JURNAL PENDIDIKAN KEPERAWATAN INDONESIA

Journal Homepage: http://ejournal.upi.edu/index.php/JPKI

The Effectiveness of An Appreciated Inquiry-Based Intervention to Improve Nursing Handover Process: A Queasy Experimental Study

Linlin Lindayani[1], Krisna Yetti[2*]

[1]Department of Medical Surgical Nursing, STIKep PPNI Jawa Barat, Bandung, Indonesia
[2]Department Basic Science Nursing and Fundamental Nursing, Universitas Indonesia, Jakarta, Indonesia
*Corresponding E-mail: krisna@ui.ac.id

A B S T R A C T

Many interventions were developed to improve the handover process, but most of them were generally target information transfer directly, individual behavior, or the more comprehensive system. The purpose of this study was to evaluate the effectiveness of an appreciated inquiry based on improving the handover process among nurses in the medical-surgical ward, Indonesia. A quasi-experimental with one group pre-test and post-test design was conducted at a medical-surgical ward at a tertiary hospital in Jakarta, Indonesia. A total of 36 nurses participated in this study, including the head and registered nurse. The intervention was designed to improve the implementation of the handover process among nurses in the medical-surgical ward based on the philosophy of appreciated inquiry using four learning activities. A total of 36 nurses were joined in the study. The handover process was done on time for more than 90%, the proportion of leadership was increased 13% become 95% from 82%. Further, the use of the SBAR communication pattern improved significantly from 72% to 89%, and documentation of handover using SBAR was increased by about 20%. The tailored intervention based on appreciated inquiry was effectively to improve the quality of the handover process, including implementation of handovers on time, and ethical leadership, communication, and documentation. Nursing management needs to continue the intervention to optimize the role and function of nurses in handover.

ARTICLE INFO

1. INTRODUCTION

Handover is the process of transferring professional responsibility and accountability for all aspects of care that occur in patients or groups of patients to others or professional groups that are temporary or permanent so that patients are safe and get satisfaction with nursing care (Chaboyer, Mcmurray, and Wallis 2010). Handover is designed as a way of providing relevant information to nurses at each shift, direction in giving information about the patient's condition, goals and plan of care, treatment and determining service priorities (Kilic RN, PhD et al. 2017). Handover is a routine performed by nurses during shift continuum care in the hospital (Malekzadeh et al. 2013). Failures in nursing handover could result in a lack of awareness, loss of significance, and dropping or lacking the information required to perform tasks (Bergs et al. 2017) Communication errors often occur in the receptivity, so improve communication during handover is significant to maintain patient safety and to prevent unexpected events (Kerr et al. 2014).

According to the national hospital accreditation standard and the international joint commissioning in 2018, every hospital must develop and implement a process for reciprocal communication for patient safety target (Komisi Akreditasi Rumah Sakit 2017). The discussion needs to be effective, timely, accurate, complete, unambiguous communication, and understood by the recipient, reduces errors and results in increased patient safety (Kerr et al. 2014). There were four essential indicators considered for good handover process in many Indonesian hospitals: timeliness, communication patterns, background, assessment, recommendations (SBAR), leadership, and documentation. These four things are assessed every month and recapitulated by the nursing department for monitoring and evaluation.

Failures in nursing handover can deliver different bothersome outcomes, running from an absence of consciousness of occasions, to loss of noteworthiness, and to dropping or coming up short on the data expected to perform assignments. The handover problems more often than not add to the course of disappointments engaged with unfavorable results, as opposed to being the sole reason, making the estimation and research of perils starting from the handover troublesome. In hospital, the problems of handover problems, for example, close to misses and deferrals in treatment, it is hard to evaluate their general commitment to potential perils. Acknowledgment of the potential danger of handover mistakes has made numerous specialists attempt to fix them utilizing an assortment of strategies, both straightforward and multi-segment. Intercessions by and large focus on the exchange of data legitimately, the conduct of people or the more extensive framework. The methodology incorporates institutionalization of procedures; preparing and instruction; changes in the physical condition; utilization of innovation; expressly marking the exchange of record abilities; and others. A recent case study found that about 75% of nurses had sufficient knowledge about the shift handover process using SBAR. The SBAR was adopted as a standard for handover, but no specific guideline or standard operating procedure (Yetti et al., 2021).

Many interventions were developed to improve the handover process, but most of them were generally target information transfer directly, individual behavior, or the more comprehensive system. The intervention included training and education; physical environment modification; use of technology, and accountability transfer. However, those methods were standardized using, for example, the read-back technique, the Identification Situation Background Assessment

Recommendations (SBAR) technique, or electronic medical records, and not considered individual characteristics (Alhamid et al. 2016; Clarke and Persaud 2011). The appreciated inquiry has been tested adequately to improve the quality of nursing handover in the emergency ward (Bergs et al. 2017). The intervention focuses on affirmation, appreciation, and generative dialog to enhance behaviour change (Cooperrider and Srivastva 1987; Robertson et al. 2014; Trajkovski et al. 2013; Verleysen, Lambrechts, and Van Acker 2014). This intervention was adopted from (Bergs et al. 2017) using four learning activities, namely 4-D: 1) Discovery: identification and sharing the best practice during handover. 2) Dream: discussion the new possibility for better hand over the process in the future. 3) Design: make a prioritize for paling and start implementation; 4) Destiny (or deploy): execute and implanted it and pay attention to future improvement and evaluation (Cooperrider and Srivastva 1987; Robertson et al. 2014; Trajkovski et al. 2013; Verleysen et al. 2014). The tailored intervention to improve handover is limited (Alhamid et al. 2016; Robertson et al. 2014).

This study utilized normalize procedure theory to encourage the usage procedure. It gives a lot of sociological apparatuses to comprehend and clarify the social procedures through which new or changed practices of reasoning, authorizing, and sorting out work are operationalized in medicinal services and other institutional settings. From the more extensive field of execution science we discover that, before another training will be utilized appropriately, change is required at two levels: (1) the perception of the new practice and (2) the workflow of the existing routines. The purpose of this study was to evaluate appreciated inquiry-based intervention on improving handover process among nurses in the medical-surgical ward, Indonesia.

2. METHOD
Research Design

A quasi-experimental with one group pre-test and post-test design was conducted to evaluate the effectiveness of appreciated inquiry-based intervention on handover process using a structured form, standard operational procedure, in-service training, and simulation. This study was conducted on June to November 2019.

Population and Sample

This study was conducted at the medical-surgical ward at a tertiary hospital in Jakarta, Indonesia. The hospital employed over 200 physicians and 1,300 nurses. The bed occupying rate was 79.55% with more than 20 wards. Currently, the hospital has A level in a National accreditation and also has been accredited from joint commission international. Inclusion criteria were nurses with minimum diploma III, having experience at least one year, and willing to participate in this study. Nurse who taking leave either maternity or sick leave were excluded from this study. A total of 36 nurses participated in this study, including head and registered nurse. A convenience sample technique was used to select participants.

Intervention

A standardized handover system was implemented to meet the accreditation standards, with four indicators, namely punctuality, communication pattern using situation, background, assessment, recommendation (SBAR), leadership, and documentation.

However, there was a lack of a system or structure to facilitate the handover process. Therefore, this intervention was designed to improve the implementation of the handover process among nurses in the medical-surgical ward based on the philosophy of appreciated inquiry. The appreciated-inquiry has been tested adequately to enhance the quality of nursing handover in the emergency ward (Bergs et al. 2017). The intervention focuses on affirmation, appreciation, and generative dialog to improve behaviour change (Cooperrider and Srivastva 1987; Robertson et al. 2014; Trajkovski et al. 2013; Verleysen et al. 2014). This intervention was adopted using four learning activities, namely 4-D. 1) Discovery: identification and sharing the best practice during handover. 2) Dream: discussion the new possibility for better hand over the process in the future. 3) Design: make a prioritize for planning and start implementation; 4) Destiny (or deploy): execute and implanted it and pay attention to future improvement and evaluation.

The intervention was delivered to nurses who work in medical-surgical wards. The participation in this intervention was counted as work time. The session consisted of two courses and each session has an introduction explaining the aim of the session (five minutes), a brief reminder the important of handover (15 min), and four learning activities (4 hours). The sessions were led by the principal investigator.

Table 1.   **The step of the intervention by applying four learning activities**

4-D step	Learning Activities
Discovery	Participants were asked to review three best stories that they ever been experienced related the handover process including difficulties, difficulties, happy experiences, things that can facilitate nursing handover process and documentation.
Dream	Participants were stimulate by the case that they commonly faced about nursing documentation and discuss how to solve and improve the hand over process according to the available resource also the need to improve the resources and the systems.
Design	Participants were asked to discuss prioritize implementation that can be made as first step to improve the handover process. They were facilitated to make a planning and strategies to improve the handover process based on their best experience and resources
Deploy/ Destiny	Participant were provided a training about the capacity building to build up the commitment and solidarity to implement their planning of the handover process. Then, the head nurse been reminded all the nurse about the handover in every morning meeting

Instrument

The study of nurse's demographic information was collected on enrolment: this information including age, gender, education level, and working duration. The evaluation of the handover process was used four indicators, namely punctuality, communication pattern using situation, background, assessment, recommendation (SBAR), leadership, and documentation. The evaluation was measured before and after the intervention using observation directly. A standardized checklist form with yes/no choice was developed to evaluate the handover process every day after the intervention being delivered to all nurses. For example, the time starts for handover if as scheduled, the score is one (mark as yes). If the communication using an SBAR standard form, the score is one (mark as yes). Handover process was measure in the morning, afternoon, and night duty.

Research Procedure

All nurses who joined this study were recruited from four wards at inpatients room of studied hospital. Subject information was obtained from the managers. Subjects who agreed to participate completed the research questionnaire in a private location before their scheduled appointment for intervention. Participants were informed that the collected information would be kept confidential and that the questionnaire was anonymous. The data were collected twice before (June 2019) and after the intervention (November 2019). All the respondent were provided with a copy of all instrument. We also provide boxes for the collection of data that has been filled in completely by the participants. This box is also used to maintain data confidentiality. In addition, to increase response rates, follow-up and reminders are carried out routinely by the head of the room and also two research assistants. Two research assistants were those who graduated from bachelor program in Nursing, having abilities to communicate, and have been mutually trained for conducting this study.

Data Analysis

A descriptive statistic using mean, standard deviation, proportion was used to describe the demographic characteristics of the respondent. Pre and post-test data were evaluated using a chi-square test. We took several steps to reduce the risk of bias in general through the process of data collection such as during data collection, the confidentiality of respondents was very guarded so as to maximize in answering questions and then also carried out statistical control. The significance level was set at 0.05. All analyses were performed using Statistical Product and Service Solutions version 22 for windows.

Ethical consideration

The ethical commission of studied hospital has approved this study (No. DM 01.01 / VIII.2 / 1359/2019).

3. RESULTS

A total of 36 nurses were joined in the study. Table 1 summarizes the characteristics of respondents. The mean age was 31.45 (SD=2.41). The majority of participants were female and more than half were graduated from a bachelor with profession program. The mean of working experience was 8.67 (SD=3.11). About 75% of nurses had sufficient knowledge about the shift handover process using a method of situation, background, assessment, and recommendations (SBAR) (Table 1).

Table 2.   **Demographic characteristics of the nurses at medical-surgical ward (n=36)**

Characteristics	Analysis Univariat (n=36)
Age, mean (SD)	31.45 (2.41)
Education level, n (%)	
Diploma III	13 (36.1)

Bachelor	19 (52.8)
Master	2 (5.5)
Specialist	2 (5.5)
Working experience (years), mean (SD)	8.67 (3.11)
Gender, n (%)	
Female	29 (80.5)
Male	7 (19.4)

There was a significant improvement in punctuality, communication pattern using situation, background, assessment, recommendation (SBAR), leadership, and documentation after the intervention been done. Before the intervention, the handover process was done on time about 76% and increased about 16% to the 90%. There was also improvement in the leadership during handover from 82% to 95% (increased about 13%). Further, the use of the SBAR communication pattern improved significantly from 72% to 89% (increased about 17%), and documentation of handover increased by about 20% from 72% to 91% (Figure 1).
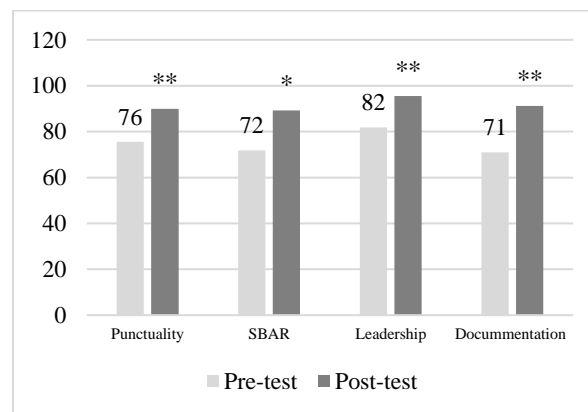

Figure 1. The effect of a appreciated inquiry-based intervention on the handover process (n=36)

Note: * $p < 0.05$; ** $p < 0.01$

4. DISCUSSION

The aims of this study was to improve the implementation of a standardised handover form and corresponding procedure for nursing handover in inpatients department at studied hospital. We discover that the way to improved nature of intrahospital nursing handover is long and hampered by different difficulty. Although little evidence is available, we assumed that the use of a standardised handover form and procedure would improve handover quality. Inside this investigation setting, a handover structure and method had just been planned and actualized, notwithstanding, viable execution had not been come to. Guided by the hypothetical system of acknowledged request, we planned an improvement intercession using an acknowledged request execution way to deal with encourage intelligent getting the hang of concerning the handover procedure and methodology.

This study found that the tailored intervention based on appreciated inquiry was effectively to improve the quality of the handover process, including implementation of handovers on time, and ethical leadership, communication, and documentation. Although the success rate of the handover

process ranged from 80% to 90%, there are still needed for improvement to achieve hospital target about 100% of the handover process that should follow four indicators. According to our evaluation, the handover from afternoon to night started at 20:30 until 21:00, which usually is done late. The previous study reported that the handover process is done within one hour to one and half hour in general word but take shorten in the intensive care unit (Athanasakis, 2013). Nursing handover plays an essential role in the continuity of patient care to ensure the quality of care and patients' safety. Therefore, the standard operating procedure of handover and checklist form for evaluation are needed to be socialized every time to all nurses as a reminder to adherence following a guideline of nursing handover.

Effective and efficient handover process could improve patient's satisfaction (Athanasakis 2013). However, on some occasion, due to high workload, handover process produced working burden to nurses that affected to the miscommunication of the patient's care (Barker and Ganti 1980). Therefore, effective communication is essential to provide accurate and complete information and avoid unexpected outcome (Barker and Ganti 1980). One crucial problem found frequently was associated with less supervision to monitor the quality of the handover process. A study suggested that top management is expected to have involvement and commitment to improving and facilitating handover according to standards (Shortell and Kaluzny 2000). Nursing management needs to continue the intervention to optimize the role and function of nurses in transfer, starting from planning, organizing, directing, supervising, and monitoring.

We found that nursed had an improvement in using situation, background, assessment, recommendation (SBAR) for the handover process. SBAR is a rigid structure of handover that could transfer information objectively in a standard format (Patterson 2008). SBAR was recommended to use during handover; however, unclear direction about comprehensive information and communication existed. A previous study suggested that prioritized transferring details were essential to help the oncoming nurse get information quickly and minimize overload information and time-consuming during handover (Patterson 2008). Also, the documentation of transfer using SBAR was paper-based that could be a burden due to time-consuming to write a complete story of the patients. Policymaker may consider applying technology to reduce the time for documentation.

Implication for Nursing Practices

This study provides an important recommendation to improve the quality of nursing handover process by applying four learning activities based on appreciated-inquiry. By using the story in general and focusing on the desired results in this case that give meaning in life can enhance mutual understanding, and build an attitude to mutually support each other to carry out compliance towards standard procedures to reduce human error, as well as transforming in behaviour. So the hospital must invest in further development and follow-up of an improvement strategy to improve the quality of handover process in all wards or all units. We further suggested that nursing management needs to continue the intervention to optimize the role and function of nurses during the handover with consistent supervision in every ward.

Program to optimize the role and function of nurses in handover process needs to be carried out in stages starting from planning, organizing, directing, supervising and supervising so that a

mature and sustainable process flow is needed in this program. In this innovation, a guidebook, Operational Procedure (SPO) draft, flow and instruments related to the nursing and handover process have been made, which are the first step and then a shared commitment is needed between the nursing staff both managerial and care executor at studied Hospital.

The field of nursing as top management is expected to have involvement and commitment in improving and facilitating this program to run according to standards and can motivate the implementation of the program. There is a common perception with the hospital regarding the optimization of the process of weighing in nursing so that it is expected that there is a policy from the Director of Hospital to approve the draft guideline and standard operating procedure which will then be disseminated to all heads of rooms and team leaders as a follow-up plan in the hospital. This socialization is intended to increase understanding and reduce nurses' confusion in carrying out the weighing process when providing care services.

Study limitation

An essential limitation of this study was no control group; therefore, pre-existing factors are not taken into account. Furthermore, this study may not be able to generalize to others ward or hospital due to a working culture different and also small sample size. Future studies are needed using more rigors methods to test the effectiveness of a tailored intervention on improving the quality of the handover process.

5. CONCLUSIONS

In conclusion, this study found that the tailored intervention may improve the handover process following four important indicators, namely the implementation of handover on time, and having good leadership, communication and documentation based on situation, background, assessment, and recommendation (SBAR). This information can be used as data to integrate tailored intervention into the daily routine of nursing management.

6. REFERENCE

Alhamid, Munirah, Desmond Lee, Hei Wong, Matthew Chuah, Yu Jun Wong, Kaavya Narasimhalu, Thuan Tong, and Su Low. (2016). "Implementing Electronic Handover: Interventions to Improve Efficiency, Safety and Sustainability." International Journal for Quality in Health Care, 28(5), 608-614.

Athanasakis, Efstratios. (2013). "Synthesizing Knowledge about Nursing Shift Handovers: Overview and Reflections from Evidence-Based Literature." International Journal of Caring Sciences 6(3), 300-313.

Barker, M., and A. R. Ganti. (1980). "An In-Depth Study of the Head Nurse Role." Supervisor Nurse, 11(11), 16–21.

Bergs, Jochen, Frank Lambrechts, Ines Mulleneers, Kim Lenaerts, Caroline Hauquier, Geert Proesmans, Sarah Creemers, and Dominique Vandijck. (2017). "A Tailored Intervention to

Improving the Quality of Intrahospital Nursing Handover." International Emergency Nursing, 36, 7-15.

Chaboyer, Wendy, Anne Mcmurray, and Marianne Wallis. (2010). "Bedside Nursing Handover: A Case Study." International Journal of Nursing Practice, 16(1), 27–34.

Clarke, Christina, and David Persaud. (2011). "Leading Clinical Handover Improvement: A Change Strategy to Implement Best Practices in the Acute Care Setting." Journal of Patient Safety, 7(1), 11–18.

Kerr, Debra, Sharon Klim, Anne-Maree Kelly, and Terence McCann. (2014). "Impact of a Modified Nursing Handover Model for Improving Nursing Care and Documentation in the Emergency Department: A Pre- and Post-Implementation Study." International Journal of Nursing Practice, 22(1), 89-97.

Kilic RN, PhD, Serap Parlar, Nimet Ovayolu RN, PhD, Ozlem Ovayolu RN, PhD, and Mehmet Hayrullah Ozturk RN. (2017). "The Approaches and Attitudes of Nurses on Clinical Handover." International Journal of Caring Sciences, 10(1), 136–45.

Malekzadeh, Javad, Seyed Mazluom, Toktam Etezadi, and Alireza Tasseri. 2013. "A Standardized Shift Handover Protocol: Improving Nurses' Safe Practice in Intensive Care Units." Journal of Caring Sciences, 2, 177–85.

Patterson, Emily. (2008). "Structuring Flexibility: The Potential Good, Bad and Ugly in Standardisation of Handovers." Quality & Safety in Health Care, 17(1), 4–5.

Trajkovski, Suza, Virginia Schmied, Margaret Vickers, and Debra Jackson. (2013). "Implementing the 4D Cycle of Appreciative Inquiry in Health Care: A Methodological Review." Journal of Advanced Nursing, 69(6), 1224-1234.

Verleysen, Bert, Frank Lambrechts, and Frederik Van Acker. (2014). "Building Psychological Capital With Appreciative Inquiry." The Journal of Applied Behavioral Science, 51(1), 10-35.

Yetti, K., Dewi, N. A., Wigiarti, S. H., & Warashati, D. (2021). Nursing handover in the Indonesian hospital context: Structure, process, and barriers. Belitung Nursing Journal, 7(2), 113-117.