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RESEARCH ARTICLE

EFFECT OF KNOWLEDGE ON THE ATTITUDE AND PRACTICE OF HAND WASHING TECHNIQUES AMONG STAFF NURSES WORKING IN PEDIATRIC UNITS OF SELECTED TERTIARY HOSPITAL, PUNJAB.

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Key words:-
Handwashing, staff nurses, knowledge, attitude, practice, pediatric units.

Abstract

Hand hygiene is the act of cleaning the hands with or without the use of water with another liquid or soap, for the purpose of removing soil, dirt and micro-organisms which plays a central role among staff nurses in preventing the transmission of various nosocominal infections. The effect of knowledge on the attitude and practice of hand washing techniques among staff nurses working in pediatric units of selected tertiary hospital was studied. Structured questionnaire, Likert scale and Observation checklist were used to assess knowledge, attitude and practice of staff nurses regarding handwashing. The findings of the study concluded that 53.3% staff nurses had average knowledge, 72.2% had favorable attitude towards handwashing and 98.9% had unsatisfactory handwashing practice. There was a positive correlation (r=0.248) between the knowledge and attitude (p=0.019). Although staff nurses (45.5%) had good knowledge but their handwashing practice was unsatisfactory (98.9 %) (p> 0.05).

Introduction:-

Infection prevention is an important part of every component of care of children. New born babies are more susceptible to infection because their immune system is immature. Nurses constitute the largest percentage of the Health care workers (HCW_S) and they are the "nucleus of the health care system". Despite the vast evidences for the benefits of handwashing and efforts to raise awareness of the importance of handwashing, low rates of handwashing compliance continue to be reported worldwide. Promotion of handwashing is a complex issue; it concerns knowledge and attitude of individual staff among which compliance of handwashing may vary. So, this study focused on effect of knowledge on attitude and practice of handwashing technique among staff nurses working in pediatric units.

Materials & Methods:-

A correlational study design was used. The study was conducted on 90 staff nurses working in pediatric units (pediatric medicine ward, pediatric surgery ward, thalassemia, pediatric emergency, pediatric intensive care unit & neonatal intensive care unit) selected by total enumerative sampling technique. A written permission was obtained

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from the Head of Department of Pediatrics and ethical committee of institute. Structured questionnaire, Likert scale and Observation checklist were used to assess knowledge, attitude and practice of staff nurses regarding handwashing. Concealed participatory observation was done to observe handwashing practice of staff nurses. An informed written consent was taken from staff nurses for participation in the study. The reliability of the knowledge questionnaire (r=0.9) and attitude scale (r=0.74) was established with the use of split half method. The reliability of practice checklist was established by inter-rater reliability method (r=0.8). The tools were validated by experts in the field. Descriptive and inferential statistics were used for analysis.

Results:-

All the respondents were females, reflecting the predominantly female nature of the profession. Out of 90 staff nurses nearly two third 60 (66.77%) of staff nurses were between 20-30 years of age. As per their marital status, nearly two third, 56 (66.32%) of staff nurses were married. As per their professional qualification, less than three fourth, 64 (71.21%) of staff nurses were diploma holders (i.e. G.N.M) in nursing, while more than one fourth, 24 (26.87%) were degree holder (B.Sc. Nursing). About 40.1% of staff nurses were posted in Nursery while 25.6% staff nurses were posted in pediatric ward. Others worked in pediatric intensive care unit, thalassemia unit, pediatric surgery and pediatric EMR. Majority of the staff nurses 75 (83.33%) had attended inservice education on handwashing. Less than half, 40.0% staff nurses had no hand drying facility. A statistically significant association was found between the knowledge and frequency of inservice education attended, audit on handwashing and frequency of audit.($p<0.05$)

Fig 1:- Distribution of staff nurses as per their knowledge regarding handwashing.

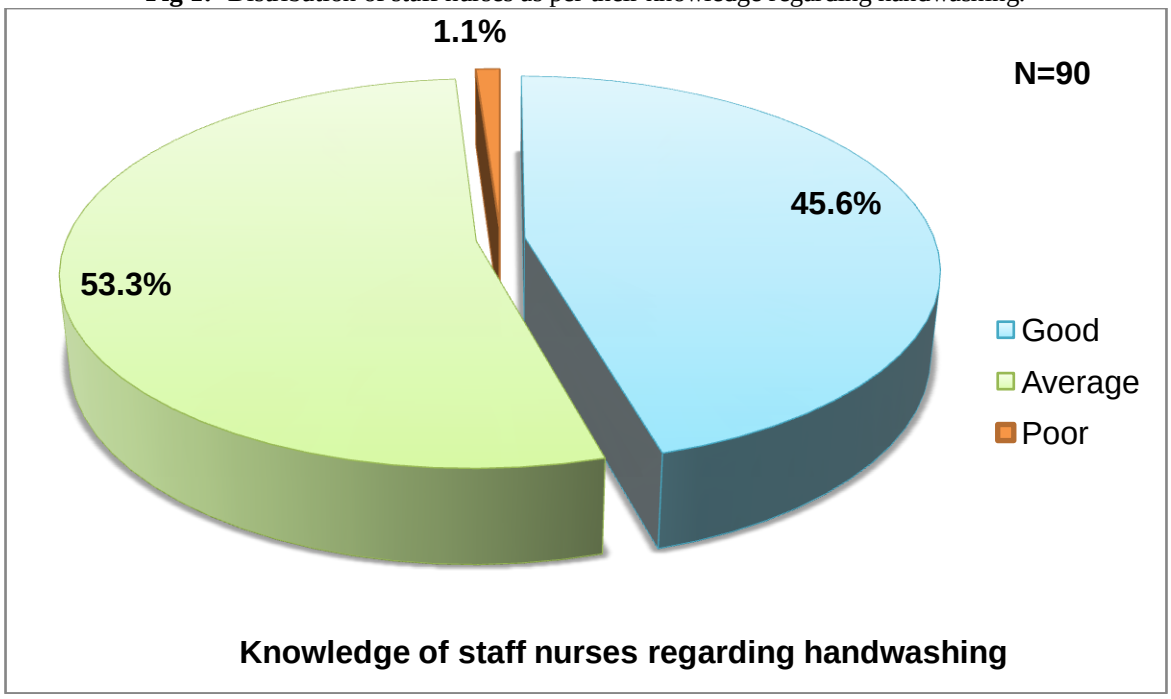

Fig 2:- Distribution of staff nurses as per their attitude towards handwashing.

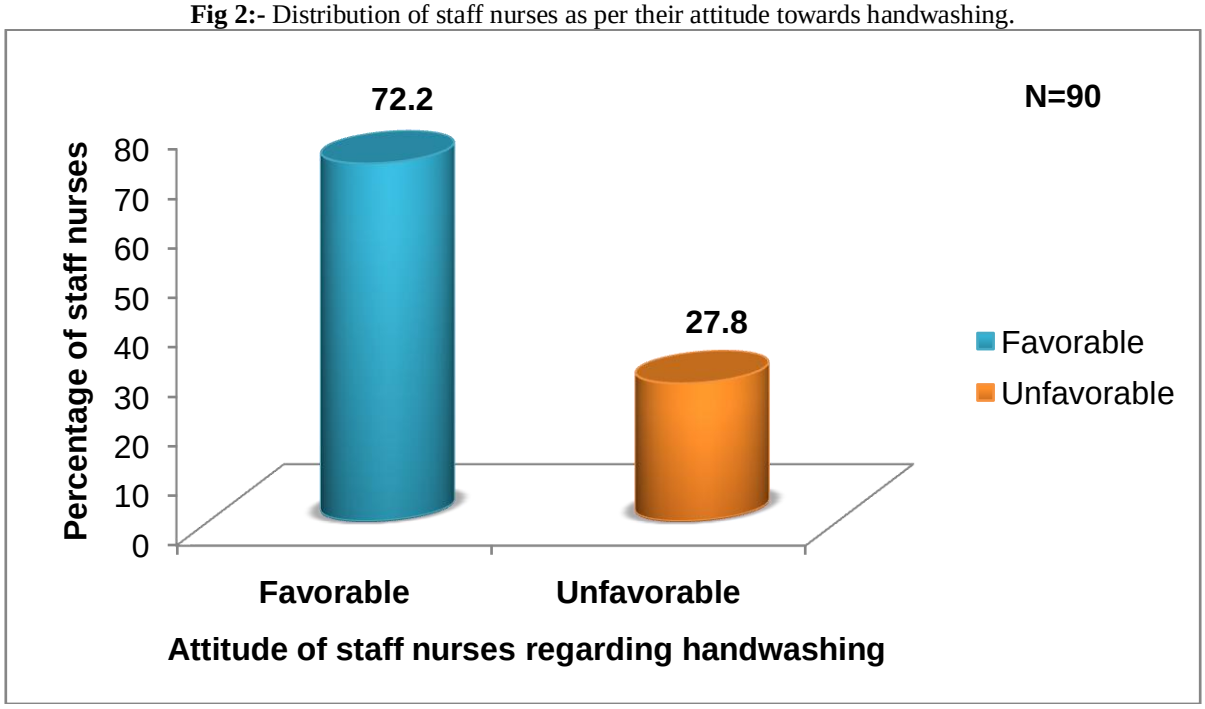

Fig 3:- Distribution of staff nurses as per their handwashing practice.

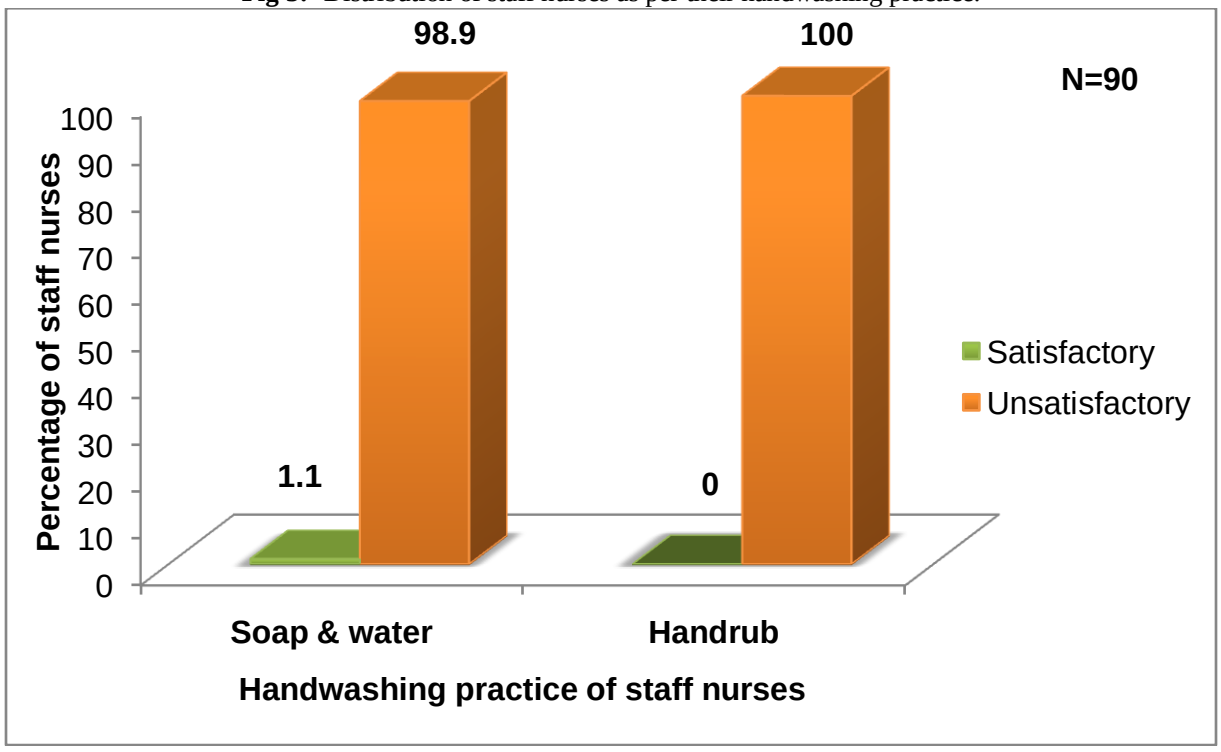

Table 1: Correlation of knowledge with attitude regarding handwashing among staff nurses. N=90

Variables	Mean ±SD	Mean%	r	p-value
Knowledge	14.98 ± 2.183	74.9	0.248	0.019*
Attitude	77.21 ± 6.247	77.21		

**significant (p<0.05) Maximum knowledge score '20' Maximum attitude score '100'*
Minimum knowledge score '0' Minimum attitude score '0'

Table 2: Correlation of knowledge with practice (soap and water) of handwashing among staff nurses. N=90

Variables	Mean ±SD	Mean%	r	p-value
Knowledge	14.98 ± 2.183	74.9	-0.049	0.645^{NS}
Practice with soap and water	2.94 ± 1.685	58.8		

NS= Non significant *Maximum knowledge score '20'* *Maximum practice score '6'*
Minimum knowledge score '0' *Minimum practice score '0'*

Table 3:- Association of knowledge, attitude and practice of handwashing among staff nurses with their professional profile. **N=90**

Variables	n	Knowledge Mean ± SD	Attitude Mean ± SD	Practice with soap and water Mean ± SD	Practice with hand rub Mean ± SD
Area of posting					
Ped. medicine ward	23	14.30±2.27	73.70±6.02	1.57±1.73	3.26±0.96
Thalassemia	04	15.50±2.38	71.50±5.01	0.75±1.50	1.00±2.00
Ped. surgery ward	03	11.67±1.15	75.33±7.02	1.00±1.00	2.67±1.15
NICU	36	15.61±2.02	78.94±5.59	3.36±1.02	2.83±1.08
PICU	23	14.95±1.96	78.52±5.83	4.19±0.98	3.24±1.17
Pediatric EMR	03	15.33±2.52	83.67±4.04	4.67±0.57	2.00±2.00
F-value		2.73	4.20	15.71	3.38
p-value		0.03*	0.01*	0.01*	0.01*
No. of patients assigned					
2-4	56	15.09±2.21	78.86±5.98	3.71±1.07	3.07±1.16
5-7	12	14.92±2.50	75.50±4.23	2.33±1.77	2.50±1.24
8-10	22	14.73±1.98	73.95±6.49	1.32±1.67	2.77±1.44
F-value		0.22	5.98	26.58	1.29
p-value		0.80	0.01*	0.01*	0.28

**significant (p<0.05) df = 89*

Discussion:-

In the present study, more than half 53.3% of staff nurses had average knowledge, 72.2% of staff nurses had favorable attitude towards handwashing and majority 98.9% of staff nurses had unsatisfactory handwashing practice with soap and water. All the staff nurses 100% had unsatisfactory handwashing practice with handrub. Similar results were found in study conducted by **Kudavidnange BP, Gunasekara T & Hapuarachchi S (2011)** which reported that majority of staff 72.5% had moderate knowledge, 47.5% had good attitude and 62.5% had poor hand hygiene practices. A contrary study conducted by **De WD, Maes L, Labeau S, Vereecken C & Blot S (2010)** revealed that nurses neither had good theoretical knowledge of hand hygiene guidelines nor social influence or moral perceptions had any predictive value relative to hand hygiene practice.

The present study showed a statistically significant, positive correlation (r = 0.248) between the knowledge with attitude regarding handwashing among staff nurses (p = 0.019). Similar findings were reported by **Wong So Man (2002)** revealing that nurses' knowledge on hand washing for preventing infection was good and there was positive correlation between knowledge and attitude.

In the present study, the mean knowledge and practice score for handwashing were 14.98 ± 2.183 and 2.94 ± 1.685 respectively. It is inferred that although staff nurses had good knowledge regarding handwashing but their practice with soap and water handwashing was still unsatisfactory. The findings are supported by **Adhikari U (2011)** in which no significant correlation was found between the knowledge and skill regarding hand washing technique (r=0.111, p=0.34) among staff nurses

Conclusion:-

As caring professionals, staff nurses seek to protect others and ensure the wellbeing of patients and co-workers. Although a simple measure in preventing the spread of disease, the literature suggests that handwashing practices are not always undertaken in accordance with universally accepted standards. This paper has provided a overview of

the knowledge, attitude and practice of staff nurses in relation to handwashing, providing a foundation for further work in evaluating and promoting this important infection control measure.

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