

Healthcare Associated Infections Control and Nurse Uniforms

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Abstract: Healthcare Associated Infections control is an effort to improve patient safety in hospitals. Nurses and uniforms act as one way to break the chain of infection. This study aims to identify the views of nurses in Healthcare Associated infections control through nurse uniforms. The research design uses descriptive phenomenology, the process of collecting data is done by Focus Group Discussion. Participants in this study were taken by purposive sampling of 16 participants, data analysis using the Giorgi method. The results of the study identified themes: headscarves, sleeves, jewelry and watches, as well as footwear or shoes as part of Healthcare Associated infections control through uniform. It was concluded that the nurse's uniform as one part of the infection chain breaker in the hospital. It is recommended the role of the nursing manager to establish detailed rules for nurse uniforms during service in the hospital.

1 INTRODUCTION

Patient safety according Peraturan Menteri Kesehatan No. 11 tahun 2017 is a system that makes patient care safer, including risk assessment, identification and management of patient risk, reporting and analysis of incidents, the ability to learn from incidents and their follow-up, as well as the implementation of solutions to minimize risks and prevent injuries caused by mistakes caused by carrying out an action or not taking the action that should be taken (Haryati, Yetti, Afriani, Handiyani, 2019). The implementation of patient safety in hospitals is often not optimal due to role of nurses in the implementation of patient safety. Gunes research (2016) shows the results that many nurses in Turkey still have a negative perception of the culture of patient safety in their institutions. This was also expressed by Freixas Sala et al. (2017) that only 16% of nurses are dedicated full time in the patient safety program. Nurses are a profession that lasts for twenty-four hours accompanying and being close to patients. The role of nurses to improve patient safety is to try to break the chain of infection. Handayani's research (2006) found that data significantly increased the number of microorganism colonies on uniform use on the second day compared to the number of colonies before uniform use.

The phenomenon at the hospital today is nurses rarely use white uniforms so we did not know how long the uniforms have been used. White color on the uniform will show color changes from day to day. Uniforms that are used are also often added accessories such as brooches or bracelets on the wrists. If nurses wear headscarves, it is often seen that nurses only tie back and often fall forward while taking action in nursing. This was seen in several hospitals, both in the capital and in the regions, at government or private hospital. However, researchers see that there are still some hospitals that apply regulations in the use of uniforms in their hospitals. The hospital is usually an international hospital. Apart from the concept that is owned by the hospital management, researchers are interested in getting a picture of the perception of nurses who are in hospital management related to the regulations applied in the use of uniforms. A good hospital regulation where when all members under the auspices of management understand the purpose of the regulation.

This study aims to obtain an overview of what components are understood by nurses in the effort to control infection so that patient safety can be guaranteed. Specifically, this study aims to know the correct way to wear the hijab, to know the settings for the nurses' uniforms, know the use of jewelry and watches, and to know the correct use of

footwear or shoes. This research is important as an effort to increase the awareness of nurses in the use of uniforms so that the infection chain breaker is not only through washing hands but also by paying attention to the use of uniforms that are worn every day. For educational institutions, through this research can be used as a scientific foundation in managing the use of student uniforms while in hospital. For the general public, the results of this study if implemented will reduce the number of HAIs among clients in the inpatient room and reduce the risk of spreading HAIs from the hospital to the community.

2 THEORITICAL REVIEW

Quality nursing care needs to be sought to meet the needs of patients optimally. The optimal fulfillment of the patient's needs is expected to be able to improve the patient's health status and not cause additional unwanted health problems while the patient is hospitalized. Undang-Undang No. 38 tahun 2014 states that nursing services are a form of professional service based on nursing knowledge and tips addressed to individuals, families, groups, or the community, both healthy and sick, which are an integral part of health care services that good nursing services will also contribute well on health, safety, and patient safety in hospitals. Nurses who work for 24 hours caring for patients certainly have a big share not only in healing, but also risk causing incidents that can harm patients and hospitals. Management of services and management of nursing care are two things that must be carried out optimally by all managerial levels of nursing led by a Director of Nursing to ensure quality care and patient safety. Management according to Weiss and Tappen (2015) is doing a job through other people. Or in other words, nursing service management is a way to manage nurses to provide professional services based on nursing knowledge to individuals, families, groups, or communities, both healthy and sick. Management of nursing services needs to be supported by good management of nursing care. Management of nursing care is defined as an activity to solve or improve needs and quality of life by assessing needs, planning care and implementing care for people who need support because of health problems (Cho et al, 2015).

TKRS 13 Komisi Akreditasi Rumah Sakit 2017 said that every Care Professional is directed to support a safe culture. Safety culture is defined as

"a collaborative environment in which all care professionals treat one another with respect, the head encourages effective teamwork and supports psychological security, the team learns from mistakes and is almost injured, the caregiver is aware of the limitations of human performance in systems that are complex (stress recognition), and there is a visible process of learning and implementing improvements through briefings. At TKRS 13 Komisi Akreditasi Rumah Sakit 2017, behaviors that did not support safety culture were conveyed, including: threatening others that would affect staff morale and endanger patients.

Effective hygiene and preventing infections are absolute in all healthcare settings. Although there is no conclusive evidence that uniforms and work wear play a direct role in spreading infection, the clothes that staff wear should facilitate good practice and minimize any risk to patients. Uniforms and work wear should not impede effective hand hygiene, and should not unintentionally come into contact with patients during direct patient care activity. Similarly, nothing should be worn that could compromise patient or staff safety during care, for example false nails, rings, earrings other than studs, and necklaces. Local policies may allow a plain ring, such as a wedding ring (United Kingdom Department of Health, 2010). These are recommended good practices based on evidence from the literature reviews, testing and effective hand hygiene procedures: wear short-sleeved tops and do not wear white coats during patient care activity, change immediately if uniform or clothing becomes visibly soiled or contaminated, dress in manner which inspires patient and public confidence, change into and out of, or cover uniform completely when travelling to and from work, wear clear indentifiers, wash uniforms and clothing worn at work at the hottest temperature suitable for the fabric, clean washing machines and tumble driers regularly, have clean, short, unvarnished fingernails; tie long hair back off the collar. Poor practice includes go shopping in uniform or engage in other activities outside work, wear false nails during patient care activity, wear any jewellery while on duty other than a smooth ring or plain stud earrings, including a wrist-watch, on the hands or wrists during direct patient care activity, wear neckties/lanyards during direct patient care activity, carry pens, scissors or other sharp or hard objects in outside breast pockets, wear numerous badges, wear prominent facial piercings or display tattoos, dress untidily and in an unprofessional manner.

3 METHOD

The method used in this study is a qualitative research method with a phenomenological approach. This research was conducted on private Hospital, nurses who were attended by 16 nurses representing the care unit. The method use Focus Group Discussion, the place were three times, the first group was 5 nurses, the second group was 6 nurses, and the third group was 5 nurses. Participants represent each type of nursing room where children are represented by 2 (two) nurses, adult care rooms are represented by 7 (seven) nurses, ICU/CCU rooms are represented by 2 (two) nurses, polyclinic rooms are represented by 2 (two) people, space IGD was represented by 1 (one) person, and NICU room was represented by 2 (two) nurses. All participants were female. The data collection tools used in this study are: a) The researcher herself as a discussion guide, b) Unstructured discussion guidelines that contain open-ended questions to explore data in accordance with the research objectives, c) Field notes used to take notes researcher observations during the discussion process. In analyzing the data of this study the researcher used the Giorgi method where clarification was carried out together with the supervisor.

4 RESULT

Participants said attention should be given to appearance and uniforms to prevent HAIs. It was revealed by 13 participants, with age over 30 years were seven participants, Bachelor degree were eight participants. Work experience under 5 years revealed were five participants, 5 to 10 years were three participants and more than 10 years were five participants. The category of prevention of HAIs was mostly revealed in the third DKT, four out of five participants revealed this category. One participant even though not expressing the category still shows agree with the expression of other participants. The expression is shown through non- verbal expressions through the nod of the head signifying agree with the expression. Prevention of HAIs by paying attention to the length of the veil used, the veil is inserted into the clothes. Other components that must be considered are the sleeves, jewelry and watches as well as footwear or shoes. Illustrated from the following participant's statement: *"If we have put the*

headscarves in the hospital, it is already good ... because it reduces contamination" (FGD 15 May 2015)

"Even if wearing a veil is not long ... so wash your hands without nosocomial infections." (FGD 15 May 2015)

"If it's possible to use a wedding ring only ... the watch was originally also not allowed, we were given a watch that was hung on a shirt to calculate the pulse, but a few months later the watch was broken so we were allowed to wear the watch again. But besides that it shouldn't be used ... for HAI's" (FGD 18 may 2015)

"It's not possible even when we want to put infusion, our veil down and it covers. Nosocomial infections must also be able not to interfere when we do activity" (FGD May 20, 2015)

"Those who wear the headscarf, the sleeve is 3 fingers below the elbow ... but if you do not wear the hijab the arms are normal ... so as not to get hit when working ... no nosocomial infection" (FGD 18 May 2015)

5 DISCUSSION

Uniform is one of the media for nosocomial infections. Uniforms worn by nurses to facilitate each user's movement and minimize the risk of contact with patients (LeTexier, 2005, Royal College of Nursing, 2014). Good management of uniforms such as changing uniforms in hospitals can reduce the risk of spreading pathogens from hospitals to homes and home to hospital (Marcus, 1998, Handayani, 2006). Uniforms must be managed well so that they can control the occurrence of HAIs by changing clinical uniforms every day (Handayani & Megapurwarsa, 2006). Uniforms must also be clean at all times. Public opinion indicates that clean service from nurses can be seen by changing uniforms at work covering uniforms when outside the work area (United Kingdom Department of Health, 2010).

Participants revealed one way to prevent HAIs through the use of headscarves that are inserted into clothing, the size of the headscarf is not too long, the shape of the arms measuring three-quarters of the arms. Minimal use of jewelry is also a thing that can reduce the spread of HAIs, in this case only using a wedding ring. Some participants revealed that the use of bracelets is still permissible as long as not in large quantities. The phrase reflects not yet fully understood by the participants about the purpose of applying the policy of using jewelry

during service. The expression reflects the use of jewelry more to the image formed to the patient that nurses must be simple, not just because to prevent HAIs. Affirmed by Salisbury, 1997 and the Royal College of Nursing, 2014, the use of rings, except wedding rings are permitted during service but care must be taken of hand hygiene when washing. Jewelry can be used but in a minimal form so as to maintain the health and safety or cleanliness of the jewelry components when doing activities (Quiambao-udan, 2009; Wilson, et al., 2007). The role of managers is very necessary in giving direction so that a correct understanding of the use of jewelry in the appearance of nurses (Gillies, 1994; Huber, 2010; Lin, et al. 2007; Longest, 1996; Manulang, 1983; Marquis & Huston, 2008; Siagian, 2002). Management to improve nurses' understanding of the prevention of HAIs is very important. Researchers believe that good management in terms of direction can increase nurses' efforts to reduce the number of HAIs through appearance and uniform clothing. Good understanding makes nurses limit themselves when going to use jewelry during business hours. Directing can be done by periodic supervision and motivation or by holding and involving nurses in seminars on the topic of prevention of HAIs. This directive process will be more effective because nurses gain knowledge and have the desire to change themselves from within themselves, not from the leadership (Hewlett et al., 2009).

The interaction between researchers and nurses at the hospital was obtained information, many hospitals hold seminars on various topics including HAIs. Seen from the results of the FGD, the expression of the prevention of HAIs was expressed by thirteen participants out of sixteen participants. The number of these expressions reflects the understanding of the prevention of HAIs through uniform appearance and clothing understood by almost all participants.

Of the thirteen participants, seven participants were over 30 years old and had a Bachelor's degree in nursing were eight people. The distribution shows cognitive factors are strongly influenced by the level of education and experience of individuals. Toha (2008) explains that perception is essentially a cognitive process experienced by everyone in understanding information about their environment, both through vision, hearing, appreciation, feeling, and smell. A person's understanding is inseparable from the existing organizational climate. A positive organizational climate shapes the satisfaction and motivation of its

members (Fumham, 2003; Gillies, Franks, & Child, 1990; Runtu & Widayarni, 2009). The results showed that the longer a person interacted with a positive organizational climate formed a good understanding of its members.

6 CONCLUSION

This study illustrates nurses' views on controlling HAIs through the uniforms they use. The results of the study through the Integrated Group Discussion found participants revealed the prevention of HAIs by paying attention to the length of the veil used, the veil put into clothing. Other components that must be considered are the sleeves, jewelry and watches as well as footwear and shoes.

Hospital agencies need to emphasize the importance of managing nurse uniforms through firmer policies, especially in the use of headscarves, sleeves, accessories (brooches) and watches as well as footwear or shoes. This research is one of the bases for subsequent studies including the ability of germs to survive in nurse uniforms.

REFERENCES

- Cho, S.H., Kim, Y.S., Yeon, K.N., You, S.J., & Lee, I.D. (2015) Effects of increasing nurse staffing on missed nursing care. *International Nursing Review*, 62(2), 267-274. <https://doi.org/10.1111/inr.12173>.
- Fumham, A. (2003). *The nursing shortage: strategies for recruitment and retention in clinical practice and education*. New York: Springer Publishing. Co.
- Gillies, D. A. (1994). *Nursing management: A system approach*. 3rd edition. Philadelphia: W.B. Saunders Company.
- Gillies, D. A., Franklin, M., & Child, D. A. (1990). Relationship between organizational climate & job satisfaction of nursing personnel. *Journal of nursing administration quarterly*. 14(4): 15-22.
- Günes, Ülkü Yapucu; Gürlek, Öznur; Sönmez, M. (2016) A survey of the patient safety culture of hospital nurses in Turkey. *Australian College of Nursing*, 23,225-232. <https://doi.org/10.1016/j.colegn.2015.02.005>
- Handayani, H., & Megapurwarsa, Y. (2006). Hubungan waktu penggunaan seragam klinik dengan peningkatan jumlah mikroorganisme. *Jurnal Keperawatan Indonesia*. 10 (1): 5-10. Diunduh dari: http://www.jki.ui.ac.id/index.php/jki/article/download/166/pdf_88.
- Haryati. T.S., Yetti, K., Afriani, T., Handiyani, H. (2019). Manajemen risiko bagi manajer Keperawatan dalam meningkatkan mutu dan keselamatan pasien. Depok: PT RajaGrafindo Persada Hewlett, S.A., Sherbin, L., &

- Sumberg, K. (2009). How gen Y & boomers will reshape your agenda. *Harvard Business Review*, 87, 71-76.
- Huber, D. (2010). *Leadership and nursing care management*. (3rd ed.). Philadelphia: W.B. Saunders Company.
- Komisi Akreditasi Rumah Sakit. (2017). Standar Nasional Akreditasi Rumah Sakit (1st ed.) Jakarta: KARS
- LeTexier, R. (2005). *Coming clean on home laudred scrubs*. Diunduh dari: <http://www.infectioncontrolday.com/./coming-clean>
- Lin, I. M., Wu, J. H., Huang, I. C., Tseng, K. H., & Lawler, I. J. (2007). Management development: A study of nurse managerial activities and skills. *Journal of healthcare management*, 52(3): 157-158.
- Manulang, M. (1983). *Dasar-dasar manajemen*. Jakarta: Ghalia Indonesia.
- Marcus, L & Marcus, E. (1998). Nosocomial zoomes. *The New England Journal of Medicine*. 338:757- 759. Diunduh dari: <http://www.ncbi.nlm.nih.gov/pmc/./PMC1151895>
- Marquis, B.L. & Huston, C., J. (2015) *Leadership Roles & Management Function in Nursing: Theory & Application*. (8th ed). Philadelphia: Lippincott Williams & Wilkins
- Marquis, B.L., & Huston, C.J. (2012). *Leadership roles and management functions in nursing* (8th ed.) Philadelphia, USA: Lippincott Williams and Wilkins.
- Peraturan Menteri Kesehatan Republik Indonesia No.11 Tahun 2017 tentang Keselamatan Pasien.
- Quiambao-Udan, J. (2009). *Fundamentals pf nursing: Concepts and clinical application*. Manila: Educational Publishing House.
- Royal College of Nursing. (2014). *Guidance on uniforms and workwear*. London: RCN.
- Runtu, D. Y. N., & Widyarini, M. M. N. (2009). Iklim organisasi, stress kerja, & kepuasan pada perata. *Journal psikologi*. 2(2): 107-112.
- Salisbury, D.M., Hutfliz, P., Treen, L.M., Solin, G.E., Gautam, S. (1997). The effect of rings on microbial load of health care worker's hands. *American Journal of Infection Control*. 25(1): 24-7. PMID: 9057940
- Siagian, S. P. (2002). *Kiat meningkatkan produktivitas kerja*. Jakarta: PT. Asdi Mahasatya.
- Undang-Undang Republik Indonesia Nomor 38 tentang kewenangan pasal 1 Tahun 2014.
- United Kingdom Department of Health (2010) *The health and social care act 2008: Code of Practice on the prevention and control of infections and related guidance*. Diunduh dari: www.gov.uk/government/organisations/department-of-health
- Weiss, S.A., dan Tappen, R.M. (2015). *Essentials of Nursing Leadership and Management*. USA: F.A Davis Company
- Wilson, Loveday & Pratt. (2007). Herder, folkore and romantic nationalism. *The Journal of Popular Culture*. 6(4): 819-835. Doi: 10.1111/j.0022- 3840.1973.00819.x