

Hospital Administration as Factors Associated with Patient Satisfaction: A Meta-Analysis

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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 analyze the association between hospital administration with patient satisfaction.

Subjects and Method: This study is a meta-analysis with PICO, population: patients. Intervention: good hospital administration. Comparison: poor hospital administration. 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 "Hospital Administration" OR "Good Administration" OR "Hospital Services" AND "Patient Satisfaction" OR "Satisfaction" AND "Multivariate". Articles included are full-text English from 2009 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 (China), Europe (Germany), and Africa (Ethiopia) were reviewed in the meta-analysis. Based on the results of the analysis, it was found that good hospital administration has the possibility to increase patient satisfaction 3.58 times compared with poor hospital administration (aOR= 3.58; 95% CI= 2.36 to 5.42; p<0.001) and the results were statistically significant.

Conclusion: Hospital administration associated with patients' satisfaction.

Keywords: hospital, hospital administration, patient satisfaction, inpatients.

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BACKGROUND

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).

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 strategies that cannot be ignored (Jannah, 2017).

During the pandemic psychological condition of health workers and society as long as it is the main focus of the government in various countries, but research shows that the majority of people in the world experience symptoms of mild stress and health workers also experience stress due to workload, stigma, and fear of being infected. (Handayani et al., 2020). Also, high prevalence of mental health problems, which positively associated with high social media exposure during the COVID-19 outbreak (Widiyanto et al., 2020). It is feared that this will be the cause of the decline in good hospital administration services.

Maintaining the quality of the hospital so that the quality of service is maintained the government has developed service standards and hospital service indicators. 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).

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).

Based on this background, a comprehensive study is needed from various primary studies on the implementing of hospital administration as a factor associated with patient satisfaction. This study aimed to analyze the associated between hospital administration and patient 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 “Hospital Administration” OR “Good Administration” OR “Hospital Services” 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 patients who use health services in hospitals, 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 and not include 95% CI also aOR value.

4. Operational Definition of Variables

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

Hospital Administration is the form of health services aimed at individuals and or groups to develop, maintain and be able to develop the quality and services of hospitals, and assessment of the good and bad of hospital administration is assessed by patients

usually using a questionnaire filled by patients or inpatients who used the health care services.

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 1,281 articles, after deleting the duplicated articles, 1,009 articles were found, of which 45 articles were eligible for a full text review. A total of 7 articles that meet the criteria according to the quantitative synthesis meta-analysis.

a. Forest plot Hospital Administration as Factors Associated with Patient Satisfaction.

The application of nursing management in hospitals has the possibility to increase patient satisfaction compared to not implementing comprehensive nursing management (aOR= 3.58; 95% CI= 2.36 to 5.42; $p < 0.001$), and the results was statistically significant.

b. Funnel plot Hospital Administration as Factors Associated with Patient 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 3 with standard error between 0.2 and 0.8, then the plot on the left has 3 with standard error between 0 and 0.4, and 1 plot touch the vertical line.

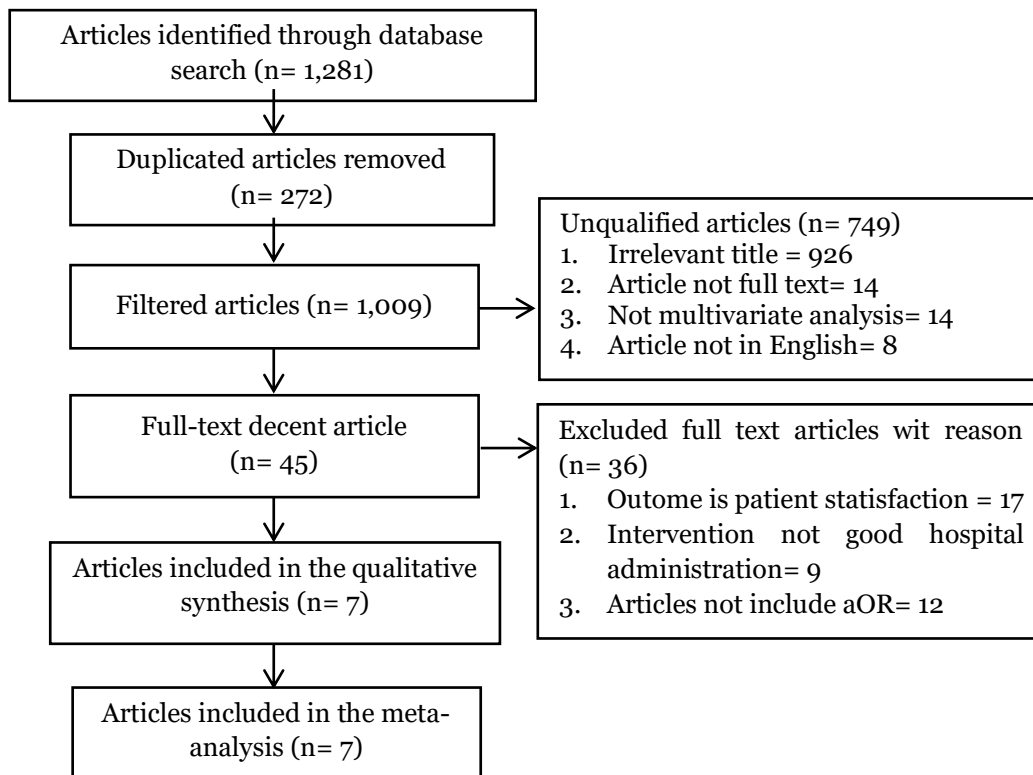


Figure 1. PRISMA FLOW Diagram



Figure 2. Research Distribution Map

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	
Desta et al. (2018)	2	2	2	2	2	2	2	2	2	2	2	2	24
Fang et al. (2019)	2	2	2	2	2	2	2	2	2	2	2	2	24
Teklemariam et al. (2013)	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
Wu et al. (2021)	2	2	2	2	2	2	2	2	2	2	2	2	24
Banakhar (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 Hospital Administration as Factors Associated with Patient Satisfaction.

Author (Year)	Country	Study Design	Sample	Population	Intervention	Comparison	Outcome	aOR (CI 95%)
Desta et al. (2018)	Ethiopia	Cross-sectional	415	Patients in public hospitals in Mekelle town	Good hospital administration	Poor hospital administration	Patient satisfaction	2.36 (1.41 to 5.72)
Fang et al. (2019)	China	Cross-sectional	626	All inpatient in Wuhan China	Good hospital administration	Poor services on administration	Patient satisfaction	1.93 (1.63 to 2.30)
Teklemariam et al. (2013)	Ethiopia	Cross-sectional	245	All inpatient in Hospital Ethiopia	Good hospital administration	Poor hospital administration	Patient satisfaction	3.70 (3.10 to 4.48)
Schoenfulder et al. (2011)	Germany	Cross-sectional	507	Women aged 18 years and over	Good hospital administration	Poor hospital administration	Patient satisfaction	4.57 (2.83 to 7.40)
Wu et al. (2021)	Ghana	Cross-sectional	126	Patients in Ghana hospital	Good hospital administration	Poor services on administration	Patient satisfaction	12.53 (5.66 to 27.72)
Banakhar (2018)	Ethiopia	Cross-sectional	413	Women aged 21 years and over	Good hospital administration	Poor services on administration	Patient satisfaction	2.39 (1.16 to 4.92)
Wudu et al. (2021)	Ethiopia	Cross-sectional	244	Women aged 20 to 65	Good hospital administration	Poor hospital administration	Patient satisfaction	8.57 (1.77 to 14.53)

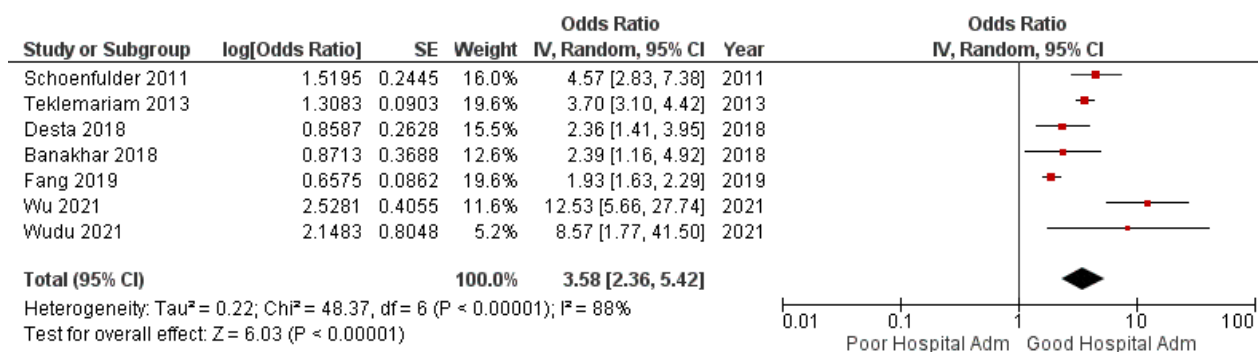


Figure 3. Forest Plot Hospital Administration as Factors Associated with Patient Satisfaction

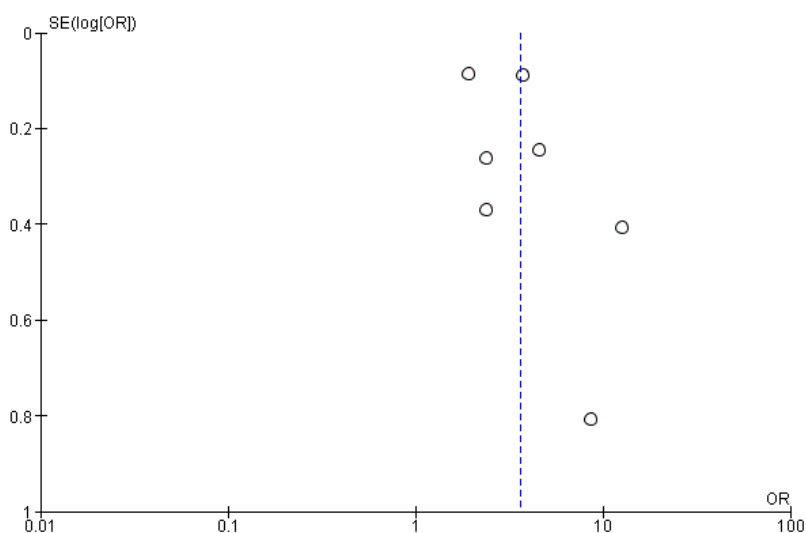


Figure 4. Funnel Plot Hospital Administration as Factors Associated with Patient Satisfaction

DISCUSSION

This study is based on a systematic review and meta-analysis investigating the hospital administration as associated factor to patients’ satisfaction, from 7 cross-sectional studies conducted in Asia, Africa, and Europe showed that hospital administration will be affect to patient satisfaction.

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).

According to Widiyanto et al. (2021) Telemedicine nurses are nurses who have the ability to perform health services remotely or remotely using communication technology. Health service outcomes for patients in the ICU are described as mortality rates, reduced hospital stays.

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).

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

All the authors contributed selects the topic, searching for article, data analysis, and also script writing.

CONFLICT OF INTEREST

There is no conflict of interest in this study.

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