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The supervision and transformational leadership styles on nurses' compliance in prevention and control of infection risks at a hospital in Kotamobagu, Indonesia

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ABSTRACT

Background: The quality of health services cannot be separated from the collaboration of all components of human resources, including nurses. Transformational leadership supported by supervision can also improve the prevention and control of infection risk in order to optimize their work performance. Supervision activities carried out by the head of the room might have a positive impact on nurse commitment.

Aims: The objective of this study is to analyze the influence of supervision and transformational leadership style on nurse compliance in infection risk prevention and control at GMIBM (*Gereja Masehi Injili at Bolaang Mongondow*) Monompia General Hospital, Kotamobagu, Indonesia.

Methods: This original research used an analytic observational with a quantitative approach and a cross sectional study design. A total of 72 nurses who worked at GMIBM Monompia Kotamobagu General Hospital, Kotamobagu Regency, Indonesia, was selected in August 2022 using a total sampling technique based on the data from the human resources division. Two combined questionnaires were distributed to define the leader supervision (20 questions) and the nurses' compliance and their transformational leadership styles (18 questions) for prevention and control the infection risks. The results of this study were analyzed using SPSS Software (univariate and bivariate parameters).

Results: This study shows that a sufficient supervision frequency (59.7%) among the participated nurses. We identify there were four transformational leadership styles among the nurses at the selected hospital: Ideal influence (33.3%), Inspirational motivation (27.8%), Individual consideration (20.8%) and Intellectual stimulation (18.1%). Moreover, the majority of nurses performed good compliance in the preventing and controlling the infection risks (80.6%). The lack of compliance might be significantly resulted by the leader supervisions (p-value: 0.002). By the bivariate analysis, this study suggested that there is a relationship between transformational leadership style and compliance (p value: 0.001). We also noticed that the leader supervision and transformational leadership style are moderating variables to strengthen the nurse compliance (R Square = 0.336).

Conclusion : This present study strongly suggested the hospital manager and head departments to pay attention to the two strong factors (Supervision and transformational leadership style) affecting the nurses compliance in updating and implementing the prevention and risk control programs.

1. Introduction

The quality of health services cannot be separated from the collaboration of all components of resources, especially Human Resources (Mulang, 2021). Nursing human resources are one of the important resources and are spearhead to achieve hospital goals (Clark et al., 2015). Efforts to

harmonize performance demands require highly committed human resources. One of the important elements in this effort is a leader who is able to influence and actively involve his subordinates in achieving hospital goals through an appropriate leadership style (Lee & Lee, 2022). A reformist leader is needed, capable of being the core driving force of change (transformation) so that good cooperation between leaders and subordinates is created (Torfing et al., 2019).

Increased knowledge about transformational leadership style in preventing and controlling infection risk for nurse performance also increases after being given education about transformational leadership to the head of the hospital room (Labrague et al., 2020). Transformational leadership style can make followers feel trust, admiration, loyalty and respect for the leader and they are motivated to do more than was originally expected of them (Ugwu et al., 2016). Transformational leadership style is a leader who is able to inspire employees to prioritize organizational progress rather than personal interests, give good attention to employees and be able to change employee awareness in seeing old problems in new ways (Vipraprastha et al., 2018). On the other hand, A person's commitment in the organization is the foundation needed to build a performance, so that the possible intervention is to develop a commitment to improve the performance of nurses in hospitals (Heriyanto, 2021).

A patient safety climate in the hospital built through transformational leadership that prioritizes patient safety to reduce unexpected events through supervision (Alshyyab et al., 2019). Continuous supervision or Mentoring Relationship Continuum (MRC) can improve transformational leadership, enabling followers to build self-efficacy and self-confidence by accepting their environment with enthusiasm and positive emotions (Reddy, 2014).

The results of preliminary interviews in April - May 2022 with the quality audit team and the nursing department at GMIBM Monompia Hospital Kotamobagu obtained data from 2022 on the results of patient identification accuracy of 75.40%, increasing effective communication 75.7%, increasing drug safety that needs to be improved. be wary of 77.15%, exact location certainty, right procedure, right patient surgery 75.50%, reducing the risk of infection related to hand hygiene health services as much as 55.67%. Reinforced by the results of observations during the residency in December 2021, it was found that the supervision did not work because there was no continuous training by the GMIBM Monompia Hospital, besides that the results also showed that the future target would be to increase the status for accreditation. Therefore, it is necessary to analyze the influence of supervision and transformational leadership style on nurse compliance in infection risk prevention and control at GMIBM Monompia General Hospital.

2. Methods

This original research used an analytic observational with a quantitative approach and a cross sectional study design. This study was conducted to determine the effect of supervision and transformational leadership style on nurse compliance in the prevention and control of infection risks. A total of 72 nurses who worked at GMIBM Monompia Kotamobagu General Hospital, Kotamobagu Regency, Indonesia, was selected in August 2022 using a total sampling technique based on the data from the human resources division. The inclusion criteria including all nurses without any exception. Nurses who did not attend at the time of survey were excluded.

Before conducting the research, the researcher will conduct an ethical test to obtain research permission from the Karya Husada University Semarang. This research questionnaire is divided into 2 parts, such as part A (20 Questions) which contains questions about supervision and part B (18 Questions) which contains transformational leadership style and nurses' compliance in disease risk prevention and control. Supervision is one part of the function of direction and supervision in nursing management and plays an important role to achieve an organizational goal. Transformational leadership styles define the style to influence others (subordinates), create inspiring situations, and be able to read situations, solve problems, and be responsible. Nurse compliance in the infection prevention and

control program (PPI) is one of the benchmarks for the quality of hospital services which is measured periodically by the PPI committee to ensure a comprehensive nursing service. The results of this study were analyzed using SPSS Software (univariate and bivariate parameters).

3. Results

Respondent characteristics

Univariate analysis on the two distributed questionnaires shows that among the 72 nurses working at GMIBM Monompia General Hospital, 43 respondents (59.7%) were sufficient in the prevention and control of infection risks, whilst the other 22 respondents were good (30.6%), and 7 respondents were poor (9.7%). We identify there were four transformational leadership styles among the nurses at the selected hospital: Ideal influence (24 respondents or 33.3%), Inspirational motivation (20 respondents or 27.8%), Individual consideration (15 respondents or 20.8%) and Intellectual stimulation (13 respondents or 18.1%). Moreover, the majority of nurses performed good compliance in the preventing and controlling the infection risks (58 respondents or 80.6%), and only 14 respondents (19.4%) performed poor compliance (non-compliance).

Table 1. The general characteristics of the respondents

Variables (n=72)	Frequency	Percent
Supervision		
Good	22	30.6
Enough	43	59.7
Poor	7	9.7
Transformational Leadership Style		
Ideal influence	24	33.3
Inspirational Motivation	20	27.8
Intellectual stimulation	13	18.1
Individual consideration	15	20.8
Nurse Compliance		
Good	58	80.6
Poor	14	19.4

Bivariate analysis: Factor affecting the Nurses Compliance

By a bivariate analysis, we noted how supervision and transformational leadership style separately affecting the nurses compliance at GMIBM Monompia General Hospital. From Table 2, it is noted the type of leader supervision among the nurses with different performance. The data shows the higher number of nurses poorly perform if having poor leader supervision. It is indicated that the lack of compliance might be significantly resulted by the leader supervisions (p-value: 0.002). By the bivariate analysis, this study suggested that there is a relationship between transformational leadership style and compliance (p value: 0.001). We can see from the Table 2, it seems that all of nurses (100%) with Influence motivation for their transformational leadership style will result with good nurse compliance. However, if compare among nurses who have Inspirational ideal as their leadership style, it tends to have higher number of nurses with poor compliance. It is suggested that the leader supervision and transformational leadership style are moderating variables to strengthen the nurse compliance (R Square = 0.336).

Table 2. Bivariate analysis of Supervision and Transformational Leadership Style with Nurse Compliance

Variables	Nurse Compliance				P-value
	Poor		Good		
	n	*%*	*n*	*%*	
Supervisi					
Poor	4	71.1	3	42.9	0.002
Enough	10	23.3	33	76.7	
Good	0	0.0	22	100	
Transformational Leadership Style					
Inspirational Ideal	11	45.8	13	54.2	0.001
Influence Motivation	0	0.0	20	100	
Intellectual Stimulation	1	7.7	12	92.3	
Individual considerations	2	13.3	13	86.7	

4. Discussion

Based on the results of this study, the distribution of the frequency of transformational leadership styles in preventing and controlling infection risk at GMIBM Monompia General Hospital was 80.6% obedient in preventing and controlling infection risk. This study is in line with previously study on nurse compliance with the results showing that 90.0% of nurses' compliance was in the good category (Faridha & Milkhatun, 2020; Noprianty & Thahara, 2019). This study is different from the other study that the results showing that as many as 57.0% of nurses had poor compliance and 43.5% experienced sufficient compliance (Pameswari et al., 2016). In another study it was also found that nurse compliance was worse than doctor compliance (Kotwal & Taneja, 2010).

Compliance is a form of human behavior that obeys the rules, orders that have been set, procedures and discipline that must be carried out (Evangelista, 1999). Formulates that compliance is influenced by two main factors, namely behavior causes and non-behavior causes (Notoatmodjo, 2014). This knowledge will then be passed down in the form of attitudes or behavior of health workers in dealing with patients (Lin et al., 2022). The one of the factors that influence nurse compliance is a good leadership style and good supervision of their work (Klijn et al., 2022). Compliance requires support in the form of shamans in the form of funds, time, and social housing that can foster compliance with the implementation of the rules that have been implemented (Pakpahan et al., 2021). Therefore, in realizing obedient or disobedient behavior starting from individual awareness of the stimulus, then eliciting a response in the form of attitude income which will lead to behavior in accordance with what is perceived, so that in the end obedient or disobedient behavior will emerge.

Based on the results of the Chi Square correlation statistic test are known that the significance is p = 0.002 (α: <0.05), which means the hypothesis is accepted. This proves that there is a relationship between supervision and nurse compliance in controlling infection risk at RSU GMIBM Monompia. This research is in line with previous study with the results of supervision research (p value = <0.001) and transformational leadership style (p value = 0.043) proves that there are differences and improvements in nurse performance before and after training (Ningsih et al., 2020).

Supported by other research regarding the relationship between supervision and motivation with nurse compliance with hand washing in hospitals with the results of the study showing that there is a fairly strong relationship between the supervision of the head of the room and nurse compliance (Parwa et al., 2019; Yulianita et al., 2020). The supervision is a job that controls and directs staff, acting as a guide in an organization to achieve the goals to be achieved together (Kadushin & Harkness, 2014). It can be concluded that supervision is an activity that contains two dimensions of actors, namely there is a leader and there are staff or people to be supervised, both of whom have an equally important role in achieving common goals.

Based on the results of this study, it was found that the results of the Chi Square correlation statistic test indicated that the significance was p=0.001 (α: <0.05), which means the hypothesis is accepted. This proves that there is a relationship between transformational leadership style and nurse compliance in controlling infection risk at GMIBM Monompia General Hospital. This study is in line with previous study showing that transformational leadership has a significant and positive effect on nurse performance and compliance (p = 0.001) (Murtiningsih, 2017). The transformational leadership variable has a significant effect on performance, the leader's trust variable and the job satisfaction variable have a role as a mediating variable (Feri et al., 2020). Hospital managers in carrying out their duties must pay attention to transformational leadership styles that not only affect the performance of nurses but also increase the commitment of nurses to hospitals where nurses work in managing hospitals, which fosters commitment to employees in the organization where they work.

Transformational leadership is a leader who is able to grow in each of his follower's trust, admiration, loyalty, respect for the leader and motivates to do more than expected (Ekaningsih, 2014; Huber, 2018). The leader transforms and motivates followers by making them more aware of the importance of the results of a job, encouraging them to place more importance on the organization or team than self-interest, and activating their needs at a higher level (Feri et al., 2020; Huber, 2018). Transformational leaders have certain behavioral components, including integrity and fairness, setting clear goals, having high expectations, providing support and recognition, arousing followers' emotions, and getting people to see things beyond their own self-interest to achieve the impossible (Sadeghi & Pihie, 2012).

5. Conclusion

In sum, this study shows that supervision and transformational leadership style have a significant relationship with nurse compliance in the prevention and control of infection risk. The results of this study might be applied in every hospital, and can be used as a reference for further research and can be developed into further research by including socio-demographic variables of health and socio determinants of health. The further study can be added more variables to adjust with socio-demographic and economic factors. Because one's level of contentment differs from that of others and is difficult to quantify, there is no correlation between the two.

Conflict of Interest

There is no conflict of interest. Nothing to disclosure.

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