Hand washing among nurses and midwives in Rwanda: is it compliance or adherence?

Philomene Uwimana, RN, MSN

Oluyinka Adejumo, Dlitt et Phil, RN, RPN, RNE

- Author: Ms. Uwimana Philomene

  Assistant Lecturer at the University of Rwanda, School of Nursing and Midwifery.
- Acknowledgement to Professor Oluyinka Adejumo and Professor Nomafrench Mbombo
- There is no conflict of interest for this study.

- The learning objectives of this presentation include:
  - to describe the difference between adherence to hand-washing and compliance to hand-washing guidelines
  - to discuss appropriate approaches to collect data related to hand-washing adherence.

Background

- HW has been found as one of the simplest yet most effective intervention to prevent nosocomial infections(Karaaslan et al., 2014)
- Improving HW among nurses should consider nurses' cognitive determinants to HW decisions (White et al., 2015).
- the concepts of adherence and compliance to HW guidelines are often used interchangeably
- however HW practice is more than complying with HW guidelines, It is about making HW a habitual practice.

Purpose

- re-examining a study in which the primary aim was to determine the compliance with HW among nurses and midwives caring for newborn babies at selected health facilities and the extent to which demographic and cognitive factors predict nurses' HW compliance. It further raised the question if the findings were just compliance or adherence.

Methods

- cross-sectional approach encompassing descriptive and quantitative methods was used
- Participants were nurses and midwives (N=134) who were providing care to newborn babies.
- An anonymous self-administered questionnaire (Alpha coefficient for the multi-item scales ranging from .88 to .91)

Methods continue

- Data were collected within 3 weeks.
- Factors such as age, education level, years after completion of basic professional studies, years of employment in the current health facility, attitudes, perceived behavioral control, intentions and HW compliance by colleagues' nurses/midwives were used as independent variables.

Methods continue

- Bivariate analysis using Pearson correlation was carried out to determine any relationship between independent variables and HW compliance rates,
- multiple regression analysis was done to determine the most unique independent predictors to HW compliance.

Results

- Of the 139 self-administered questionnaires distributed, 134 were completed and returned to the researcher giving a rate of 96.4% respondents in the study.
- The majority (74.6%) of respondents reported their highest level of education as secondary certificate (A2), compared to 18.7% of the sample who had Advanced diploma (A1) and to 6.7% with degree (A0).

Results continue

- The results showed that 64.5% of participants (n=86) did not get any formal training on HW after completion of their basic education, compared to 40.3% who experienced a HW promotional campaign in the past

Descriptive statistics of nurses/midwives' response to self-reported HW compliance, attitudes, perceived behavioral control, intention to wash hands and HW compliance by colleagues

Variables	Mean ± SD	Median	Range
Self-reported HWcompliance (%) Overall mean (8 item)	82.00 ± 13.60	85	63.75
HW before direct contact with NB (%)	81.79 ± 19.84	90	90
HW after direct contact with NB (%)	82.54 ± 18.22	90	80
HW before touching clean site during NB care (%)	81.49 ± 18.00	90	70
HW after exposure to the NB's fluids (%)	89.33 ± 14.88	100	60
HW after removing gloves used for NB care (%)	82.84 ± 17.02	90	90
HW between touching 2 patients (eg,delivering mother and care of NB) (%)	82.46 ± 18.33	90	80
HW after touching an object of the patients (%)	73.43 ± 22.81	80	100
HW between touching patient's groin and subsequently examining stomach contents (%)	82.16 ± 18.12	90	80
Attitudes (1= Not effective at all; 7 = extremely effective)	6.25 ± 1.07	6.63	5.75
Perceived behavioural control (1= extremely difficult; 7= very easy)	6.104 ± 0.98	6.25	4.75
Intention (%)	88.92± 12.75	93.13	60
Respondent's self-reported HW practice (%)	82.84 ± 12.30	80	63.75

Results from a Pearson correlation analysis

Variables	1	2	3	4	5
(1) Self-reported HW rate	1				
(2) Attitudes	.388**	1			
(3) Perceived behavioral control	.261**	.435**	1		
(4) Intentions	.576**	.493**	.323**	1	
(5) HW compliance by colleagues	.493**	.172*	.211*	.436**	1

** Correlation is significant at the 0.01 level (2-tailed),* Correlation is significant at the 0.05 level (2-tailed).

Results from a multiple regression

	B	Std. Error	t	Sig.
Attitudes	1.957	.970	2.018	.046
Intentions	.390	.090	4.350	.000
HW compliance by colleagues	2.175	.527	4.130	.000

a. Dependent Variable: Self-reported HW compliance

Discussion

- the overall mean self-reported HW compliance among Rwanda nurses and midwives was high, and it was brought to our attention that intention to wash hands and the pressure from colleagues were the most predictors to HW.
- the authors believe that results from the study would have been different if another method of collecting data was used (for example observational approach).

Discussion continue

- This belief is based on the fact that the high self-reported hand-washing compliance rates from studies that used self-administered questionnaires were not consistent with the results from observational studies, which show very low hand-washing compliance rates
- a study conducted by (Al-Wazzan et al., 2011) revealed a HW observed compliance rate of 33.4% among nursing staff in secondary care hospitals in Kuwait, which was contrasting with 90% compliance rate self-reported by nurses, stating they always washed their hands upon practicing patient care activities.

Discussion continue

- This highlights the limitation of using a self-reported approach in such kind of studies whereby respondents tend to report inflated HW rates than they actually do; desirable behavior is self-reported more frequently than it is observed.
- further questions were raised as to what would have been the outcome if the emphasis of the study had been on adherence rather than a self-report of compliance.

Conclusion

- With the limitations of this study in mind, the researchers concluded that though this study may have revealed a high self-reported HW compliance, thus the future of these type of studies would be to examine adherence, rather than compliance with HW.
- The study may have also suggested a high level of awareness; attitudes and intentions which were shown to be predictors of HW compliance among nurses and midwives, these may not translate to a habitual, consistent practice beyond mere compliance.

Conclusion

- Referring to other studies that used observational approach, although the design of the current study was not intended to compare self-reported and observed HW, the authors suggest that observational audit of HW practices be explored to provide an informed situation of HW adherence, and improve infection control in health facilities of the eastern province in Rwanda.

References

- Al-Wazzan, B., Salmeen, Y., Al-Amiri, E., Abul, A., Bouhaimed, M., & Al-Taiar, A. (2011). Hand hygiene practices among nursing staff in public secondary care hospitals in Kuwait: self-report and direct observation. Medical Principles and Practice : International Journal of the Kuwait University, Health Science Centre, 20(4), 326–31. http://doi.org/10.1159/000324545
- Karaaslan, A., Kepenekli Kadayifci, E., Atıcı, S., Sili, U., Soysal, A., Çulha, G., … Bakır, M. (2014). Compliance of healthcare workers with hand hygiene practices in neonatal and pediatric intensive care units: overt observation. Interdisciplinary Perspectives on Infectious Diseases, 2014(1), 306478. http://doi.org/10.1155/2014/306478
- White, K. M., Jimmieson, N. L., Obst, P. L., Graves, N., Barnett, A., Cockshaw, W., … Paterson, D. (2015). Using a theory of planned behaviour framework to explore hand hygiene beliefs at the " 5 critical moments " among Australian hospital-based nurses. BMC Health Services Research, 15(59), 1–9. http://doi.org/10.1186/s12913-015-0718-2

Thank you