

Meta Analysis: The Relationship between Nursing Management on Patients Satisfaction

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ABSTRACT

Background: Maintaining hospital quality is the most important thing to consider in hospital service indicators. Patient satisfaction is one of the important factors in maintaining hospital quality. This study aimed to analyzed the relationship between nursing management in patients satisfaction.

Subjects and Method: This study is a meta-analysis with PICO, population: inpatients. Intervention: nursing management. Comparison: not using nursing management. Outcome: patients satisfaction. The articles used in this study were obtained from three databases, namely Google Scholar, Pubmed, and Science Direct. Keywords to search for articles are “Nursing Management” OR “Nursing Care” AND “Patient Satisfaction” OR “Satisfaction” AND “Multivariate”. Articles included are full-text English from 2004 to 2021. Articles were selected using a PRISMA flow diagram. Articles were analyzed using the Review Manager 5.3 application.

Results: A total of 7 cross-sectional study articles from Asia (Indonesia, Iran), Europe (Germany), Africa (Ethiopia), and North America (United States) were reviewed in the meta-analysis. Based on the results of the analysis, it was found that the application of nursing management in hospitals has the possibility to increase patient satisfaction 3.72 times compared to not implementing comprehensive nursing management (aOR= 3.72; 95% CI= 2.40 to 5.78; p<0.001) and the results were statistically significant.

Conclusion: Nursing management affect the possibility of patients satisfaction.

Keywords: nursing management, patient satisfaction, inpatients

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BACKGROUND

The hospital is part of integral part of health care experienced a change in value orientation and thinking. In order to survive and thrive in an environment that fast changing and competitive, hospital have to change the management paradigm hospital to the point of view consumer. Service quality approach and customer satisfaction is one of the important stra-

tegies that cannot be ignored (Jannah, 2017).

The quality of hospital services can be examined from three things, included 1) Inputs (structure, physical facilities, equipment, funds, health workers and non-health, as well as patients); 2) Process (hospital management, technical and nursing services, all of which are reflected in medical and non-medical actions to patients); 3)

Output/Outcome (patient recovery, patient satisfaction) (Machmud, 2008).

Maintaining the quality of the hospital so that the quality of service is maintained the government has developed service standards and hospital service indicators. Hospital indicators are a set of quality measuring tools at the output of a service. The quality of nursing services as the main indicator that can play a role in maintaining the quality of hospital services must prioritize the parties served (client oriented), because patients are the most clients, so there are many benefits that can be obtained by a hospital if prioritizing patient satisfaction (Tambunan, 2016).

Nurses are health workers with long service times continuously for 24 hours in treating patients. So, it can be said that nursing services are the spearhead health services in hospitals and plays a very important role in providing patient satisfaction (Saputri, 2018).

The role of comprehensive management in nursing is to support all aspects of nursing practice itself. Included in nursing management information system development with integrated clinical pathway to improve service quality in the provision of care nursing, education, research, and management (Meo, 2015).

Clinical pathway is a coordinating device and communication for officers who involved in the management of patients who same. The clinical pathway is tools for standard implementation medical services (evidence based clinical practice guidelines), So it is hoped that nursing management can be a factor that can increase patient satisfaction in hospitals (Lochman, 1983).

Based on this background, a comprehensive study is needed from various primary studies on the implementing nursing management in patients satisfaction. This

study aimed to analyze the relationship between nursing management in patients satisfaction.

SUBJECTS AND METHOD

1. Study Design

This research is a systematic review and meta-analysis. Data collection was obtained from 3 databases, namely: Google Scholar, PubMed, and Science Direct. The analysis of this research was carried out using RevMan 5.3 software. The keywords used were “Nursing Management” OR “Nursing Care” AND “Patient Satisfaction” OR “Satisfaction” AND “Multivariate”.

2. Inclusion Criteria

The inclusion criteria used are full English papers with a cross sectional design, the relationship measure used is the adjusted Odds Ratio (aOR), the research subjects are patient in the hospital, the outcome of the study is patient satisfaction.

3. Exclusion Criteria

Exclusion criteria in this study were articles published in languages other than English, statistical results reported in the form of bivariate analysis.

4. Operational Definition of Variables

The search for articles was carried out by considering the eligibility criteria determined using the PICO model.

Nursing management is processes for implementing and managing resources to achieve goals, including interpersonal, informational, decisional, planning, organizing, staffing, actuating dan controlling.

Patient satisfaction is the level of patient feelings that arise as a result of the performance of health services obtained after the patient compares it with what he expects, and the measurement using questionnaire.

5. Study Instruments

The instrument used in this research is the Critical Appraisal Checklist Center for Evidence Based Management (CEBMA).

The following are indicators in critical assessment:

- a. Do the research objectives clearly address the focus/problem of the research?
- b. Is the research method (research design) suitable for answering the research question?
- c. Is the research subject selection method clearly written?
- d. Does the sampling method give rise to bias (selection)?
- e. Does the research sample take represent the designated population?
- f. Was the sample size based on pre-study considerations?
- g. Is the measurement method achievable?
- h. Are the research instruments valid and reliable?
- i. Was statistical significance assessed?
- j. Was a confidence interval given for the main outcome?

- k. Are there any confounding factors that have not been taken into account?
- l. Are the results applicable to your research?

6. Data Analysis

The collected articles were then processed using the Review Manager (RevMan 5.3). Data processing is done by calculating aOR. Forest plots and funnel plots are used to determine the size of the relationship and the heterogeneity of the data.

RESULTS

Process of searching article was carried out by searching several journal databases PubMed, Google Scholar, and Science Direct it can be seen using the PRISMA FLOW flow-chart shown in Figure 1.

The initial search process resulted in a total of 813 articles, after deleting the duplicated articles, 784 articles were found, of which 35 articles were eligible for a full text review. A total of 7 articles that meet the criteria according to the quantitative synthesis meta-analysis.

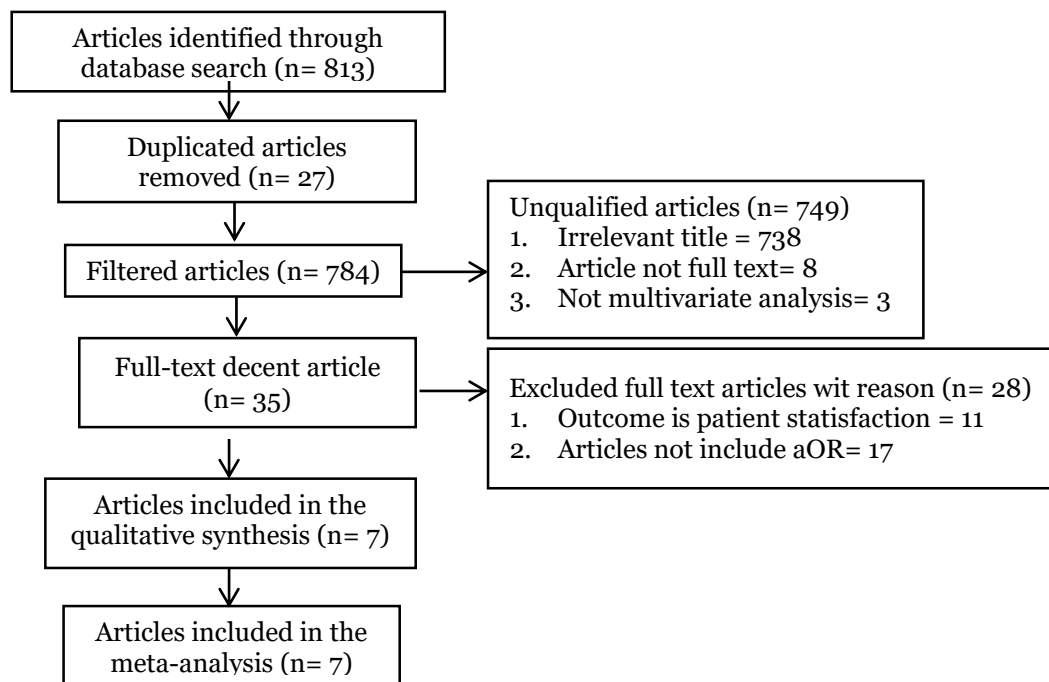


Figure 1. Results of Prisma Flow Diagrams

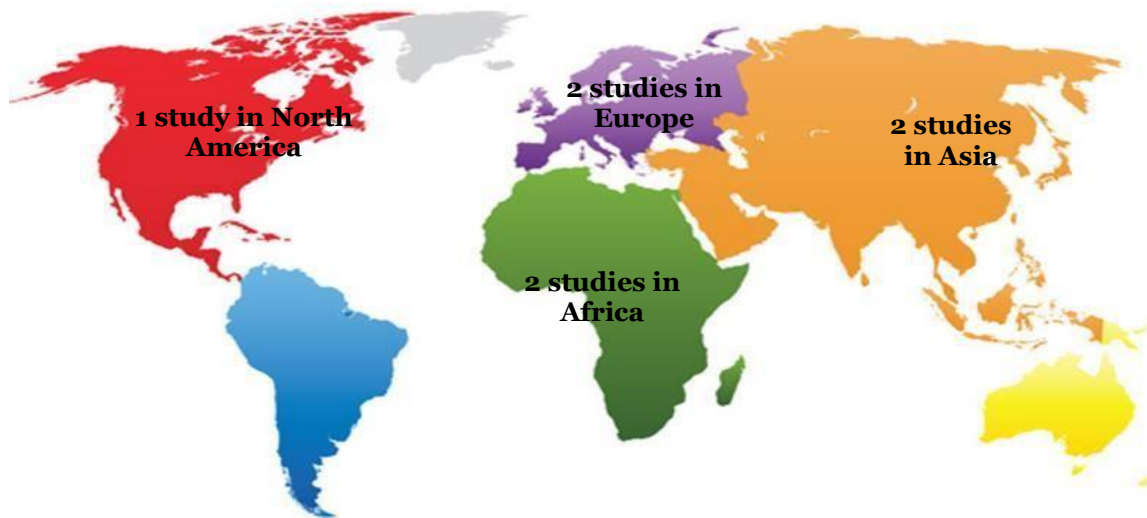


Figure 2. Resarch Distribution Map

It can be seen in Figure 2 that the research articles come from fourth continents such as Asia, Africa, North America, and Europe.

Table 1 showed about study quality assessment using CEBM, then table 2 showed the details of the articles provide nursing management on patients satisfaction.

a. Forest plot relationship between Nursing Management on Patients Satisfaction

The application of nursing management in hospitals has the possibility to increase patient satisfaction compared to not imple-

menting comprehensive nursing management (aOR= 3.72; 95% CI= 2.40 to 5.78).

b. Funnel plot the relationship between Nursing Management on Patients Satisfaction

This study shows an indication of publication bias that overestimates the true effect, which is characterized by an asymmetric distribution between the right and left plots. The plot on the right has 4 with standard error between 0.2 and 0.8, then the plot on the left has 2 with standard error between 0 and 0.4, and 1 plot touch the vertical line.

Table 1. Critical Appraisal Checklist Center for Evidence Based Management (CEBMA) for Nursing Management on Patients Satisfaction.

Primary Study	Criteria												Total
	1	2	3	4	5	6	7	8	9	10	11	12	
Vahey (2004)	2	2	2	2	2	2	2	2	2	2	2	2	24
Raffi et al. (2008)	2	2	2	2	2	2	2	2	2	2	2	2	24
Schoenfulder et al. (2011)	2	2	2	2	2	2	2	2	2	2	2	2	24
Schoenfulder et al. (2011)	2	2	2	2	2	2	2	2	2	2	2	2	24
Akbar et al. (2017)	2	2	2	2	2	2	2	2	2	2	2	2	24
Marama (2018)	2	2	2	2	2	2	2	2	2	1	2	2	23
Wudu et al. (2021)	2	2	0	2	2	2	2	2	2	2	2	2	22

Table 2. Summary of Articles Sources of The Relationship between Nursing Management on Patients Satisfaction.

Author (Year)	Country	Study Design	Sample	Population	Intervention	Comparison	Outcome	aOR (CI 95%)
Vahey (2004)	United States	Cross-sectional	621	Patients in urban hospital US	Services using Nursing management	Not using nursing management	Patient satisfaction	1.49 (1.06 to 2.09)
Raffi et al. (2008)	Iran	Cross-sectional	286	All inpatient in Iran hospitals	Services using Nursing management	Not using nursing management	Patient satisfaction	6.32 (2.78 to 11.27)
Schoenfulder et al. (2011)	Germany	Cross-sectional	245	Housewife	Services using Nursing management	Not using nursing management	Patient satisfaction	3.70 (3.10 to 4.48)
Schoenfulder et al. (2011)	Germany	Cross-sectional	507	Women aged 18 years and over	Services using Nursing management	Not using nursing management	Patient satisfaction	4.57 (2.83 to 7.40)
Akbar et al. (2017)	Indonesia	Cross-sectional	144	Women of childbearing age	Services using Nursing management	Not using nursing management	Patient satisfaction	6.62 (3.51 to 16.55)
Marama (2018)	Ethiophia	Cross-sectional	413	Women aged 21 years and over	Services using Nursing management	Not using nursing management	Patient satisfaction	2.39 (1.16 to 4.92)
Wudu et al. (2021)	Ethiophia	Cross-sectional	244	Women aged 20 to 65	Services using Nursing management	Not using nursing management	Patient satisfaction	8.57 (1.77 to 14.53)

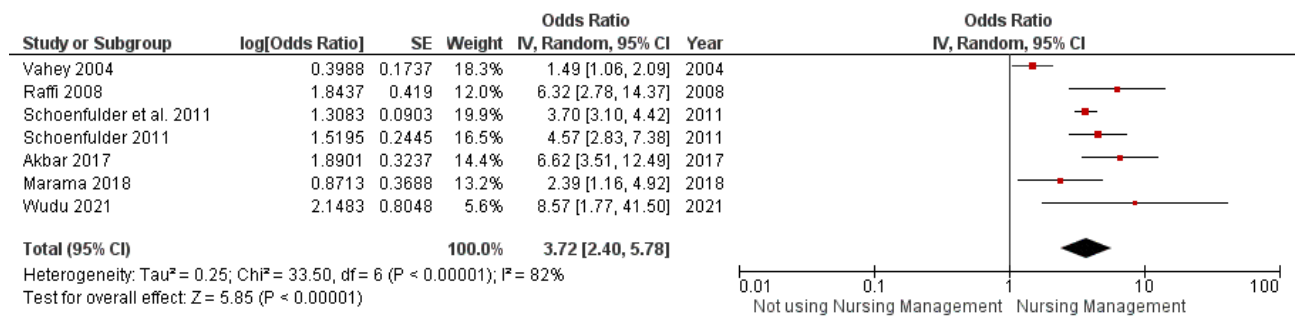


Figure 3. Forest Plot Relationship between Nursing Management on Patients Satisfaction

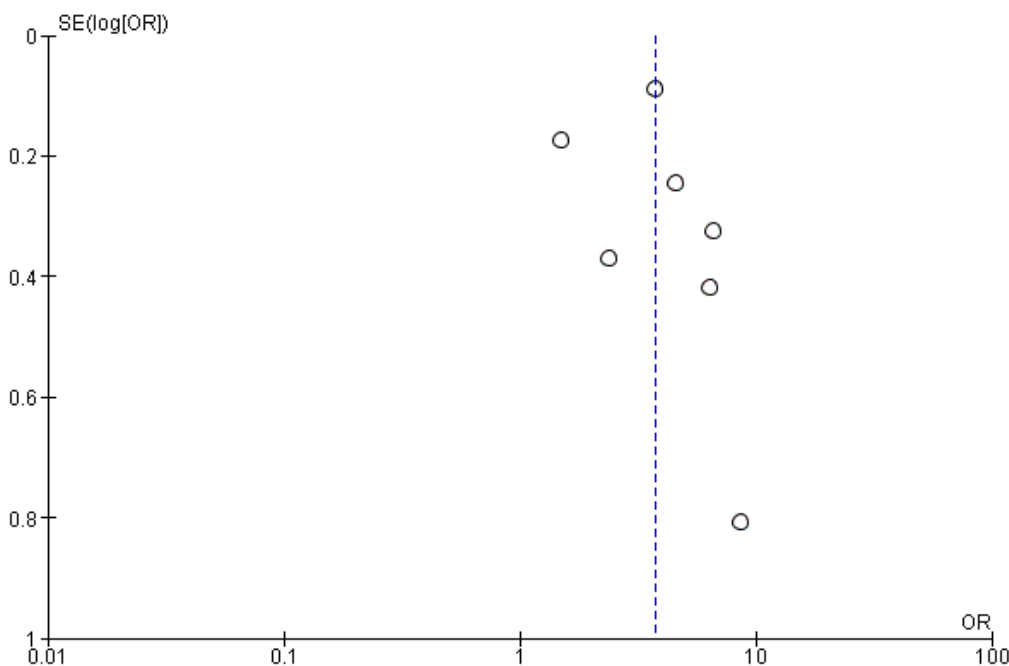


Figure 4. Funnel Plot Relationship between Nursing Management on Patients Satisfaction

DISCUSSION

This study is based on a systematic review and meta-analysis investigating the relationship between nursing management in patients satisfaction, from 7 cross-sectional studies conducted in Asia, Africa, North America, and Europe showed that nursing management is something that needs to be considered to increase patient satisfaction, especially in hospitals.

Hospitals have the task of carrying out health efforts in an efficient and effective manner by prioritizing healing and recovery efforts that are carried out in a harmonious

and preventive manner as well as carrying out referral efforts (Wendimagegn & Bezuidenhout, 2019).

Good tangibility of physical facilities such as equipments, hospitals’ occupational hygienists, toilets, examination rooms, wards, and beds may influence patients’ impression toward the hospital. The better tangibility of healthcare service facilities and providers is, the higher patients’ satisfaction will be (Akbar et al., 2017).

The results finding shows that the main focus of care does not only depend on

physical care however on how healthcare service providers are able to recognize patients' psychological condition, this kind of service is usually carried out by nurses by implementing comprehensive nursing management (Krishnasamy et al., 2001).

There is a significant relationship between nurse services to the comfort of inpatients and patient satisfaction at Medan Adventist Hospital class III. The results of the multivariate statistical test can be concluded that the nurse service variable so that the patient feels comfortable will improve patient satisfaction rate is 15,308 times fold compared to patients who did not feel comfortable (Silalahi et al. 2019).

This is in line with Rahmawati and Mumaiyizah (2013) in a study on factor analysis level of patient satisfaction in service pre- and post-surgery nursing in 2013 where there is no relationship between informed consent for satisfaction ($r = -0.026$; $p = 0.417$).

Another study also stated that communication is an important thing that can be done to increase patient satisfaction, especially communication between health workers and patients about the procedures used in treatment so that patients and their families understand the condition of their health problems. it will make the patient feel valued in terms of decision making (Kim et al., 2017).

Zarei et al. (2012) stated that the quality of service that makes patients satisfied is not only communication, but other external aspects will also have an effect, such as a comfortable environment, extensive facilities, while in hospital are also aspects of service quality that must be considered.

AUTHOR CONTRIBUTION

Titik Anggraeni, Rita Dewi Suanrno is the main researcher who selects the topic, searches for and collects research data.

CONFLICT OF INTEREST

There is no conflict of interest in this study

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REFERENCE

- Akbar Ps, Adriani Rb, Murti B (2017). The Influence Of Personal Factors Of The Patient, Doctor, Payment Method And Type Of Class To The Quality And Satisfaction Of Inpatient Care Services In Dr. Moewardi Hospital Surakarta. *J Health Policy Manage.* 02(01): 1–15. Doi: 10.26911/The-jhpm.2017.01.02.01.
- Kim Ce, Shin Js, Lee J, Lee Yj, Kim M, Choi A, Park Kb, Et Al. (2017). Quality Of Medical Service, Patient Satisfaction And Loyalty With A Focus On Interpersonal-Based Medical Service Encounters And Treatment Effectiveness: A Cross-Sectional Multicenter Study Of Complementary And Alternative Medicine (Cam) Hospitals. *Bmc Complementary And Alternative Medicine*, 17(1). Doi: 10.1186/S12906-017-1691-6
- Krishnasamy M, Wilkie E, Haviland J (2001). Lung cancer health care needs assessment: Patients' and informal carers' responses to a national mail questionnaire survey. *Palliative Medi-*

- cine, 15(3), 213–227. Doi: 10.1191/026921601678576202
- Lochman Je (1983). Factors related to patients' satisfaction with their medical care. *Journal Of Community Health* 1983. 9(2), 91–109. Doi: 10.1007/Bf01349873
- Machmud R (2008). Manajemen Mutu Pelayanan Kesehatan (Health Service Quality Management). *J. Kesh. Masy. Andalas*, 2(2), 186–190. Doi: 10.248-93/Jkma.V2i2.31
- Meo M (2015). Pengembangan Sistem Informasi Manajemen Keperawatan Dengan Integrated Clinical Pathway Untuk Meningkatkan Kualitas Pelayanan (Nursing Management Information System Development With Integrated Clinical Pathway To Improve Service Quality). *J Manaj Keperawatan*. Retrieved July 10, 2022, From: <https://Jurnal.Unimus.Ac.Id/Index.-Php/Jmk/Article/View/4028>
- Jannah R (2017). Gambaran Penatalaksanaan Asuhan Kebidanan Pada Ny. C Dengan Oligohidramnion Yang Disertai Asfiksia Sedang Pada Bayi Baru Lahir Di Rsud Indramayu Tahun 2017 (Overview of Midwifery Care Management on Ny. C with Oligohydramnios accompanied by moderate asphyxia in newborns at Indramayu Hospital in 2017). <http://r2kn.litbang.kemkes.go.id:8080/handle/123456789/36995>.
- Saputri D (2018). Peran Perawat Dalam Keselamatan Pasien Dilayanan Kesehatan. Doi: 10.31219/OSF.IO/DU5VY
- Wendimagegn NF, Bezuidenhout MC (2019). Integrating promotive, preventive, and curative health care services at hospitals and health centers in Addis Ababa, Ethiopia. *Journal of Multidisciplinary Healthcare*, 12, 243. Doi: 10.2147/JMDH.S193370
- Zarei A, Arab M, Froushani AR, Rashidian A, Tabatabaei SMG (2012). Service quality of private hospitals: The Iranian Patients perspective. *BMC Health Services Research*, 12(1), 1–7. Doi: 10.1186/1472-6963-12-31/TABLES/2.
- Widiyanto A, Murti B, Soemanto RB (2018). Multilevel Analysis on The Effect of Socio-Cultural, Lifestyle factors, and School Environment, on the Risk of Overweight in Adolescents, Karanganyar District, Central Java. *J. Epidemiol. Public Health*. 3(1): 94-104. Doi: 10.26911/jepublichealth.-2018.03.01.08.