Effectiveness of Training Programs on Nurse's Competency in Integrated Patient Progress Note

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ABSTRACT

OBJECTIVE: The objective of this study was to evaluate the effectiveness of a training programme for nurses' knowledge regarding Integrated Patient Progress Notes (IPPN).

METHODOLOGY: This interventional study was conducted on nurses at Universitas Syiah Kuala Hospital. The study was conducted in August 2024. One group pre-test and post-test were used in this study. A total of 33 nurses were included in the current study. The intervention was provided with a training program to improve the competency of nurses. This study uses self-administered questionnaire sheets that contain two sections: nurses' demographic data and nurses' knowledge assessment of the IPPN. Data were analyzed using the Wilcoxon signed-rank test, as the Shapiro-Wilk test confirmed the non-normal distribution.

RESULTS: The statistical test analysis findings indicated that the nurses' competency in Integrated Patient Progress Note (IPPNs) was significantly impacted before and after the training program ($Z = -3.095$; p-value 0.002).

CONCLUSION: Further assistance is needed to improve the competency of nurses in the Integrated Patient Progress Note. It is hoped that nurses receiving continued mentoring regarding Integrated Patient Progress Note (IPPN) will improve patient safety.

KEYWORDS: Nursing, Documentation, IPPN, Nurses Competency

INTRODUCTION

With the ongoing sophistication of patient care in a health landscape that is rapidly changing, healthcare providers are mandated to provide comprehensive and effective record documentation, enabling accurate communication between all areas of healthcare. An integrated patient progress note is essential to document your team's full spectrum of care, including results from assessments and interventions[1]. These notes are crucial not only for care transitions but also for preventing patient harm, meeting legal and regulation requirements, and supporting a collaborative model of health[2]. Because nurses were the largest clinical group of healthcare providers, they played a significant role in documentation, resulting in the quality of care given to patients[3].

Recent studies have highlighted the importance of proper documentation in improving patient outcomes. A study conducted at Sunnybrook Health Sciences Centre in Toronto demonstrated that a comprehensive IPPN training program led to a 40% improvement in documentation accuracy and a 25% reduction in communication-related adverse events within six months of implementation[4]. This success story illustrates the potential impact of well-designed training interventions on nurses' competency and, by extension, patient outcomes.

Integrated patient progress notes, which aggregate different elements of care into one standardized format, have been identified to facilitate better communication between an interdisciplinary team member and the number of uses towards improved quality patient outcomes. When nurses and doctors are provided with more comprehensive information about the patient on integrated notes, it helps avoid redundancy and miscommunication and streamlines clinical workflows, ensuring that all healthcare providers have access to the same accurate patient data[5].

In addition, standard integrated progress notes allow for optimal decision-making, which backs practical interventions to improve care and, ultimately, patient outcomes in a positive matter[6]. But, even when used correctly, the efficient use of this method of documentation is still up to the skill level and writing ability of each nurse.

While the advantages are apparent, nurses still struggle with mastering proficiency in documentation. Some of the key barriers include insufficient time, incomplete training and poor use of standardization in documentation[7,8]. This is further exacerbated by the level of responsibility given to nurses in demanding clinical environments with documentation needing to be completed rapidly and accurately for patient safety. Poor documentation has been associated with failures in communication between teams[9], such that necessary care is not given at the right time resulting in preventable medical errors and adverse outcomes

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for patients[10]. Therefore, training programs with a specific structure are used to overcome these barriers and improve nursing documentation practices.

The growing interest in training programs focuses on improving the documentation skills of nurses to help close the competency gap[11]. Yet, despite the expansion of such programs, scant scholarship is focused on their impact on enhancing nurses' utilization of integrated patient progress notes. Current studies often train general documentation, with few details on the importance of comprehensive, integrated notes to continuity of care. This gap in the literature signifies a requirement for targeted interventions to assess how training, specifically, may further competence in integrating patient documentation by nurses[12,13]. Training should be theoretical and provide nurses with demonstrable experience and opportunities to boost their confidence and efficacy in live documentation[14].

The training program is designed to measure the effectiveness of a structured two-day training in nurses' knowledge and competency by using notes for patients on integrated patient progress notes. Such intervention is especially relevant today with the advancement of patient care and growing requirements for precise documentation in multiple healthcare settings. Investigating changes in the competency of nurses pre- and post-intervention will enable measurement of the extent to which improved documentation training programs can address deficiencies in documenting skills. These results are intended to assist in future designs of training strategies that may enhance nurse competency, improve patient safety, and increase interdisciplinary communication in healthcare settings.

Given the importance of IPPN in modern healthcare and the identified gaps in nurses' competency and research, this study aims to address the following research question: What is the effectiveness of a training program for nurses' knowledge regarding Integrated Patient Progress Notes?

METHODOLOGY

Study Design

This study utilized one group pre-test and post-tests without a control group design to evaluate the effectiveness of a training program in enhancing nurses' competency in using Integrated Patient Progress Notes (IPPN). The pre-test was conducted to measure the nurses' baseline knowledge and competency before the intervention. The training itself was delivered in a full-day session, after which a post-test was administered to assess the improvement in their skills. The pre-test and post-test were conducted and recorded using Google Forms to ensure efficient data collection and analysis.

Time, Population and Sample

The study was conducted in August 2024. The population for this study consisted of nurses working at Universitas Syiah Kuala Hospital. A total sampling method was employed, involving 33 nurses as participants, including head nurses, within the inpatient wards.

Instrument

Data were collected using a self-administered questionnaire divided into two sections. The first section focused on the nurses' demographic information, including age, gender, years of clinical experience, and level of education. The second section comprised a knowledge assessment tool explicitly designed to evaluate nurses' understanding and competency in using the IPPN. The knowledge assessment included questions on the core components of integrated patient progress notes (IPPN). The knowledge assessment tool was tested for validity and reliability with a sample of 30 respondents previously. The validity test employed a critical value (r-table) less than 0.361. The results showed that all correlations between items exceeded this threshold, with values ranging from 0.362 to 0.622, confirming the content's validity. Cronbach's Alpha was used for reliability testing, and a coefficient of 0.89 was obtained, indicating a high level of consistency for the nurse knowledge assessment instrument.

Training program

A training program was developed to improve nurses' knowledge and practices concerning Integrated Patient Progress Notes (IPPN). This program was meticulously crafted based on a thorough needs assessment of the nursing staff and aligned with current research findings and the Standard Operating Procedures for IPPN. The training intervention encompassed multiple components and was implemented in a structured, sequential manner.

The program began with a pre-test administered 30 minutes before the start of the training to assess baseline knowledge. Following this, a detailed training module on nursing documentation was distributed to each participating nurse, providing a comprehensive resource on IPPN implementation. A series of lectures then explained the module content in depth, ensuring participants thoroughly understood the material.

After the lectures, practical training sessions focused on properly using IPPN forms. These hands-on sessions allowed nurses to apply their theoretical knowledge in a controlled setting, building skills and confidence in IPPN implementation. Instructors maintained open communication throughout, encouraging questions and addressing any queries.

Facilitators with expertise in nursing documentation and IPPN led the training, using varied teaching methodologies, including didactic presentations, multimedia resources, and problem-based learning approaches. Participants' progress was monitored through formative assessments to identify areas for additional clarification. Upon completing the program, a post-test was administered to evaluate the training's effectiveness and measure improved knowledge and skills related to IPPN documentation.

Data Analysis

Data were analyzed using the Wilcoxon signed-rank test, given the non-normal distribution of the data, which was confirmed through the Shapiro-Wilk test. This non-parametric test was used to compare the differences between the pre-test and post-test scores, allowing for the assessment of the effectiveness of the training program. Descriptive statistics were used to summarize demographic characteristics, while inferential statistics were applied to determine the significance of changes in nurses' competency levels. A p-value of less than 0.05 was considered statistically significant for all analyses.

Limitation of the Study

The research acknowledges several limitations that warrant consideration. Firstly, the study's sample size of 33 respondents may constrain the generalizability of the findings to broader populations. Secondly, potential sampling bias exists due to including all nurses at Universitas Syiah Kuala Hospital without specific criteria, potentially limiting representativeness across diverse healthcare settings. Thirdly, the reliance on self-reported data for knowledge and attitudes introduces the possibility of response bias. Fourthly, the absence of a control group in the pre-test and post-test design restricts isolating the intervention's effects. Lastly, the condensed nature of the training program, delivered in a single full-day session, may impede long-term knowledge retention and skill acquisition.

Ethical Statement

This study was conducted following ethical guidelines and was approved by the Universitas Syiah Kuala Ethics Committee. Written informed consent was obtained from all participants before their inclusion in the study. Participants were assured of their right to withdraw at any point without consequence, and confidentiality was maintained throughout the research process. No identifying information was included in the data analysis or reporting, ensuring the anonymity of the participants.

RESULTS

The demographic characteristics provided a diverse yet representative sample of nurses working in the inpatient wards at Universitas Syiah Kuala Hospital. The demographic analysis revealed that the average age of the respondents was 33 years, with the majority of participants falling within the 31-40 age range (51.52%). Female nurses represented the most significant proportion of the sample (78.79%). Regarding marital status, most participants were married (81.82%), and the highest level of education attained by the majority was a Diploma III in Nursing (63.64%). Regarding professional experience, a significant portion of nurses had worked for 5 to 10 years (36.36%). **Table I**.

The Wilcoxon signed-rank test statistical analysis demonstrated a significant improvement in nurses' competency using Integrated Patient Progress Notes

(IPPN) following the training program. The test results showed a Z value of -3.095 and a p-value of 0.002, indicating a statistically significant difference between the pre-test and post-test scores. (**Table II).** This finding suggests that the training program had a notable positive impact on the nurses' understanding and use of IPPN.

Table I: Characteristic Respondents (n=33)

Characteristics	f	%
Age (M±SD)	33,50±6,948	
< 30	8	24.24
31 - 40	17	51.52
> 40	8	24.25
Gender		
Female	12	78.79
Male	7	21.21
Marital Status		
Not Married	6	18.18
Married	27	81.82
Educational Level		
Diploma in Nursing	21	63.64
Bachelor in Nursing	12	36.36
Working experience		
> 1 year	6	18,18
1 – 5 years	9	27,27
6 – 10 years	12	36,36
> 10 years	6	18,18

Table II: Integrated Patient Progress Notes (IPPN) Competency

IPPN Nurses Competency	Mean	Mean rank	Sum of rank	Z	α	p-value
Pre-test	19,33	0,00	0,00	-3,095	0,05	0,002
Post-test	36,00	6,50	78,00			

DISCUSSION

The findings of this study demonstrate a significant improvement in nurses' competency in documenting Integrated Patient Progress Notes (IPPN) following a structured training program. The results of the Wilcoxon signed-rank test indicated a statistically significant difference in competency levels before and after the intervention (Z = -3.095; p = 0.002); this suggests that the training program effectively enhanced the nurses' understanding and ability to apply integrated documentation techniques, crucial for improving patient care quality and safety.

Before the intervention, many nurses exhibited insufficient knowledge of integrated patient progress documentation; this aligns with the previous study's recommendation that nurses face documentation challenges due to inconsistent training[15]. In a study at a hospital in Banda Aceh, poor adherence to nursing

documentation standards was associated with a lack of ongoing training and inconsistent supervision[16]. Inadequate documentation has been shown to compromise patient safety, emphasizing the need for structured training programs focused on integrated patient progress notes to ensure comprehensive care documentation[17].

The significant improvement observed post-intervention reflects the efficacy of targeted educational interventions. Similar results have been noted in studies such as those investigating the impact of the Indonesian Nursing Diagnosis Standard[18], where structured training programs improved nurses' ability to document nursing diagnoses and patient care plans accurately. The hands-on, interactive approach in this training, including role-playing and case scenarios, enabled nurses to directly apply theoretical knowledge to clinical practice, aligning with adult learning principles[19,20]. This method has proven to be effective in closing competency gaps in documentation.

The focus on IPPN precisely, rather than a broader view of nursing documentation, addresses a critical gap in nursing practice. By targeting this area, the study contributes to a growing body of literature that underscores the importance of integrated notes in enhancing communication among healthcare teams[21,22]. A retrospective analysis examining nursing documentation based on the Indonesian Nursing Diagnosis Standard further supports this, highlighting that better documentation leads to more efficient care transitions and improved patient outcomes[18]. This study's improvement in competency post-training mirrors findings from other regions, suggesting that a well-structured program can have widespread applications in different clinical settings.

The results also affirm the importance of continuous education in nursing. Documentation is a core component of nursing practice, and regular training helps nurses stay updated on best practices, thereby ensuring patient safety; this has been a recurring theme in literature, with studies such as "What is the problem with nursing documentation? Perspective of Indonesian nurses" pointing out that without structured documentation training, nurses struggle with accuracy and completeness [7]. In the present study, the training program provided nurses with practical tools to improve their documentation skills, resulting in better clinical practice outcomes.

A noteworthy factor contributing to the program's success is the alignment of training with the nurses' clinical experience. More experienced nurses could refine their skills, while less experienced nurses benefitted from the comprehensive training, which offered them a solid foundation in IPPN documentation[23]; this reflects findings from studies on nursing students, where those exposed to systematic documentation training exhibited a better grasp of the nursing process and were more confident in documenting patient care[24].

The significant improvement in nurses' competency in this study can also be attributed to the supportive learning environment. A positive learning atmosphere enhances participant engagement and retention of new skills[25]. In this study, the peer group setting and real-time feedback from facilitators allowed for active peer interaction and hands-on practice, which likely reinforced the theoretical knowledge acquired; this is consistent with findings from prior research, which emphasized the role of mentorship and interactive learning in improving clinical documentation practices[26,27].

This study also found that improving competency in Integrated Patient Progress Notes (IPPN) enhances nurses' work efficiency and improves patient care quality. Proper documentation ensures that critical patient information is accessible to all healthcare team members, ultimately reducing the risk of medical errors and improving team coordination[28]. Other studies have shown that evidence-based training can enhance nurses' overall competency, positively impacting patient care outcomes[29].

Despite these positive findings, certain limitations must be acknowledged. Using a one-group pre-test post-test design restricts the ability to control for confounding factors, such as prior documentation experience or external motivations. Future research should incorporate a control group, allowing a more rigorous evaluation of the training's effectiveness. Additionally, while this study involved a relatively small sample of nurses, the results are encouraging. However, future studies would benefit from a larger sample size and should ideally be conducted in higher-tier hospitals to enhance generalizability. Lastly, future research needs to investigate the long-term effects of documentation training, ensuring that nurses sustain their improved competencies over time.

In conclusion, this study contributes to the growing evidence that structured training programs significantly improve nurses' competency in Integrated Patient Progress Notes (IPPN). By accurately enhancing nurses' ability to Integrate Patient Progress Notes (IPPN), healthcare teams can ensure better communication, reduce the risk of errors, and ultimately improve patient safety.

CONCLUSION

This study demonstrates the positive impact of a structured training program in enhancing nurses' competency in Integrated Patient Progress Notes (IPPN) documentation. The significant post-training improvements underscore the program's ability to address critical gaps in documentation skills, which are essential for patient safety and interprofessional communication. The hands-on, interactive approach improved nurses' practical skills, enhancing compliance with documentation standards and more accurate patient care records.

Future recommendations include implementing regular training programs and competency

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assessments to maintain nurses' proficiency in IPPN documentation. Continuous support through mentorship and supervision is crucial for reinforcing these skills in clinical practice. Healthcare institutions should also invest in user-friendly IPPN systems to optimize nurses' time allocation between documentation and direct patient care. Further research is warranted to explore the long-term effects of training on documentation practices and their impact on patient outcomes, ensuring that nursing documentation remains a cornerstone of patient safety and effective care delivery.

AUTHOR CONTRIBUTION

Yuswardi: Contributed to the study's design and the formulation of the primary research idea or hypothesis, as well as the development of data collection instruments, was responsible for interpreting the study findings and analyze their implications in the discussion.

Maurissa A: Contributed to the study's design and the formulation of the primary research idea or hypothesis, as well as the development of data collection instruments, refined the manuscript by incorporating feedback from co-authors and reviewers, ensuring that the final version adhered to the journal's guidelines.

Nizami NH: Contributed to the study's design and the formulation of the primary research idea or hypothesis, as well as the development of data collection instruments, actively involved in data collection and providing supporting resources.

Mayasari P: Contributed to the study's design and the formulation of the primary research idea or hypothesis, as well as the development of data collection instruments, actively involved in data collection and providing supporting resources.

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