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This document will discuss, and critique research conducted by Chavali et al., (2014). The author's empirical study evaluated the adherence to hand hygiene among nurses and allied healthcare workers at the end of their training year. The first section will discuss the background of the study, including 1) a description of the research question and problem background, 2) methodology and features of the study, and 3) results. The second section will critique the study, which will include the limitations and recommendations.

Background of the study

This section will address the research problem, methodology, and the results of the Chavali et al., (2014) study on the adherence to hand hygiene among nurses and allied healthcare workers at the end of their training years. Based on what the authors claim, compliance can be assured with ongoing training. The intent of this current study is to provide evidence to support that regular training courses mandated by hospitals can increase hand washing compliance and decrease Healthcare-Associated Infections. The theoretical framework is not clearly stated in the study but from what I have read it would be considered a middle range theory. Which is "a type of theory that specifies factors such as patient's health condition, family situation, and nursing actions and focus on answering particular practice questions" (Grove & Gray, 2015). The study focuses on the nurses action which is hand hygiene and how we can improve adherence. The study does not mention any consents being obtained. They only filled out a survey after their mandatory training was done.

Research Problem, Question, and Hypothesis

The research question is not clearly stated in the study, but it is evident from the title the research problem is how compliant health care workers in tertiary care hospitals are. The purpose of this quasi-experimental study was to examine the effectiveness of their trainings. This study provides information about when and why failures in handwashing occur. The problem is significant to nursing because one thing all hospitals have in common is being able to lower incidents dealing with HAIs. The purpose does clarify the aim which is to assess the adherence to hand washing among nurses and allied healthcare workers by the end of their training year (p.1). There is no hypothesis in this study. The objective in this study is to assess how compliant the nurses and healthcare staff are with hand hygiene once training is done. The objective and the research problem are logically linked to the purpose and framework. This is because this study explains a nursing phenomenon.

Methodology

Chavali at al., (2014) conducted a quantitative study using a cross-sectional observational

approach. The design is appropriate for collecting the data because the observer is actually able to see the results. The sample is logically linked. They chose the ICU floor because patients in the ICU are susceptible to disease and most of time it is contracted from a healthcare worker. “The nursing staff (n=28) and allied healthcare workers (n=10) was taken as the sample size” (p.10). The sample method used was nonrandom. For this specific study the method was adequate. They chose a floor that had high rates of HAIs. Power analysis was not used. The sample was drawn from the ICU floor of the hospital. The inclusion criteria would include the subject must work for the ICU and also complete their training. Subjects excluded were anyone who had not completed the training or was on a different floor from the ICU. Nobody was excluded based on age, socioeconomic status, or race. The independent variable was either the nursing staff, or the allied health care worker. The dependent variable was each moment they washed their hand over 10 days. The variables were not conceptually defined but the variables were operationally defined. The operational definition was linked to the study methodology. The study consisted of a survey in the beginning pertaining to how often they performed handwashing, when its indicated, and their feelings towards it. From there is direct observation for 10 days. Marking off if the nurse or allied healthcare worker was in a situation that required hands to be washed and if they washed their hand. If they did not it wasn’t marked. From there they averaged the results and calculated an adherence rate. The only instruments they used to collect data was an observer and a checklist to markdown compliance.

Results

The results of the Chavali at al., (2014) study revealed that during the 10 days of the study there were 1500 hand washing opportunities. Nurses had 69% compliance, while the healthcare workers had 86.9% compliance. The nurses did have more contact with patients. Before patient contact nurses had a 63% compliance and 50% after touching surroundings. The average was about 78%. There wasn’t a significant difference in compliance rates between day and night times. Compliance only fell during the times the ICU was busy, during acute resuscitation settings or multiple admissions. The findings were discussed in relation to the objective. The findings were below standards. The benchmark is 90% and the average was 78%. These results can be considered reliable since the source is coming from a direct observer. When asked why adherence was so low, nurses said hand rubs were not as available around the clinical area, shortages of nurses, and workload. The study concludes that easy access to hand rubs and preemployment trainings does not ensure adequacy, but continuous reminders and training will be able to sustain handwashing. The conclusion was based on clinically significant results because it is coming right from the source. Findings can be used universally in the healthcare systems.

Limitations and Implications

The studies limitations were that direct observations are very time consuming. If the staff is aware about the observation, they will most likely change their behavior. Some limitations that the researcher did not mention was the small sample size. They should also consider doing it on each floor of the hospital to see if there is any significance with the adherence of hand hygiene.

The author indicated the implications of the findings for practice. They conclude that in order for hand hygiene to adherence to increase, they must continue to have consistent training and reminders. In the heat of the moment they can forget but if the management stays persistent it

will be second nature. The research findings can be applied to nursing practice by implementing consistent trainings and having management put up constant reminders. The more the topic is in your face the less likely you will forget. The author does not indicate the implications of the findings for further research.

Article Critique

This study had some strengths and many weaknesses. To summarize this whole study, I can say that it was very brief and not very detailed. Most of the sections of the study was not clearly stated such as the research question, literature review, variables, and framework. I had to really read and understand what would fit the criteria of each section.

Starting from the beginning the study did not obtain and consents, and just started observing them. The introduction which was supposed to introduce the research question and problem was very broad. I had to infer from what I read, and the literature review wasn't even stated. I looked at the different research that was cited in the study but there was no specific section mentioning it. The framework was not stated either I read how they conducted to study to infer what closely fit the criteria.

As far as methods, the study had a weak design. There was only a treatment group and but nobody to compare it to. How can they test how effective it is if there is no control group? The sample method was one of convenience. It is justified because the ICU does have the highest rate of HAIs, but they should be able to compare results throughout other floors of the hospital. The study should have also been detailed enough to include what the training consisted of so that we are aware of what was obtained and the skills that they could use that would be effective.

Overall the study was not very detailed and organized. It was missing a lot of vital information that a study should have. The topic was very relevant in the nursing practice and it has potential of being a very good study but only if all the vital information is added. The results and reasoning are justified. If they can make this study on a bigger scale it could be a study used for other hospitals around the world.