
The Quality of Competence Through Nursing Career Paths Among Indonesian Nurses in Hospital Settings

Muhammad Hadi^{1*}, Dina Rahmawati², Nyimas Heny Purwati³, Dhea Natasha⁴, Slametiningsih⁵, Idyatul Hasanah⁶

¹Faculty of Nursing, Universitas Muhammadiyah Jakarta, Indonesia, muhammad.hadi@umj.ac.id

²Cilegon City General Hospital, Banten, Indonesia, dina.rafalok@gmail.com

³Faculty of Nursing, Universitas Muhammadiyah Jakarta, Indonesia, nyimas.heny@umj.ac.id

⁴Faculty of Nursing, Universitas Muhammadiyah Jakarta, Indonesia, natashia_dhea@umj.ac.id

⁵Faculty of Nursing, Universitas Muhammadiyah Jakarta, Indonesia, slametiningsih@yahoo.com

⁶STIKES Yarsi Mataram, NTB, Indonesia, idyatulhasanah@gmail.com

*Corresponding Author: E-mail: muhammad.hadi@umj.ac.id

ARTICLE INFO

Received: 5 June, 2024

Revised: 12 July, 2024

Accepted: 15 July, 2024

Volume: 4

Issue: 2

DOI: [10.56338/jphp.v4i2.5459](https://doi.org/10.56338/jphp.v4i2.5459)

KEYWORDS

Clinical Nurse
Hospital Setting
Nurse Competence
Nursing Career Paths
Quality Competence

ABSTRACT

Introduction: Nurses play a pivotal role in the provision of healthcare services both within the Indonesian context and on a worldwide scale. The development of nursing competence is crucial in order to guarantee the provision of high-quality healthcare services. To examine the elements that are linked to the enhancement of nurse competence by means of the adoption of nursing career paths within hospital settings in Indonesia.

Methods: A descriptive analytical design, utilising a cross-sectional approach with a sample size of 197 nurses. The data was obtained by administering a meticulously evaluated questionnaire, designed by the researchers, to the participants. The questionnaire's validity ($r=0.361$) and reliability ($r=0.933$) were thoroughly assessed. The analysis of the research data was conducted utilising multiple linear regression tests.

Results: As established through the use of multiple linear regression tests, demonstrate a statistically significant positive association ($p<0.05$) between organisational loyalty, organisational support, guidance, and financing, and the implementation of nurse competence quality. The obtained coefficient of determination was 0.260, suggesting that the four independent variables considered in this study have the ability to collectively account for 26% of the variability observed in the implementation of nurse competence quality. It is important to note that the remaining variation is likely impacted by additional factors not included in the analysis. The guiding element has been identified as the primary determinant in the cultivation of quality competence within hospital settings while implementing nursing career routes.

Conclusion: The present study establishes that factors such as organisational loyalty, organisational support, mentorship for nurses, and financial resources for career advancement have a significant impact on the enhancement of nursing competency along the career trajectory within hospital settings. The variable exerting the most significant influence is the provision of instructions for nurses.

Publisher: Pusat Pengembangan Teknologi Informasi dan Jurnal Universitas Muhammadiyah Palu

INTRODUCTION

Hospitals play a crucial role as integral components of the public healthcare system, significantly impacting international health by addressing both immediate and long-term medical needs. As global health challenges like

pandemics, chronic diseases, and health disparities continue to rise, the effectiveness of healthcare systems becomes increasingly crucial. On the other hands, nurses have a prominent and vital role in delivering healthcare services to patients inside hospital settings. According to Hodgson and Scanlan (2013) and Mashuri, (2021), these individuals serve as the primary providers of direct care to those requiring therapy (1,2). In the context of a rapidly evolving healthcare landscape characterised by intricate systems, the significance of nurses in the provision of high-quality healthcare services is amplified. The enhancement of nurses' abilities is a crucial determinant in ensuring their ability to properly carry out their responsibilities and deliver safe and efficient healthcare services to patients. Nursing competence encompasses a comprehensive range of knowledge, skills, and attitudes that are essential for nurses to effectively provide high-quality healthcare services (3,4). The foundation of professional nursing practise is in the possession of robust nursing competence, which enables nurses to deliver healthcare services of exceptional quality. This is achieved by the comprehensive comprehension, effective application, and diligent execution of their duties in alignment with elevated benchmarks (5). The effective integration of competency quality within healthcare systems necessitates adherence to established policies, which encompass the judicious allocation of nurses to their respective positions in nursing services in accordance with their credentials. In order to facilitate the progression of nurses' professional trajectories, it is imperative for management to hold the capacity to discern and acknowledge the distinct career needs of nurses at various levels of proficiency (6,7).

In Indonesia, the regulation that governs the development of nurse competency is Minister of Health Regulation no. 40 of 2017. This regulation offers detailed rules for ensuring the quality of nurse competence and outlines the many career routes that are open to professional nurses. This regulatory framework delineates four distinct professional trajectories for nurses, encompassing the roles of Clinical Nurse, Nurse Manager, Nurse Educator, and Nurse Researcher. Clinical nurses are tasked with the provision of direct nursing care to patients and communities, whereas nurse managers have the responsibility of overseeing nursing services across different levels of management. Nurse educators primarily dedicate their efforts to instructing students inside nursing institutions, whereas nurse researchers are involved in conducting research related to nursing and activities (1,8,9). Nevertheless, the practical application of this regulation may encounter numerous obstacles and variables that can impact the advancement of nursing proficiency.

The competence of nurses is of utmost importance in maintaining the standard of healthcare, as it is intricately connected to their performance, satisfaction in their role, and rate of absenteeism (4,10–12). The development of nursing competencies is of utmost importance. Nevertheless, there exist a multitude of internal and external elements that have the potential to impede or support nurses in the acquisition of these competences (4,13). Several studies have extensively reported the factors that influence the quality of nursing competence. According to Rizany et al. (2018), a systematic review has indicated that the development of competency is an ongoing process that involves the enhancement of knowledge, attitudes, and skills (14). This process is influenced by multiple factors, including work experience, the specific nursing environment, educational attainment, adherence to professionalism, critical thinking abilities, and personal characteristics. Moreover, Liu and Aunguroch, (2018) did an integrative literature analysis which suggests that characteristics pertaining to the competency of nurses can be categorised into sociodemographic, professional-related, and work environment variables. However, there is a scarcity of empirical studies on this topic. Therefore, it is imperative to take into account the various elements that impact nursing competency in order to facilitate future research endeavours (15). Nevertheless, there exists a dearth of comprehensive study elucidating these aspects, specifically within the framework of implementing regulated nursing career routes.

Thus far, no research has been identified that investigates the elements that influence the development of nursing competence quality through the adoption of career pathways in Indonesia. This study has the potential to address the existing vacuum in knowledge by investigating cultural variations, responder demographics, and the distinctiveness of the healthcare setting in Indonesia, which may diverge from other nations. The outcomes of this study will yield more comprehensive perspectives and more robust generalisations concerning the determinants that impact nursing proficiency across diverse settings. Furthermore, it is imperative to further investigate the precise ways in which these elements continuously influence the development of nursing competence. It is imperative to thoroughly examine the various elements that contribute to a nurse's competence in order to acquire

a comprehensive understanding of how both internal and external factors influence their competency. Additionally, by effectively managing these aspects, it is possible to strengthen a nurse's competency (13). By acquiring a more comprehensive comprehension of these variables, it is anticipated that various stakeholders in the healthcare sector, such as governmental bodies, healthcare organisations, and nurses themselves, would be able to implement more efficacious measures to augment the proficiency growth of nurses, consequently leading to an enhancement in the calibre of healthcare provisions.

The correlation between the advancement of nursing competences and the trajectory of nursing career paths has heightened significance inside the more intricate landscape of healthcare. By comprehending the impact of these elements on the acquisition of nursing competences, hospitals and healthcare organisations may strategize and execute efficient career development initiatives, so enabling nurses to continually enhance their skills and deliver exceptional patient care. Hence, the primary objective of this research was to investigate and comprehend the diverse elements that influence the enhancement of nursing competence quality via the implementation of career pathways in Indonesia.

Hence, the primary objective of this research was to investigate and comprehend the diverse elements that influence the enhancement of nursing competence quality via the implementation of career pathways in Indonesia. The specific research questions are: 1) What are the demographic characteristics of the nursing staff in Indonesian hospitals, and how do these characteristics correlate with their competency levels? 2) What are the key internal and external factors influencing the development of nursing competence in Indonesia? 3) How do the various career pathways impact the acquisition of nursing competencies? 4) How do factors such as organizational support, guidance, and financing contribute to the enhancement of nursing competence and overall healthcare quality in Indonesia?

METHOD

Study design

A cross-sectional study was performed

Participant

A sample of 197 clinical nurses was selected via proportional random sampling from a population of nurses working in 20 inpatient rooms. This method ensured that each inpatient room contributed nurses to the sample in proportion to its size in the overall population, maintaining the representativeness and diversity of the nurse population. G power analysis was conducted based on the total sample size of 197 with 14 predictors, a medium effect size, an F test, and linear multiple regression, yielding an actual power of 0.91. This indicates that the sample size is sufficient to detect a medium-sized effect with a 91% probability, assuming such an effect exists in the population. Eligibility criteria for nurses in Tangerang, Indonesia included being employed at a general hospital, possessing a minimum educational background of a Diploma, and having at least one year of work experience.

Data collection

The data collection period spanned from November 2019 through March 2020. The researcher met potential volunteers in their respective clinical settings and furnished them with pertinent information on the study. Participants who provided their consent were requested to sign a document affirming their agreement, followed by the completion of the survey. The researcher was present during the participant's completion of the questionnaire in order to address any potential inquiries and to retrieve the finished form. During the data collection phase, the individuals responsible for overseeing the room and the structural department will collaborate to facilitate the dissemination of questionnaires among the nursing staff.

Measurement

The measurement instrument was a questionnaire developed by the researchers themselves and divided into three sections:

Part one consists of questions related to the respondent's demographic data include: gender, status of employment, education, clinical nurse competencies, nurses' age, and length of service. This data is not directly related to the research variables, but can be used as a basis for discussing the results.

Section two consists of questions to measure the analysis of factors influencing the development of nurse competence quality, which includes training composed of seven questions with four answer choices ranging from 1= never to 4= very often; competence composed of 17 questions with four answer choices ranging from 1= strongly disagree to 4= strongly agree, nurse commitment composed of seven questions with four answer choices ranging from 1= never to 4= very often; organizational loyalty composed of six questions with four answer choices ranging from 1= never to 4= very often; organizational support composed of six questions with four answer choices ranging from 1= never to 4= very often; employee recognition composed of nine questions with four answer choices ranging from 1= strongly disagree to 4= strongly agree; mentoring composed of five questions with four answer choices ranging from 1= never to 4= very often; and financing composed of four questions with four answer choices ranging from 1= strongly disagree to 4= strongly agree.

In part three, this questionnaire was developed and compiled to measure the implementation of nursing career paths in hospitals. Measuring the implementation of a nursing career path starting from planning, implementation and career development with answers (1=strongly disagree to 4=strongly agree). The number of question points to measure a nurse's career path is 17 questions.

The instrument has been tested for validity and reliability on 30 respondents with similar nurse characteristics in other hospitals showing the *r* value (Corrected item-total correlation) is less than the *r* table value ($r = 0.361$). The reliability test result of $r_{\alpha} = 0.933$ is greater than the *r* table value.

Analyses

The analysis employed the Pearson product moment correlation to examine the relationship between variables, whereas the final modelling utilized Multiple Linear Regression. The study employed the Pearson Product Moment Correlation analysis to assess the association between a set of independent variables, including gender, employment status, education, age, length of service, clinical experience, training, expertise, commitment, nurse loyalty, organizational support, nurse appreciation, guidance, and financing, and the dependent variable of nurse competence quality in Indonesian hospitals. The findings of the correlation study demonstrate the magnitude of the association between the variables under investigation. In contrast, the technique of Multiple Linear Regression was employed to ascertain the variables that exert a more substantial impact on the dependent variable. This study utilized multiple linear regression analysis to examine the collective impact of various variables, including gender, employment status, education, age, length of service, clinical experience, training, expertise, commitment, nurse loyalty, organizational support, nurse appreciation, guidance, and financing, on the quality of nurse competence within nursing career trajectories. Each independent variable was assessed separately in terms of its association with the dependent variable. In the multivariate model, those variables that exhibited a *p*-value of less than 0.25 in the bivariate analysis were included. In order to assess the collective impact of variables that displayed a relatively robust correlation with nurse competence, a multiple linear regression model was constructed, using these variables as predictors of the dependent variable. The analysis was conducted utilising the SPSS software (version 23).

Ethical consideration

The present study successfully obtained ethical approval from the ethical committee of Universitas Muhammadiyah Jakarta, Indonesia with the reference number 215/S2/FIK-UMJ/2019.

RESULTS

Demographic Characteristics

The demographic data collected from a sample of 179 respondents revealed that the majority of participants were female, accounting for 171 individuals (86.8%). In terms of employment status, 86 respondents (43.7%)

identified themselves as civil servants. Furthermore, the highest degree of education reported by the participants was an Associate Degree in Nursing, with 146 individuals (74.1%) holding this qualification. Lastly, the majority of respondents indicated a competency quality level of Clinical Nurse PK III, with a percentage of 44.7%.

Factors that influence the development of quality competencies through the career path of nurses in hospitals An overview of the factors that influence the development of quality nursing competence

A comprehensive overview of the various factors that impact the cultivation of high-quality nursing competency within the framework of a nursing career trajectory is as follows:

Table 1. An overview of the factors that influence the development of quality nursing competency through the implementation of a nursing career path

Variable	Mean-Median	Standard of Deviation	Minimal-Maximal
Ners' Age	35.96 – 35.00	8.377	24-55
Length of Service	10.79 – 09.00	8.373	1-39
Training	16.46 - 17.00	2.73	10.00 – 22.00
Expertise	49.41 - 49.00	3.32	41.00 – 58.00
Commitment	16.20 - 16.00	3.41	9.00 – 25.00
Loyalty to the organization	14.40 - 14.00	2.40	9.00 – 20.00
Organizational support	13.86 - 14.00	2.32	9.00 – 19.00
Rewards	23.38 - 23.00	2.49	18.00 – 29.00
Guidance	11.08 - 11.00	2.48	6.00 – 17.00
Financing	10.40 - 10.00	2.34	5.0 – 16.00

The analysis of Table 1 reveals notable variances in the age and length of service among nurses, suggesting a diverse range of experiences within this group. Furthermore, it is noteworthy that nurses engage in training activities on a regular basis, with an average frequency of 16.46 times per year. Moreover, their average level of competency stands at 49.41. This demonstrates a comparatively elevated degree of proficiency. Nurses exhibit a notable dedication to the institution in which they are employed. According to the findings of this survey, nurses hold a favourable opinion regarding the organization's provision of loyalty, support, rewards, guidance, and finance.

Overview of the implementation of nurse career paths in hospitals

The assessment of nursing career paths' typical implementation was conducted by analyzing the aspects of planning, implementation, and development, as depicted in the table provided.

Table 2. Mean median implementation of nursing career paths

Career implementation	Mean-Median	Standar Deviasi	Minimal-Maksimal
Planning	17.17 – 17.00	2.29	12.00 – 23.00
Implementation	16.15 – 16.00	2.07	11.00 – 21.00
Development	16.44 – 16.00	2.40	11.0 – 22.00

Based on the findings presented in Table 2, it can be inferred that the mean evaluation of career path planning by nurses is roughly 17.17 (95% CI: 16.84 – 17.49), with a standard deviation of 2.29. This indicates that nurses tend to provide positive assessments regarding career path planning in the hospital. Furthermore, the average assessment of career path implementation by nurses is approximately 16.15 (95% CI: 15.86 – 16.44), with a standard deviation of 2.07. This suggests that nurses give a fairly positive assessment of career path implementation based on the indicators of implementation in the hospital. Next, the average assessment of career development by nurses is approximately 16.44 (95% CI: 16.10 – 16.78), with a standard deviation of 2.40. This indicates that nurses tend to provide positive assessments related to career development based on the career development indicators in the hospital. Thus, overall, nurses give positive assessments of aspects related to career

paths in the hospital, including planning, implementation, and professional advancement.

Analysis of factors that influence the development of quality competencies through the implementation of nurse career paths in hospitals

The initial stage of this analysis involves assessing the normality of the data by conducting the Kolmogorov-Smirnov Z Test on all variables. Based on the analysis of the test results, it is evident that the calculated significance value surpasses the predetermined alpha value of 0.05. This leads to the conclusion that all the variables under consideration exhibit a normal distribution. In this study, the correlation analysis between the independent variable and the dependent variable was conducted using a parametric test known as the Pearson Product Moment correlation test. The test findings have been documented as follows:

Table 3. Correlation test results between the independent and the dependent variable

Variable	Statistic test			Sig. (2-tailed)
	Pearson Correlation	T test Independent (Table F)	Uji One Way Anova (Table F)	
Gender		11.806		0.670
Status			4.808	0.009
Education			0.188	0.829
Age			1.482	0.221
Length of Service	0.001			0.998
Clinical nurse	0.069			0.336
Training	-0.027			0.707
Expertise	0.130			0.069
Commitment	0.323			0.001
Loyalty	0.251			0.001
Support	0.385			0.001
Reward	0.238			0.001
Guidance	0.395			0.001
Financing	0.338			0.001

Based on the data presented in Table 3, it is apparent various findings regarding the relationship between independent variables and the dependent variable. The variables of gender, education, age, length of service, and training do not exhibit a significant influence on the growth of competence quality within the nursing career ladder, as indicated by a p-value greater than 0.25. In contrast, there exist several variables that exert a substantial impact on the advancement of competence quality within the nursing profession. These variables include employment status, clinical nurse designation, nurse competence, organisational commitment, employee loyalty, organisational support, employee recognition, guidance, and funding. It is noteworthy that these variables have been found to be statistically significant, as indicated by a p-value of less than 0.25.

The variables eligible for inclusion in the multivariate model are those that have a p-value of less than 0.25 in their respective bivariate analyses. Based on the aforementioned statistical findings, it is evident that the variables warranting further examination in the multivariate analysis include employment status, clinical nurse, competence, organizational commitment, employee loyalty, organizational support, employee recognition, guidance, and funding. However, the variables of gender, education, age, and duration of service were excluded from the multivariate analysis as their p-values were found to be less than 0.25.

Analysis of the influence of independent variables on dependent variables in hospitals

Multiple linear regression analysis is used to predict which variables have a greater influence on the dependent variable. The formation of the multivariate model is done using the backward method, where all variables are included in the model initially, and then independent variables with a p-value > 0.05 are removed from the model one by one. The backward method is explained in Table 5 below.

Table 4. Backward independent variable to dependent variable

Variable	Sig.	Sig.	Sig.	Sig.	Sig.	Sig.
Employment Status	0.633	-	-	-	-	-
Clinical nursing	0.172	0.144	0.157	0.176	-	-
Expertise	0.532	0.501	0.499	-	-	-
Commitment	0.180	0.184	0.161	0.151	0.142	-
Nurse loyalty	0.099	0.088	0.087	0.034	0.032	0.008
Organizational support	0.029	0.032	0.029	0.018	0.016	0.009
Reward	0.582	0.615	-	-	-	-
Mentorship	0.017	0.019	0.013	0.016	0.014	0.004
Financing	0.030	0.033	0.023	0.025	0.031	0.024

Based on the data shown in Table 4, it is evident that the variables of job status, clinical nursing, competency, dedication, and employee rewards exhibit p-values more than 0.05. Consequently, these variables are omitted from the model. This study has undertaken tests to assess assumptions. Based on the results of the assumption test, it can be inferred that the Multiple Linear Regression analysis has satisfied the prescribed assumptions, thereby enabling the utilisation of the model for predicting the impact of implementing nursing career paths on the enhancement of nurse competence quality in Indonesia.

Table 5. Multivariate Model

Variable	Coefficients B	Coefficients Beta	R Square	ANOVA Sig.	Sig.	N
Loyalty	0.329	0.174	0.260	0.001	0.008	.97
Organizational Support	0.370	0.190			0.009	
Guidance	0.401	0.220			0.004	
Funding	0.320	0.166			0.024	

The variable quality of nursing competence can be accounted for by 26% through the four independent variables. Subsequently, the outcomes of the F test conducted in the analysis of variance (ANOVA) revealed a p-value (sig) of 0.001, while maintaining a significance level (alpha) of 5%. The regression model demonstrates that loyalty, organisational support, guidance, and financing have a strong predictive effect on the variable of nurses' competence quality. The table provides insights into the variable that exerts the greatest influence on the development of nurse competence quality along the nursing career trajectory. The identification of the most significant impact of a variable can be achieved by examining the coefficient Beta values. The aforementioned multiple linear regression model suggests that the variable exerting the most substantial impact on the enhancement of nurse competence quality across the trajectory of a nursing career is employee mentorship, as indicated by a coefficient of 0.220.

DISCUSSION

According to recent modelling, several aspects contribute to the development of competence within the nursing career progression. These factors include loyalty, organizational support, direction, and financial resources. This aligns with prior scholarly investigations that elucidate how the continuous advancement of science and technology prompts organizations to bolster the proficiency of nurses by means of career assistance, guidance provision, and budgetary strategizing in order to effectively implement and improve the quality of nurse competencies (15). Additional studies have indicated that the incorporation of competency-based quality measures into healthcare institutions is contingent upon factors such as nurses' organisational loyalty, support from the organisation, provision of guidance to nurses, and financial resources (16,17).

There exists a notable correlation between the level of nurse competence and the variable of organizational loyalty (18). The motivation of nurses plays a crucial role in the enhancement of nursing resources within hospital settings. To achieve the overarching objective of human resource management, which is to enhance productivity,

foster loyalty, promote job satisfaction, and cultivate positive work motivation among nursing personnel, it is imperative for managers to engage in strategic planning. Recent college graduates often exhibit low levels of loyalty, which can be attributed to excessively high expectations. This phenomenon is not limited to this demographic, as professional groups also experience a similar trend, wherein loyalty is primarily directed towards the profession itself. To cultivate loyalty among nurses, organizations employ effective human resource practices, such as strategic planning and career development initiatives (19). According to Wang et al. (2020), it is imperative for nurses to demonstrate a strong commitment and foster a culture of professionalism within the organizational context. The research conducted by Sastradijaya (2020) demonstrates that nurse career planning has a significant role in enhancing their competency in the context of human resource management. Furthermore, according to Solehudin et al. (2022), the rise in demand for human resources is attributed to the presence of dedicated personnel who possess professional competencies within their respective domains.

The study on the impact of organizational support on the development of competency quality reveals that there is a significant relationship between organizational support and the quality of nurse competence. The study examines the relationship between career development and performance among nurses, with a sample size of 264 nurses. The research findings indicate that engagement in training programmes, involvement in leader-member exchanges, and receiving career mentorship are all positively correlated with nurses' attitudes. According to Hermawati and Yosiana (2021), there exists a correlation between organisational support and career advancement. The findings of this study suggest that there is a positive correlation between organisational support and nurse performance. However, this relationship is contingent upon the perception of career opportunities within the organisation, which is based on the competence of nurses as determined by human resource management practises. The study further reveals that Competent Base Human Resources Management (CBHRM) in nursing is influenced by various organisational factors, such as organisational size, culture, nature, human resource policies, and the type of organisation (24). The career development of a nurse is influenced by various factors, including the support provided by the HR department. Lúcia et al. (2017) highlight that the HR department plays a crucial role in facilitating career development by offering information on available career paths and assisting in the planning of a nurse's career (25).

The impact of guidance on the level of nursing competence has considerable importance. According to Woolnough and Fielden (2017), the study on guidance for nurses in health services demonstrates the effectiveness of providing support and direction to nurses in terms of career development and implementing ways to enhance their professional growth (26). Human resource management encompasses various aspects pertaining to the cultivation, utilisation, and safeguarding of human resources. Coaching is implemented within the framework of examining potential and enhancing the calibre of productive human resources. According to Rivai (2003), mentors play a crucial role in offering guidance and recommendations to nurses in order to enhance their professional trajectory (27). According to Moran et al. (2011), the implementation of mentorship programmes and the provision of continuing education and training opportunities are crucial factors for hospitals to consider in order to facilitate the professional development of nurses. Mentors or those who offer assistance play a pivotal part in facilitating nurses' comprehension of their professional trajectories, surmounting obstacles, and augmenting their proficiencies (28). Hence, it is imperative for hospital management and human resources departments to prioritise the establishment of impactful mentorship programmes as a means to enhance nurse competence and foster successful career advancement within the healthcare industry. However, implementing effective guidance and mentorship programs in hospital settings faces several barriers and challenges, including financial constraints, lack of qualified mentors, and variability in nurse motivation and loyalty. To address these challenges, hospitals can explore partnerships with educational institutions, seek funding through grants, and develop incentive programs to attract and retain qualified mentors, thereby ensuring the sustainability and effectiveness of mentorship programs.

According to Sinambela and Poltak (2019), the cost factor is a significant determinant in the enhancement of nursing competence within hospitals located in the Tangerang district of Banten Province, Indonesia (29). The authors assert that the cost factor is among the key considerations in the implementation of measures aimed at improving the quality of nurse competence. The study conducted in Oman examined the many elements that impact the level of competence. A total of 80 participants were included in the study. The findings revealed a

significant association between financing and career trajectories, as indicated by a p-value of 0.001. Additionally, it was observed that numerous organisations see human resource development to be contingent upon investment and owned assets (29). The significance of the cost element in the enhancement of nurse proficiency is in the allocation of resources necessary for training, ongoing education, and the cultivation of skills. Various resources, such as financial support for training, availability of state-of-the-art medical technology, and the acquisition of books and training materials, can significantly impact the degree to which nurses are able to develop their professional competence. In addition, the cultivation of nursing proficiency is a strategic endeavour that has the potential to provide substantial advantages for healthcare institutions and their clientele. Nurses that possess a high level of competence have been seen to deliver care of superior quality, mitigate the likelihood of medical errors, and enhance patient satisfaction. Hence, it is imperative for healthcare institutions to devote a sufficient budget towards the enhancement of nursing competency.

Nurse professional career development, as exemplified by nurse competency quality, is a systematic approach aimed at enhancing performance and professionalism within the nursing profession. This approach focuses on the augmentation of competence, which subsequently leads to improved professional performance [5,9]. The concept of competency quality refers to the degree of skill required to provide responsible and ethical nursing care within the boundaries of one's authority (30). Enhancing the level of nurse competency has the potential to enhance the provision of professional nursing services. According to Collins et al. (2020), the nurse competency quality programme is intended to foster and incentivize the attainment of clinical excellence. The advancement of nurses' careers, with respect to awards, can manifest through recognition for increased levels of expertise and responsibility, accompanied by tangible rewards that align with the professional competence exhibited at each career stage. Professional nurses are required to possess the capacity for rational thinking, adaptability to environmental circumstances, self-awareness, experiential learning, and self-actualization. Therefore, the enhancement of their professional competence can be achieved (5,25).

Implications for Public Health

Implementing nurses can propose and plan the development of quality competence through strengthening and increasing the competence of nurses in providing nursing services. Hospital management must be committed that the nurse competency quality program is designed to inspire and appreciate the clinical excellence of nurses.

Limitations and Recommendations for Future Research

The limitation of this study is that the obtained results do not have a direct impact on addressing a nursing management problem, particularly those pertaining to organisational loyalty, organisational support, guidance for nurses, financing, and the implementation of nurse competence quality. It is important to note that the application of nurse competencies in hospitals can be influenced by various other factors. Nevertheless, this research serves as a crucial component in the development of strategies for enhancing nursing management (25,32). The application of nurse competence is a phenomena that encompasses the involvement of individuals within an organization [8]. The determination of factors that impact the implementation of nurse competence quality is derived from the evaluation of the ward nurse, resulting in an assessment that is currently limited to the ward nurse alone, with no corresponding evaluation of the nursing staff (33,34).

The present study employed a sample of 197 nurses who were selected from hospitals located in Indonesia. Although the sample size provided in this study offers insights into a segment of the nursing community in Indonesia, it is important to acknowledge that it may not fully capture the breadth of variety that exists throughout the entire nation. Hence, it is important to acknowledge that the outcomes of this study may possess limits in terms of their applicability to the broader nursing community across different nations.

Furthermore, the present investigation utilized a cross-sectional methodology, wherein data was gathered at a singular moment in time. This factor can present difficulties in establishing causal links between the variables being examined. The cross-sectional nature of the study restricts the ability to establish causal relationships. Future research employing longitudinal designs would be beneficial to confirm these findings and explore causal pathways more definitively. Moreover, while this study has successfully identified a number of influential components, it is

important to acknowledge that there exist numerous additional variables that may also exert substantial effects on the enhancement of nursing competence. Future investigations may need to consider factors such as the geographic location of hospitals or the geographic regions in which nurses work, as these factors have the potential to influence the development of nurse competence.

CONCLUSION

The present study posits that factors such as organisational loyalty, support from the organisation, guidance provided to nurses, and financial resources for career development have a significant impact on the enhancement of competency quality along the career trajectory of nurses within hospital settings. The variable exerting the most significant influence is the provision of instructions for nurses. It is vital to comprehend the influence of these aspects on the development of nursing competence within the dynamic realm of healthcare. These insights can be utilised by hospitals and healthcare organisations to strategically design and implement career development programmes. This will enable nurses to consistently improve their skills and knowledge, ultimately leading to the delivery of high-quality care to patients.

AUTHOR'S CONTRIBUTION STATEMENT

All authors : Conceptualization, Data Curation, Formal Analysis, Investigation, Writing – Original Draft Preparation ;
All authors : Writing – Original Draft Preparation, Writing – Review & Editing ;
All authors : Methodology, writing – Original Draft Preparation, Writing – Review & Editing : Investigation, Methodology, Project Administration, Supervision ; Final version of manuscript.

CONFLICTS OF INTEREST

The authors declare that no conflict of interest

SOURCE OF FUNDING STATEMENTS

Universitas Muhammadiyah Jakarta

ACKNOWLEDGMENTS

Thank you to the Chancellor of the University of Muhammadiyah Jakarta for providing financial support and the opportunity for this research. Also thanks were conveyed by the director of the Tangerang hospital for allowing this research activity.

BIBLIOGRAPHY

1. Mashuri MA. PENGEMBANGAN MODEL JENJANG KARIR PROFESIONAL PERAWAT DI RUMAH SAKIT UMUM DAERAH KABUPATEN SIDOARJO. *Jurnal Ilmu Administrasi: Media Pengembangan Ilmu Dan Praktek Administrasi* 2021;18. <https://doi.org/10.31113/jia.v18i1.596>.
2. Hodgson AK, Scanlan JM. A Concept Analysis of Mentoring in Nursing Leadership. *Open J Nurs* 2013;03. <https://doi.org/10.4236/ojn.2013.35052>.
3. Fukada M. Nursing competency: Definition, structure and development. *Yonago Acta Med* 2018;61. <https://doi.org/10.33160/yam.2018.03.001>.
4. Rizany I, Hariyati RTS, Handayani H. Factors that affect the development of nurses' competencies: a systematic review. *Enferm Clin* 2018;28:154–7. [https://doi.org/10.1016/S1130-8621\(18\)30057-3](https://doi.org/10.1016/S1130-8621(18)30057-3).
5. Sandehang PM, Hariyati RTS, Rachmawati IN. Nurse career mapping: A qualitative case study of a new hospital. *BMC Nurs* 2019;18. <https://doi.org/10.1186/s12912-019-0353-z>.
6. Salvage J, White J. Nursing leadership and health policy: everybody's business. *Int Nurs Rev* 2019;66. <https://doi.org/10.1111/inr.12523>.
7. Matsuo M. Leadership of learning and reflective practice: An exploratory study of nursing managers. *Manag Learn* 2012;43. <https://doi.org/10.1177/1350507612440413>.

8. Alligood MR. *Nursing Theorists And Their Work*-eighth edition. vol. 8. 2014.
9. Kementerian Kesehatan RI. Peraturan Menteri Kesehatan Nomor 40 Tahun 2017 tentang Pengembangan Jenjang Karir Profesional Perawat Klinis. Indonesia: 2017.
10. Numminen O, Leino-Kilpi H, Isoaho H, Meretoja R. Newly Graduated Nurses' Competence and Individual and Organizational Factors: A Multivariate Analysis. *Journal of Nursing Scholarship* 2015;47:446–57. <https://doi.org/10.1111/jnu.12153>.
11. Kuokkanen L, Leino-Kilpi H, Numminen O, Isoaho H, Flinkman M, Meretoja R. Newly graduated nurses' empowerment regarding professional competence and other work-related factors. *BMC Nurs* 2016;15. <https://doi.org/10.1186/s12912-016-0143-9>.
12. Karami A, Farokhzadian J, Foroughameri G. Nurses' professional competency and organizational commitment: Is it important for human resource management? *PLoS One* 2017;12. <https://doi.org/10.1371/journal.pone.0187863>.
13. Istomina N, Suominen T, Razbadauskas A, Martinkėnas A, Meretoja R, Leino-Kilpi H. Competence of Nurses and Factors Associated With It. vol. 47. 2011.
14. Liu Y, Aunguroch Y. Current Literature Review of Registered Nurses' Competency in the Global Community. *Journal of Nursing Scholarship* 2018;50:191–9. <https://doi.org/10.1111/jnu.12361>.
15. Pfaff H, Braithwaite J. A parsonian approach to patient safety: Transformational leadership and social capital as preconditions for clinical risk management—the Gi factor. *Int J Environ Res Public Health* 2020;17. <https://doi.org/10.3390/ijerph17113989>.
16. Ortega-Lapiedra R, Barrado-Narvi6n MJ, Bernu6s-Oliv6n J. Acquisition of Competencies of Nurses: Improving the Performance of the Healthcare System. *Int J Environ Res Public Health* 2023;20. <https://doi.org/10.3390/ijerph20054510>.
17. Ortega J, Hooshmand M, Foronda C, Padron M, Simon D, Waters M, et al. Developing nurse leaders across the Americas: evaluation of an online nursing leadership course. *Revista Panamericana de Salud Publica/Pan American Journal of Public Health* 2018;42. <https://doi.org/10.26633/RPSP.2018.152>.
18. Marwiati M, Fahrurrozi M. E -Log Book Untuk Penilaian Kinerja Kompetensi Perawat klinis. *Jurnal Kepemimpinan Dan Manajemen Keperawatan* 2021;4:177–82. <https://doi.org/10.32584/jkkm.v4i2.1191>.
19. Kim SO, Choi YJ. Nursing competency and educational needs for clinical practice of Korean nurses. *Nurse Educ Pract* 2019;34. <https://doi.org/10.1016/j.nepr.2018.11.002>.
20. Wang Y, Liu Y, Tian J, Jing M, Zhang K. Analysis on nursing competence and training needs of dementia caregivers in long-term care institutions. *Int J Nurs Sci* 2020;7. <https://doi.org/10.1016/j.ijnss.2020.03.003>.
21. Sastradijaya HJ. Faktor-faktor yang berhubungan dengan kinerja perawat di ruang rawat inap RSUD Cilegon. *E-Journal Keperawatan Universitas Hasanudin* 2020.
22. Solehudin S, Hadi M, Sulaeman S, Kurniati T, Nursalam N. Efek Kepemimpinan Transformasional Pada Kinerja Perawat. *Jurnal Kepemimpinan Dan Manajemen Keperawatan* 2022;5. <https://doi.org/10.32584/jkkm.v5i1.1183>.
23. Hermawati A, Yosiana Y. Optimalisasi Kinerja Perawat Berbasis Beban Kerja Dengan Intervening Stres Kerja Pada Perawat Di Puskesmas. *Equilibrium: Jurnal Ilmiah Ekonomi ...* 2021.
24. Torres-Alzate H. Nursing Global Health Competencies Framework. *Nurs Educ Perspect* 2019;40. <https://doi.org/10.1097/01.NEP.0000000000000558>.
25. L6cía A, Oliveira A, Fernandes JD, Deolinda M, Lopes L, Maur6cio D. Human capital in the nursing management of hospitals * 2017:1–6.
26. Rivai V. *Kepemimpinan dan Perilaku Organisasi*. Jakarta: Aja Grafindo Perada; 2003.
27. Moran P, Duffield C, Donoghue J, Stasa H, Blay N. Factors impacting on career progression for nurse executives. *Contemp Nurse* 2011;38. <https://doi.org/10.5172/conu.2011.38.1-2.45>.
28. Sinambela, Poltak ProfDrL. *Manajemen Sumber Daya Manusia*. 2019.
29. Al-Abri N, Kooli C. Factors Affecting the Career Path Choice of Graduates: A Case of Omani. *International Journal of Youth Economy* 2018;2. <https://doi.org/10.18576/ijye/020203>.

30. Scully NJ. Leadership in nursing: The importance of recognising inherent values and attributes to secure a positive future for the profession. *Collegian* 2015;22. <https://doi.org/10.1016/j.colegn.2014.09.004>.
31. Collins E, Owen P, Digan J, Dunn F. Applying transformational leadership in nursing practice. *Nurs Stand* 2020;35. <https://doi.org/10.7748/ns.2019.e11408>.
32. Huh A, Shin JH. Person-centered care practice, patient safety competence, and patient safety nursing activities of nurses working in geriatric hospitals. *Int J Environ Res Public Health* 2021;18. <https://doi.org/10.3390/ijerph18105169>.
33. Streimelweger B, Wac K, Seiringer W. Human-factor-based risk management in the healthcare to improve Patient Safety. *International Journal of E-Health and Medical Communications* 2016;7. <https://doi.org/10.4018/IJEHMC.2016070102>.
34. Gottlieb LN, Gottlieb B, Bitzas V. Creating empowering conditions for nurses with workplace autonomy and agency: How healthcare leaders could be guided by strengths-based nursing and healthcare leadership (SBNH-I). *J Healthc Leadersh* 2021;13. <https://doi.org/10.2147/JHL.S221141>.