed between nurses of neonate and pediatric unit Allied hospital and DHQ hospital Faisalabad. The nurses who were willing to fill the questionnaire, Who were not willing to fill questionnaires were simply ignored. This technique is quicker to gather information. A total of 180 questionnaires were distributed and 150 questionnaires were returned back making a response rate of 89% due to absence of some students during the study period (3.8%), incomplete questionnaires (5%), and lack of interest in the study (2%).

Study Tool
A semi structured questionnaire was used to bring together the following data: socio-demographic characteristics, for example age, residence, sex, marital and working statuses, hand hygienic practices in nurses. A pre-tested questionnaire will be introduced for data collection from Allied hospital and DHQ hospital Faisalabad. Study design will be cross sectional. I will be use convenient sampling technique.

Pilot Testing of the Study
Before the main study reliability and validity of the instruments were tested by pil0t study. Wh0i research prOcedure was f011owed including data c011ecti0n, data ana1ysis and interpretati0n of data. Pi10t study was carried out with sma11 size sample size. The main purp0se of the study was t0 determine the validity and reliability of the instrument. Allied hospital and DHQ hospital Faisalabad in the province Punjab were selected f0r pil0t study by using rand0m sampling technique.

Reliability of Instrument
The Pilot testing checked reliability of the tool. 10 questionnaires were distributed in nurses. The result of these 10 questionnaires was reliable. The researcher checked the Cronbach (alpha) and the values are
Data Collection Procedure

The researcher obtained the requisite copies of the questionnaire according to the sample of the research. The researcher included a covering letter for the purpose to guide respondents about the nature and significance of the study. It was also mentioned that the acquired data would be kept in strict confidence by the researcher.

Data Analysis

Descriptive statistics were reported as frequencies, z-test, means and standard deviations, medians were used to determine the relationship between characteristics of nurses, their barriers to continue higher education among hospital employed nurses.

ANALYSIS AND DISCUSSION

This chapter describes answers of the research questions in a precise manner. Each of the research questions is addressed separately/individually using relevant statistical techniques. Each of the research questions is addressed separately/individually using relevant statistical technique described in tables.

Demographic of the Study

<table>
<thead>
<tr>
<th>Gender</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>150</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age wise classification</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-25 years</td>
<td>16</td>
<td>10.7</td>
</tr>
<tr>
<td>26-30 years</td>
<td>15</td>
<td>10.0</td>
</tr>
<tr>
<td>36-40 years</td>
<td>65</td>
<td>43.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qualification wise classification</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matric</td>
<td>15</td>
<td>10.0</td>
</tr>
<tr>
<td>F.Sc</td>
<td>4</td>
<td>2.7</td>
</tr>
<tr>
<td>F.A</td>
<td>23</td>
<td>15.3</td>
</tr>
<tr>
<td>B.Sc</td>
<td>96</td>
<td>64.0</td>
</tr>
<tr>
<td>B.A</td>
<td>4</td>
<td>2.7</td>
</tr>
<tr>
<td>M.A</td>
<td>8</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Results indicate that gender wise classification female were 150 (100%) percentage.

Results indicate that age wise classification 20-25 years ago were 16(10.7%), 26-30 years were 15(10%) and the percentage of 36-40 years were 65 (43.3%).

I am generally satisfied with my own hand hygienic practices

<table>
<thead>
<tr>
<th>Opinion</th>
<th>F</th>
<th>%</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>agree</td>
<td>150</td>
<td>100.0</td>
<td>1.0000</td>
<td>.00000</td>
</tr>
</tbody>
</table>

Table-7 describes about I am generally satisfied with my own hand hygienic practices. Results indicate that 100% respondents were agree with the statement. The mean is 1.0000 with .00000 standard deviation.

I feel confident in my knowledge of encounters that require hand hygienic during patient care

<table>
<thead>
<tr>
<th>Opinion</th>
<th>F</th>
<th>%</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>63</td>
<td>42.0</td>
<td></td>
<td>2.7333</td>
</tr>
<tr>
<td>Agree</td>
<td>22</td>
<td>14.7</td>
<td>2.7333</td>
<td>.59828</td>
</tr>
<tr>
<td>UN decided</td>
<td>65</td>
<td>43.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table-8 describes about I feel confident in my knowledge of encounters that require hand hygienic during patient care. Results indicate that 42.0% respondents were Strongly agree, 10.7% Agree and the UN decided 43.3% with the statement. The mean is 2.7333 with .59828 standard deviation.
Table-9 describes about I receive formal training for hand hygiene. Results indicate that 100% respondents were Agree with the statement. The mean is 1.0000 with .00000 standard deviation.

**DISCUSSION**

The purpose of my study was to comparison of hand hygienic practices in nurses of neonate and pediatric unit Allied hospital and DHQ hospital Faisalabad. So at the end, in this chapter discus the final result of the study and compare result of my studies with other studies for conclusion. Despite this, present day data suggest that hand hygiene compliance among health care personnel in most hospital is at best, less than 50%. Working in ICUs, Doctors under staffing, overcrowding, high intensity patient care insufficient time, lack of institutional priority etc. were some of the risk factors for poor hand hygiene compliance. Many attempts have been made in the past to improve hand hygiene compliance such as educational intervention, motivational programmes etc. However, most of these met with little or temporary success. Hence several multi-faceted interventions, which include behavioral, environmental and social changes, have been suggested and tried to sustain improvement in hand hygiene compliance. In the present study the investigator assess the hand hygiene practices among HCWs in CSICU. On analysis it was found that 38% of respondents use soap and water and 70% used alcohol based hand rub for hand hygiene. Suchitra et al., [10] conducted a study to assess the hand hygiene compliance, in the study the researcher given 270 opportunities for hand washing. The categories of staff were doctors, nurses, and ward aides. The total compliance was 63.3%. Hand washing done by soap in 41 situations (71.9%). The remaining 16 (28%) opportunities were by use of hand disinfections agents. Compliance in hand hygiene was differed among the different categories of HCWs.

**CONCLUSIONS**

The aim of my study to assess compliance with hand washing among nurses caring newborn babies in Allied and DHQ hospital. Hand washing is a primary measure to reduce infection and prevent spread of health care associated infection. Descriptive quantitative design used for this study. Data was collected through adopted questionnaire Descriptive statistics was used for analyzing date. The results of this study conclude that nurses compliance rate low regarding hand hygiene. Nurses do not follow standard protocols attending newborn babies. Therefore result suggests that nurses improve hand washing compliance attending hospitalized babies.

**RECOMMENDATION**

Based on result of this study, the following recommendations are formulated:

- Hand hygiene is a fundamental procedure prevents and cures from disease. WHO give standard protocols for hand washing but nurses do not perform hand washing according to protocols. WHO guidelines should be pasted in washing places.
- Workshops and teaching session should be arranged for improve hand hygiene practices.
- Proper resources should be provided for hand washing.
- Administration should be made check and balance policy for hand washing.

**Limitation**

The limitation of this study is time shortage and nurses were reluctant to fill full questionnaires.

**REFERENCES**

