Systematic Review

Relationship Between Leadership Style And Motivation With Nurse Performance In Hospitals

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ABSTRACT

Background: Performance is the quantity and quality of task achievement. Good leadership can motivate employees to improve performance. This study aims to determine the relationship between leadership style and motivation on the performance of nurses in hospitals.

Methods: This study is a systematic review and meta-analysis. Article searches were carried out using search engines, including Google Scholar, PubMed, Sciendirect, BMJ, and Garuda Portal. The keywords used were “leadership style” OR motivation AND performance AND nurses AND “cross-sectional”, performance AND nurses. Determination of the eligibility of articles using PRISMA. Results from the entire literature were selected using inclusion and exclusion criteria. Measurement of effect size using RevMan 5.3 program.

Results: All research obtained using a cross sectional research design. Good leadership style increased nurse performance by 3.19 times compared to poor leadership style and was statistically significant (OR= 3.19; 95% CI= 1.76 to 5.79; p<0.001). The sample of leadership style variables is 1290 nurses. Good motivation can improve nurse performance by 3.65 times compared to poor motivation and is statistically significant (OR= 3.65; 95% CI= 1.95 to 6.82; p< 0.001).

Conclusion: Leadership style and motivation as factors in improving nurse performance. The leadership style of the head must be adapted to the needs of each room and must be flexible. With the right leadership style, nursing services in the room can be aligned with hospital goals.

INTRODUCTION

Human resources for nursing staff have an important role that absolutely must be analyzed and developed so that their time, energy and abilities can really be used optimally in supporting the performance of health service organizations. Nurses as one of the health workers in hospitals play an important role in achieving health development goals. The success of health services depends on the participation of
nurses in providing quality nursing care to patients (Potter, PA Perry, 2005). This is related to the presence of nurses on duty 24 hours to serve patients, as well as the number of nurses who dominate health workers in hospitals ranging from 40-60%, therefore hospitals must have nurses who perform well to support them. Hospital performance so that customer or patient satisfaction can be achieved (Swanburg, 2000 in Suroso, 2011).

Nurse performance is closely related to the quality of nursing services provided. The Directorate of Nursing Services of the Ministry of Health in collaboration with WHO (World Health Organization) in 2004 which examined several provinces in Indonesia consisting of the provinces of East Kalimantan, North Sumatra, North Sulawesi, West Java and DKI Jakarta, the results showed that during the last 3 years as many as 70, 9% of nurses have never attended training, 39.8% of nurses in hospitals perform non-nursing tasks, 47.4% of nurses do not have clear and written job descriptions, there is no monitoring and evaluation of the performance of nurses in particular. In dealing with certain situations and conditions, a leader must make efforts to change character. This is because the change in character is a strategy to solve the problems at hand. Without a strong character of integrity, endurance to face difficulties and challenges, a clear vision and mission, one will never become a leader (Thoha, 2013).

The leadership style used by America is very common in leadership practices in Asian countries, including Indonesia, which applies a pattern of direction and command. The participatory leadership style in Asia involves closer equal collaboration with leaders and colleagues, and this applies more generally in the European region. Based on careful observations, there are nine key qualities of a successful leader in increasing employee motivation, of course without ignoring cultural factors, namely: enthusiasm, assertiveness, self-confidence, integrity, adaptation, emotional toughness, emotional resonance, self-knowledge and humility (Affif, 2013).

According to Mangkunegara's theory in Yuliawan (2011), employee performance itself is influenced by internal factors which include intelligence, skills, emotional stability, nature, attitude, motivation, age, gender, education, work experience, cultural background and other personal variables. While external factors that affect performance are those from the environment, including labor regulations, customer desires, competitors, economic conditions, organizational policies, leadership, actions of colleagues, types of training and supervision, wage systems and social environment (Mangkunegara, 2014).

Leadership has an important role in the organization, the leader is in charge of supervising and controlling the running of an organization. So that the role of leaders in the organizational environment is very vital and ensures the organization runs well and achieves the goals that have been set. The use of appropriate leadership from superiors is one of the factors that can move, direct, guide and motivate employees to excel at work (Mangkunegara, 2014). One of the important internal factors that affect the performance of nurses is motivation. According to Afandi in Ulfah (2019) Motivation is a desire from within the individual, where the individual will be encouraged to do work with pleasure so as to get quality results. According to research conducted by Terok et al (2015), that there is a relationship between motivation and the performance of nurses at the Tuminting Health Center with p= 0.001. This study aims to determine the relationship between leadership style and motivation with the performance of nurses in hospitals.
MATERIALS AND METHOD

This research is a systematic research and meta-analysis. Research data was searched from a systematic and comprehensive electronic database of several indexes. The databases used include: Google Scholar, PubMed, BMJ, ScienceDirect, and Portal Garuda. The keywords used in the journal collection were “leadership style” OR motivation AND performance AND nurses AND “cross-sectional”, performance AND nurses.

Articles are searched taking into account the feasibility of using SPIDER. The population of this study were nurses in hospitals with interventions in the form of leadership style and motivation and the results in the form of nurse performance. The inclusion criteria of this study used a cross-sectional research design with a measure of the Odds Ratio (OR) relationship, CI and p value. The research subjects are nurses who work in hospitals. Articles used from 2015 to 2020. The exclusion criteria in this study were primary research conducted with an experimental design. Articles published other than English and Indonesian.

Qualitative data analysis using the Critical Appraisal Checklist for Cross-sectional Study (Barend, 2015) and quantitative analysis using Review Manager (RevMan) 5.3 program.

Figure 1. PRISMA diagram
RESULTS

Research related to the relationship between leadership style and motivation with nurse performance consists of 21 articles, of which 19 articles are from Indonesia, 1 article from East Africa, and 1 article from Switzerland. Of the 21 articles obtained, there are 9 research articles that fall into the leadership style variable and 14 research articles that fall into the motivation variable. Based on Figure 2 shows the results of the analysis of the relationship between leadership style and nurse performance. The value of $I^2 = 76\%$ so that the analysis uses a fixed effect model. We can see the interpretation of the results of the meta-analysis process through the forest plots.

The results of the forest plot show that a good leadership style can improve nurse performance by 3.19 times compared to a poor leadership style and is statistically significant (OR= 3.19; 95% CI= 1.76 to 5.79; p<0.001). Based on Figure 3, it can be seen that there is a publication bias which is indicated by the symmetry of the right and left plots where there are 3 plots on the left and 6 plots on the right. The plot on the left of the graph has a standard error of between 0.8 and 0.4 and the plot on the right of the graph has a standard error of between 0.8 and 0. Publication bias can be seen from the balance of the distance between the studies on the two charts, right and left sides of the funnel plot.

![Figure 2](http://jurnalinterest.com/index.php/int 95) Funnel plot of the relationship between leadership style and nurse performance

Based on Figure 4, it can be seen the results of the analysis of the relationship between motivation and nurse performance. The value of $I^2 = 86\%$ so that the analysis uses a random effect model. We can see the interpretation of the results of the meta-analysis process through the forest plot. The results of the forest plot show that high motivation can improve nurse performance by 3.65 times compared to low motivation and is statistically significant (OR= 3.65; 95% CI= 1.95 to 6.82; p<0.001).

Figure 3 shows the absence of publication bias as indicated by the symmetry of the right and left plots where there are 7 plots on the left and 7 plots on the right. The plot on the left of the graph has a standard error of between 1.5 and 0 and the plot on the right of the graph has a standard error of between 2 and 0.5. Publication bias can be seen from the balance of distances between studies on both the right and left sides of the funnel plot.
Figure 3. Funnel plot of the relationship between motivation and nurse performance

| Study or Subgroup | log(Odds Ratio) | SE | Weight | Odds Ratio IV, Random, 95% CI |
|-------------------|-----------------|----|--------|-----------------------------|
| Abdullah 2019     | 1.3876          | 0.4275 | 12.4% | 4.01 [1.73, 9.26]           |
| Cristafer 2016    | 2.0023          | 0.3903 | 10.0% | 16.27 [8.24, 32.31]         |
| Inwardi 2016      | 1.4748          | 0.7276 | 9.5%  | 4.37 [2.05, 9.31]           |
| Karna 2017        | 0.27            | 0.4657 | 12.7% | 1.31 [0.50, 3.42]           |
| Mangarani 2018    | 1.7496          | 0.5797 | 10.3% | 5.79 [1.93, 17.76]          |
| Santoso 2020      | 0.6647          | 0.7619 | 9.5%  | 2.62 [1.48, 4.93]           |
| Stevendarmann 2019| 1.5244          | 0.145  | 15.9% | 3.76 [2.63, 5.59]           |
| Subekti 2020      | -1.6684         | 0.7003 | 9.4%  | 0.19 [0.04, 0.77]           |
| Treda 2015        | 1.4996          | 0.4531 | 12.1% | 4.48 [1.84, 10.88]          |

Total (95% CI) 100.0% 3.19 [1.76, 5.78]

Heterogeneity: Tau² = 6.59, Chi² = 22.27, df = 8 (P = 0.0001); I² = 78%
Test for overall effect: Z = 3.93 (P = 0.0001)

Figure 4. Forest plot of the relationship between leadership style and nurse performance

| Study or Subgroup | log(Odds Ratio) | SE | Weight | Odds Ratio IV, Random, 95% CI |
|-------------------|-----------------|----|--------|-----------------------------|
| Angkasa 2019      | -0.5232         | 1.0341 | 5.0%  | 0.59 [0.08, 4.50]           |
| Darmayanti 2015   | 2.6856          | 0.8982 | 5.9%  | 14.67 [2.68, 80.42]         |
| Doliak 2018       | 0.0109          | 0.4453 | 8.6%  | 2.25 [0.94, 5.39]           |
| Farama 2019       | -2.0423         | 0.8177 | 8.2%  | 0.13 [0.03, 0.64]           |
| Habibi 2019       | 1.2133          | 0.4908 | 8.4%  | 3.36 [1.31, 8.83]           |
| Irena 2017        | 1.0483          | 0.5977 | 7.0%  | 3.35 [1.97, 20.46]          |
| Inwardi 2018      | 2.4087          | 0.7298 | 8.7%  | 11.12 [2.66, 48.46]         |
| Marlianto 2016    | 1.7184          | 0.903  | 7.6%  | 5.58 [1.71, 18.18]          |
| Pundak 2018       | 1.1282          | 0.2989 | 9.5%  | 3.09 [1.72, 5.55]           |
| Rosdyawati 2020   | 2.7360          | 0.5564 | 7.9%  | 15.44 [5.19, 45.94]         |
| Salawangki 2018   | 2.6495          | 1.5755 | 2.9%  | 14.09 [0.64, 369.03]        |
| Sutarto 2016      | 0.15            | 0.9653 | 10.3% | 1.16 [0.02, 1.32]           |
| Subamdy 2020      | 4.4773          | 1.2092 | 4.2%  | 80.89 [8.23, 941.32]        |
| Umar 2016         | 0.0617          | 0.7982 | 9.1%  | 2.37 [1.13, 4.95]           |

Total (95% CI) 100.0% 3.65 [1.05, 11.62]

Heterogeneity: Tau² = 0.90, Chi² = 90.02, df = 13 (P = 0.0001); I² = 96%
Test for overall effect: Z = 4.05 (P = 0.0001)

Figure 4. Forest plot of the relationship between motivation and nurse performance

http://jurnalinterest.com/index.php/int | 96
| No | Biography | Journal |
|----|-----------|---------|
| 1. | (Irwadi et al., 2018) | Association of Head of Environment Directions and Incentives with Nurse Performance at Arun LNG Hospital Lhokseumawe Aceh |
| 2. | (Kania, 2017) | The Relationship between the Head Nurse's Leadership Style and the Performance Improvement of Implementing Nurses at Permata Pamulang Hospital |
| 3. | (Trevia et al., 2019) | The Leadership Style of the Head of the Room with the Performance of the Nurse Implementing Relationship in the Implementation of Nursing Care in the Inpatient Room of the General Hospital of Major General HA Thalib Kerinci |
| 4. | (Santoso, 2020) | Transformational Leadership Style and Excellent Service on Nurse Performance at Ken Saras Hospital, Semarang Regency |

| Sample | Interest Phenomenon (Based on the Article) | Design | Evaluation | Types of research |
|--------|------------------------------------------|--------|------------|------------------|
| 74     | There is a relationship between leadership style and nurse performance because leaders have a special responsibility to staff and organizations to supervise and provide direction to nurses so that they can perform their jobs optimally. | Cross-sectional | OR = 4.37 95% CI= 1.05 to 18.17 P = 0.043 | Quantitative |
| 80     | There is an influence of leadership style on the performance of nurses because the leadership style of the head nurse who is highly task-oriented has a target for work done by his staff which has an impact on good performance. In addition, this leadership style relies on the power of coercion, imbalance and punishment to influence the nature and achievements of followers | Cross-sectional | OR = 1.31 95% CI= 0.59 to 2.92 P = 0.002 | Quantitative |
| 101    | There is an effect of democratic leadership style on performance because democratic leadership style is considered more useful in increasing work productivity. | Cross-sectional | OR = 4.48 95% CI= 1.84 to 10.88 P= 0.001 | Quantitative |
| 70     | The transformational leadership style variable in this study did not have a significant effect on the performance of nurses in excellent service because the sample was homogeneous, meaning that in this study the | Cross-sectional | OR = 2.624 95% CI= 0.663 to 10.392 P= 0.169 | Quantitative |
| No | Biography Journal | Sample | Interest Phenomenon (Based on the Article) | Design | Evaluation | Types of research |
|----|-------------------|--------|------------------------------------------|--------|------------|------------------|
| 5. | (Abdullah, 2017)  | 175    | The results showed that the transformational leadership style had an effect on the performance of nurses, which means that the higher the transformational leadership style of the head of the room, the higher the performance of nurses at Ibnu Sina Hospital Makassar, and vice versa. This is evident from the results of the cross tabulation which shows that most nurses who perceive the transformational leadership style of the head of the room as high have high performance. | Cross-sectional | OR = 4.01 95% CI= 1.73 to 9.26 P= 0.001 | Quantitative |
| 6. | (Crystandy et al., 2019) | 99    | Leadership becomes a very influential thing in the midst of the resulting performance, if the leader is able to carry out and has authority as expected, the form of communication, direction and clear job descriptions carried out by the leader can improve performance for its members. | Cross-sectional | OR= 18.21 95% CI= 6.34 to 52.31 P= 0.001 | Quantitative |
| 7. | (Musinguzi et al., 2018) | 564 | The results of this study indicate that nurses in Uganda prefer transformational leaders over being transactional or laissez-faire. Nurse performance is correlated with transformational leadership. | Cross-sectional | OR = 5.7 95% CI= 1.83 to 17.79 P=0.023 | Quantitative |
| No. | Biography Journal | Sample | Interest Phenomenon (Based on the Article) | Design | Evaluation | Types of research |
|-----|-------------------|--------|------------------------------------------|--------|------------|-------------------|
| 8.  | (Schwendimann et al., 2016) *Factors Associated with High Job Satisfaction among Nursing Workers in Swiss Nursing Homes* - Cross Sectional Survey Study | 162    | There is an influence of leadership style on the performance of nurses because the leaders are supportive of accepting nurses' input. Moreover, as observed elsewhere, a leadership style that treats care errors as learning rather than providing criticism thus develops trust and commitment among treatments. | Cross-sectional | OR = 3.761 95% CI= 2.833 to 4.993 P<0.001 | Quantitative |
| 9.  | (Sutriyati et al., 2020) *Analysis of Factors Affecting Nurse Performance in the Inpatient Installation of RSUD Sekayu Mubayu* | 38     | There is a relationship between leadership style and nurse performance because the head of the room is the leader who directly supervises the implementing nurse and the implementation of the nurse's duties in the inpatient room is a process in hospital management. The head of the room acts as a manager as well as a leader. The head of the room has the responsibility to move the implementing nurse. Therefore, the head of the installation also has the task of evaluating the performance of nurses. | Cross-sectional | OR = 0.19 95% CI= 0.04 to 0.77 P= 0.041 | Quantitative |

Table 2. Summary of sources of relationship between motivation and nurse performance

| No. | Biography Journal | Sample | Interest Phenomenon (Based on the Article) | Design | Evaluation | Types of research |
|-----|-------------------|--------|------------------------------------------|--------|------------|-------------------|
| 1.  | (Sutarto and Joebagio, 2016) *The Relationship of Motivation, Competence, Workload, and Nurse Performance at RSUD Dr. Soedira Mangun Sumarso Wonogiri, East Java* | 50     | Work motivation greatly affects the performance of nurses, because it is driven from within a nurse, the work displayed will not be optimal. | Cross-sectional | OR = 1.16 95% CI= 1.02 to 1.32 P=0.022 | Quantitative |
| No. | Biography Journal | Sample | Interest Phenomenon (Based on the Article) | Design | Evaluation | Types of research |
|-----|-------------------|--------|------------------------------------------|--------|------------|------------------|
| 2.  | (Irwadi et al., 2018) Association of Head of Environment Directions and Incentives with Nurse Performance at Arun LNG Hospital Lhokseumawe Aceh | 74     | The results of this study indicate that motivation affects the performance of nurses. High motivation improves nurse performance. Work motivation is very influential in the conditions for generating, directing, and maintaining behavior related to the work environment | Cross-sectional | OR = 4.37 95% CI= 1.05 to 18.17 P = 0.043 | Quantitative |
| 3.  | (Doloh et al., 2018) The Factors Affecting the Work Performance of Nurses in Providing Health Services to Patients with National Health Insurance Dr. RSUP. Moewardi Surakarta | 150    | The results of the analysis show that there is an effect of work motivation on the performance of nurses. Nurses with high motivation to have good performance compared to nurses with low work motivation. | Cross-sectional | OR = 2.25 95% CI= 0.94 to 5.42 P= 0.007 | Quantitative |
| 4.  | (Pundati et al., 2018) Motivation, Competence, Workload, and Its Relation to Nurse Performance at RSUD Dr. Arif Zaenudin Surakarta | 200    | The results of this study indicate that there is a positive relationship between the motivation and performance of nurses. This study shows that the better the nurse's motivation, the better the nurse's performance in implementing the next training | Cross-sectional | OR = 3.09 95% CI= 1.72 to 5.52 P=0.001 | Quantitative |
| 5.  | (Mardianto and Kolibu, 2016) Relationship between Discipline and Motivation with Nurse Performance at Kotamobagu City Hospital RSUD | 56     | There is a relationship between motivation and the performance of nurses, this is due to the motivation to seek ways to optimize the potential of employees to be able to work well, willing to support to encourage the improvement of employee performance, so that they succeed in achieving and realizing the goals that have been determined. | Cross-sectional | OR = 5.58 95% CI= 1.71 to 18.18 P= 0.007 | Quantitative |
| No. | Biography Journal | Sample | Interest Phenomenon (Based on the Article) | Design | Evaluation | Types of research |
|-----|-------------------|--------|--------------------------------------------|--------|------------|------------------|
| 6.  | (Habibi et al., 2019) The Relationship between Head of Room Leadership Style and Work Motivation with Nurse Performance in the Inpatient Room of An-Nisa Hospital Tangerang | 104 | Work motivation in the good category results in the performance of nurses in the good category because motivation is the impetus that affects the behavior of the workforce to be able to improve performance because there is an increase in performance for themselves. Motivation caused by various causes that result in low performance. | Cross-sectional | OR = 3.36 95% CI= 1.31 to 8.63  P= 0.019 | Quantitative |
| 7.  | (Urus et al., 2019) Factors Affecting Nurse Performance at RSUD Sorong RSUD | 120 | There is an influence of motivation on the performance of nurses because motivation is one of the efforts to achieve success, good cooperation, and mutual support of fellow nurses so that they can complete the job well. | Cross-sectional | OR = 2.37 95% CI= 1.13 to 4.95  P=0.034 | Quantitative |
| 8.  | (Anggitasari et al., 2019) Relationship between work stress and work motivation with nurse performance at home | 80 | The results of the research conducted showed that there was no significant relationship between work motivation and nurse performance, indicating that motivation was not one of the factors that caused the decline in nurse performance at Anutapura Hospital Palu. | Cross-sectional | OR = 0.59 95% CI= 0.08 to 4.50  P=0.533 | Quantitative |
| 9.  | (Sutriyati et al., 2020) Analysis of Factors Affecting Nurse Performance in the Inpatient Installation of RSUD Sekayu Mubayu | 38 | The results of the analysis of the relationship between work motivation and nurse performance, especially nurses who have high motivation will have a better chance of performance. | Cross-sectional | OR = 88.0 95% CI= 8.23 to 941.33  P=0.001 | Quantitative |
| 10. | (Darmayanti, 2015) The Relationship between Motivation | 37 | The results of the study that there is a significant influence | Cross-sectional | OR= 14.67 95% CI= 2.68 to 80.42 | Quantitative |
| No. | Biography Journal | Sample | Interest Phenomenon (Based on the Article) | Design | Evaluation | Types of research |
|-----|-------------------|--------|------------------------------------------|--------|------------|------------------|
| 11. | (Rosyidawati et al., 2020) The Influence of Workload, Job Satisfaction and Work Motivation on Nurse Performance in Hospital Inpatient Installations | 170 | The results showed that there was an influence between motivation and performance. Motivation is needed because of motivation, employees will be more enthusiastic and responsible for the work so that their performance can be better. | Cross-sectional | OR = 15.44 95% CI = 5.19 to 45.94 P = 0.001 | Quantitative |
| 12. | (Franata et al., 2019) The Relationship between Motivation and Compensation with Nurse Performance at the Petisah Hulu Regional Hospital | 90 | There is a significant relationship between motivation and the performance of nurses in hospitals. This means that if the motivation of a nurse is increased, the performance of the nurse will also increase. | Cross-sectional | OR = 0.13 95% CI = 0.03 to 0.64 P = 0.005 | Quantitative |
| 13. | (Irena, 2017) The Relationship between Motivation and Nurse Performance in the Inpatient Room at RSUD Dr. RM Pratomo Bagansiapiapi in 2017 | 57 | There is a relationship between motivation and the performance of nurses who have low work motivation to have low performance compared to those who have high motivation. Nurse work motivation is something that creates a desire for a nurse, both from within and from outside to carry out nursing care | Cross-sectional | OR = 6.35 95% CI = 1.97 to 20.46 P = 0.003 | Quantitative |
Based on the assessment of study quality using the Critical Appraisal Checklist for Cross-sectional Study (Barend, 2015), A total of 21 articles included in the quantitative meta-analysis synthesis meet the articles that are categorized as good. Found 9 articles about the relationship of leadership style with nurse performance. There were 14 articles on the relationship between motivation and nurse performance.

**DISCUSSION**

Relationship between leadership style and nurse performance, the results of journal searches from various sources contained 9 research articles from 2016 to 2020 which could be analyzed quantitatively using RevMan 5.3 as a source of meta-analysis of the relationship between leadership style and nurse performance. All research studies obtained used a cross-sectional study design. The sample of the leadership style variable is 1363 nurses. The results of the forest plot show that a good leadership style can improve nurse performance by 3.19 times compared to a poor leadership style and is statistically significant (OR = 3.19; 95% CI = 1.76 to 5.79; p<0.001).

Overall, the articles included in the meta-analysis have the same research results, namely the relationship between leadership style and nurse performance. This meta-analysis provides evidence to support leadership style as a factor in improving nurse performance. These results are in line with research conducted by Hasibuan et al., (2021) that there is an influence of the leadership style of the head of the room on the performance of nurses in the inpatient room of RSUD Rokan Hulu where a good leadership style has the opportunity to improve the performance of nurses to be good 3.673 times greater than the head of the room with a leadership style that is not good after being controlled by the variable period of service (POR = 3.673 ; 95% CI = 1.364 to 10.024). The head of the room is a leader who directly supervises the nurse and carries out the duties of the nurse in the inpatient room. The head of the room has the responsibility to mobilize nurses and evaluate nurses' performance.

Not only the head of the room, the performance of nurses is also influenced by the leadership style of the existing doctors. Research conducted by Sudiarto et al., (2021), shows that doctors with good leadership styles have a 6.073 times greater chance to improve the performance of nurses than doctors with bad leadership styles (OR= 6.073; p= 0.008). The success of nursing services and services is largely determined by the performance of nurses in providing nursing care. The leadership style applied by the
head of the room will determine how the role of the head of the room in improving the performance of nurses. For this reason, the leadership style of the head of the room must be adapted to the needs of each room and must be flexible, the head of the room must be able to read the situation of the room, make an analysis and decide when to be appointed.

Democratic or authoritarian. With the right leadership style, nursing services in the room can be aligned with hospital goals (Sudiarto et al., 2021). The relationship between motivation and nurse performance, the results of journal searches from various sources contained 14 research articles from 2015 to 2020 which could be analyzed quantitatively using RevMan 5.3 as a source of meta-analysis of the relationship between motivation and nurse performance. All research studies obtained used a cross-sectional study design. The sample of the motivation variable is 1290 nurses. The results of the forest plot show that high motivation can improve nurse performance by 3.65 times compared to low motivation and is statistically significant (OR= 3.65; 95% CI= 1.95 to 6.82; p<0.001).

Overall, articles merged into meta-analysis has the same research results, namely the relationship of motivation to nurse performance. This meta-analysis provides evidence to support motivation as a factor in improving nurse performance.

The results of this meta-analysis are in line with research conducted by Sovia et al., (2019), where nurses with high motivation had 4.1 times the chance to show good performance compared to nurses with low motivation after being controlled by attitude and personality (aOR = 4.083; 95% CI = 1.672 to 9.972; p = 0.002). The involvement of nurses will positively affect their self-efficacy and leadership motivation, which in turn will positively affect their career aspirations. According to research conducted by Hee et al., (2016), intrinsic motivation is positively related to the improvement of nurse performance ($\beta = 0.557; p<0.050$).

Any increase in intrinsic motivation will improve the performance of nurses. This means that nurses who have intrinsic motivation will work better in carrying out their duties. So nurses need to keep intrinsic motivations maintained because intrinsic motivation produces integrity of goals, both organizational goals and individual goals where both can be satisfied

**CONCLUSIONS**

This meta-analysis showed that, Good leadership style and high motivation can improve nurse performance. The leadership style of the head must be adapted to the needs of each room and must be flexible, the head must be able to read the situation of the room, make analysis and decide when to be democratic or authoritarian. With the right leadership style, nursing services in the room can be aligned with hospital goals.

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