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PRACTISE OF ALCOHOL BASED HAND RUB AND REPORTED SKIN REACTIONS AMONG REGISTERED NURSES: A DESCRIPTIVE STUDY

Nursing

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ABSTRACT

A descriptive design adopting a quantitative approach was used in this study. Written consent was obtained from nurses in the selected units for the study who participated in the study after explanation of the aims and nature of the study by the researcher. Nurses on six wards all type of an intensive care unit (ICU, pediatrics ICU and neonatal ICU), medical and surgical ward of Hospital X were asked to participate in this study. Total of 200 nurses, 25 male nurses and 175 female nurses are participate. Tools used have some divisions, first part is concerned with the demographic characteristics of nurses; and checklist to assess Practise of alcohol based hand rub and reported skin reactions. Results shows that the registered nurses do compliance of hand hygiene using alcohol based hand rubs without following the right steps which is according to the World health organization's guidelines.

KEYWORDS

Hand Rub, Nurses, Hand Hygiene, Infection Control.

INTRODUCTION

Hand hygiene refers to the same procedure but by using alcohol based hand rub. Hand disinfection refers to use of alcohol based hand rub to clean hands, either by using medicated soap or alcohol. Some experts refer to the action of "degerming" as the use of detergent-based antiseptics or alcohol. Hand hygiene rub is about rubbing hands with a small quantity (about 2 mL to 3 mL) of a highly effective, fast-acting alcohol based hand rub.

The aim of hand hygiene is to remove dirt and limit the microbial counts on the skin and to prevent cross transmission of pathogens between patients (Tsan, Davis & Langberg, 2008). Since nurses are present 24 hours a day, 7 days a week at the healthcare setting, it is essential to comply the hand hygiene policy and maintain patient's safety.

Semmelweis in 1861 proposed a theory on the importance of hand cleanliness as a preventive measure in pathogen transmission (Risse, 1980). This theory was not acknowledged or accepted by the medical profession until the early 1900s. This lack of acceptance on new knowledge was known as the Semmelweis reflex. It describes a certain type of human behaviour, characterised by a rejection of new knowledge because it contradicts entrenched norms, beliefs or paradigms.

Nearly 180 years after Semmelweis proposed his theory, many HCAIs continue to be caused by pathogens transmitted from one patient to another via healthcare staff who have not washed their hands between patients. Hand hygiene compliance among staff remains alarmingly low (Creedon, 2008 & Gilbert, 2010) and, with the current evidence base emphasising its importance but it is difficult to rationalise why clinicians continue to be resistant towards hand-hygiene practices.

Çelik, and Koçaş (2008) mentioned that there are studies that indicate the poor hand washing practises of nurses which can be attributed by many reasons, including the complicated structure of work station, the characteristics of the patients in departments, the heavy workload in such units, and an insufficient number of nurses.

The researcher observed in clinical area where the nurses neglecting using the alcohol based hand rubs before and after any bedside procedures for example taking blood pressure. The researcher also got feedback from the student nurses in practical area that they are not encouraged by the ward staffs to use alcohol based hand rubs. Face to face interview done by the researcher to the patients in certain wards regarding practicing of alcohol based hand rubs by nurses before and after touching the patients. Most of the patients said that they never saw nurses do so. The points above shows that there is lack of knowledge among nurses regarding alcohol based hand rub and hygienic hand washing. Based on all these reasons listed, the researcher would be liked to know the practise of alcohol based hand rub and adverse effects of alcohol based hand rub among the nurses.

MATERIALS AND METHODS

A descriptive design adopting a quantitative approach was used in this study. Written consent was obtained from nurses in the selected units for the study who participated in the study after explanation of the aims and nature of the study by the researcher. Nurses on six wards all type of an intensive care unit (ICU, pediatrics ICU and neonatal ICU), medical and surgical ward of Hospital X were asked to participate in this study. Total of 200 nurses, 25 male nurses and 175 female nurses are participate. Tools used have some divisions, Self-assessment on effect in 48 hours after the use of alcohol based hand rub was given to the registered nurses in private hospital X. The researcher collected it back after 48 hours from the registered nurses. Descriptive with "Yes" and "No" answers on the reaction such as itchiness, dryness, burning or stinging, skin tightness and bleeding. An observation assessment on technique apply for alcohol based hand rub complied was conduct by the researcher among the registered nurses in private hospital X. the researcher used world health organization (WHO) check list on hand hygienic technique of alcohol based hand rubs.

RESULTS

Demographic data of study subjects

The respondent's ages ranged from 24 to 65 years. Seventy-eight (48.1%) of the respondents are between the age 24-40, seventy-four (45.7%) of the respondents are between the age of 41-55. Regarding to gender, twenty one (13.0%) were males while hundred and forty one (87.0%) of them were female. Educations wise, none of them are certificate holders. Majority of respondents are holding diploma in nursing which are eighty five (52.5%) of them. There forty two (25.9%) of the respondent are diploma in nursing and also have post basic cause. Thirty (18.5%) of the respondents are holders in degree in nursing and five (3.1%) are holders of masters in nursing.

Based on their years experiences eighty four (51.9%) of the respondents have experience less than five years while 78 (48.1%) of the respondents have experience more than 5 years. For the question on availability of alcohol based hand rub, 162 (100%) of the respondents have answered yes.

Table 1 Descriptions of Step in hand hygiene technique with Alcohol-Based Formulation which was practiced by registered nurses at private hospital X, in all type of intensive care unit, medical and surgical ward.

STEPS	Frequency Followed the step	Percentage Followed the step	Frequency Not Followed the step	Percentage Not Followed the step
Step 1 - Apply a palmful of the product in a cupped hand, covering all surfaces	158	97.5%	4	2.5%
Step 2 - Rub hands palm to palm	162	100%	0	0%

Step 3 - Right palm over left dorsum with interlaced fingers and vice versa	102	62.9	60	37.1%
Step 4 - Palm to palm with fingers interlaced	108	66.6	54	33.4%
Step 5 - Backs of fingers to opposing palms with fingers interlocked	98	60.4	64	39.6%
Step 6 - Rotational rubbing of left thumb clasped in right palm and vice versa	98	60.4	64	39.6%
Step 7 - Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa	88	54.3	74	45.7%
Step 8 - Air dry the hands	154	95.1	8	4.9%

Table 1 shows the practice of alcohol based hand rub among registered nurses in private hospital X in all they of ICU, medical and surgical ward.

Table 2: Descriptions of skin reaction after used ABHRs in 48hours.

Type of reactions	Frequency Reactions	Percentage Reactions	Frequency Non Reactions	Percentage Non Reactions
Itchiness	3	1.85%	159	98.15%
Dryness	3	1.85%	159	98.15%
Burning or Stinging	0	0%	162	100%
Skin tightness	0	0%	162	100%
Bleeding	0	0%	162	100%

Table 2 shows the self-assessment report on reaction after used alcohol based hand rub by registered nurses in private hospital X in all they of ICU, medical and surgical ward in 48 hours. It showed that out of hundred and sixty two respondents only 3 (1.85%) respondents have reaction of itchiness and dryness.

DISCUSSION

The researcher also found regarding the assessment of alcohol based hand rubs practise techniques that individuals' technique on practice of using alcohol based rub among the registered nurses in private hospital X, in all type of intensive care unit, medical and surgical ward, all hundred and sixty two nurses do not follow the guideline produced by the World health organization. It shows that the registered nurses do compliance of hand hygiene using alcohol based hand rubs without following the right steps which is according to the World health organization's guidelines.

Hand hygiene is the simplest, most effective measure for preventing nosocomial (hospital associated infections), yet studies indicate that, on average, healthcare workers follow recommended hand hygiene procedures on less than half the number of occasions (Van Asbeck, Clemons, Markham, & Stevens 2007). Nurses' hands come into close contact with patients and are frequently contaminated during routine patient care: e.g. during auscultation and palpation or while touching the contaminated surfaces, devices or materials, for example, changing of dressing (Rogers, Mody & Kaufman, 2008).

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