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**FACTORS AFFECTING MEDICAL DOCTOR TURNOVER IN THE HOSPITAL: A SYSTEMATIC REVIEW****Angesti Drea Habsari\***, Jaslis Ilyas*Magister of Hospital Administration Study Program, Faculty of Public Health, Universitas Indonesia*

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**ABSTRACT**

**Background:** Among others, healthcare professional is one of the main drivers in the hospital. Medical doctor plays an important role in patient-centered care system in the hospital, leading health services to patients, cooperating with other healthcare professionals. Medical doctor shortage and high turnover in the hospital has become a problem in many countries. High turnover of medical doctor can lead to an inadequate supply of health services, thereby compromising people's access to health care and endangering the quality of patient care and safety. The objective of this study is to get an overview of the factors that affect medical doctor turnover in the hospital.

**Methods:** A systematic review of articles published between 2014 and 2019 that contain information from all relevant published articles were extracted and analyzed.

**Results:** The literature search and screening process resulted in 9 (nine) studies. From the selected studies, overtime, job satisfaction, and work stress are among the things that affect the turnover of medical doctor in the hospital.

**Conclusions:** Consequences of high medical doctor turnover in the hospital are including financial loss, low patient satisfaction, and poor organizational practices. Factors affecting medical doctor turnover in the hospital are long work hours, job satisfaction, work stress, workplace condition, and hospital management.

**Keywords:** medical doctor; physician; turnover; hospital.

**INTRODUCTION**

Globalization has affected the world economy and many aspects of health care [1]. In 2006, WHO declared a focus on workforce shortages and movement of health professional from needed responsibilities in undeveloped countries to developed countries with better professional opportunities. The most urgent need in underdeveloped countries is for basic primary care services; in developed countries, the demand increasingly is for technologically advanced, sophisticated services [2]. In United Nation Sustainable Development Goals, Goal 3c states "Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States" [3]. In this statement we can conclude that the health workforce is central in translating vision of universal health coverage into reality.

Medical doctor plays an important role in patient-centered care system in the hospital, leading health services to patients, cooperating with other healthcare professionals. Medical doctor shortage and high turnover in the hospital has become a problem in many countries [4]. Each year, substantial numbers of

health workers leave the health workforce, either temporarily or permanently. Health workers leave temporarily because of illness, maternity, or pursuing advanced education, while they leave permanently because of death, migration, or changing occupation.

A study conducted in Taiwan showed that 14.5% of the surveyed physicians reported strong intention to leave their current hospital [4]. While another study conducted in Xiangyang City of China showed that 28.2% of hospital doctors were considering leaving due to factors related to job satisfaction such as high occupational risk, heavy workload, and poor working conditions in the hospital [5].

These exits can provoke shortages if workers who leave are not replaced, and such shortages compromise the delivery and quality of health services [6]. High turnover of medical doctor may lead to inadequate supply of health services, higher institutional costs, disrupt organizational function, reduce team efficiency, and cause a loss of institutional knowledge. It is important for hospital management to manage exits from the health workforce to ensure the least possible disruption of health services. [2].

In Bangladesh, there is serious shortage of human resource in health care with an approximate doctor-population ratio of 3:10,000. Currently to fulfil the WHO standard at least 90,000 more doctors would be needed [7]. One cross-sectional study in Ghana revealed that the dimensions of motivation and job satisfaction significantly associated with turnover intention included career development, workload, management, organizational commitment, and burnout, but not remuneration. Another article conducted in England to retain the general practitioner workforce showed that reduced intensity and volume of workload were more important than incentive payment [4].

As a health professional, sufficient medical doctor is needed both quality and quantity measurement. The quantity of doctor should be sufficiently distributed not only in big cities but also remote areas, and have competency to perform excellently as the health system required [8]. Sklar proposed a model of workforce dynamics in 2013, in which physician workforce sufficiency is broken down into three components: (1) Production and flow of physicians and other providers into the system; (2). Population demand, provider supply and efficiency, and delivery system dynamics; and (3). Attrition and outflow of providers through death, retirement, work reduction, or disability [9].

Many studies have reported factors affecting the intentions of medical staff, especially nurses. However, less attention has been paid to the factors influencing the turnover of doctors in hospital. In this study, factors affecting doctor's turnover is focusing in the hospital where medical doctor's sufficiency is highly needed due to more complex cases compared to primary health care services. Medical doctors in the hospital treat more patients with critical conditions, and they have a higher workload and lower job control.

## **METHODS**

### ***Search Strategy***

The electronic database was searched for 7 days from April 25 to May 1, 2019. The protocol for systematic review refers to PRISMA-P (Preferred Reporting Items for Systematic review and Meta-Analysis Protocols) 2015. We perform systematic searches in one database (ProQuest) to retrieve peer-reviewed publications of relevant empirical publications in the last five years from 2014 to 2018 and limit the research review that are written in English and Indonesian. The type of document we review are scholarly journals, books, and dissertations and theses.

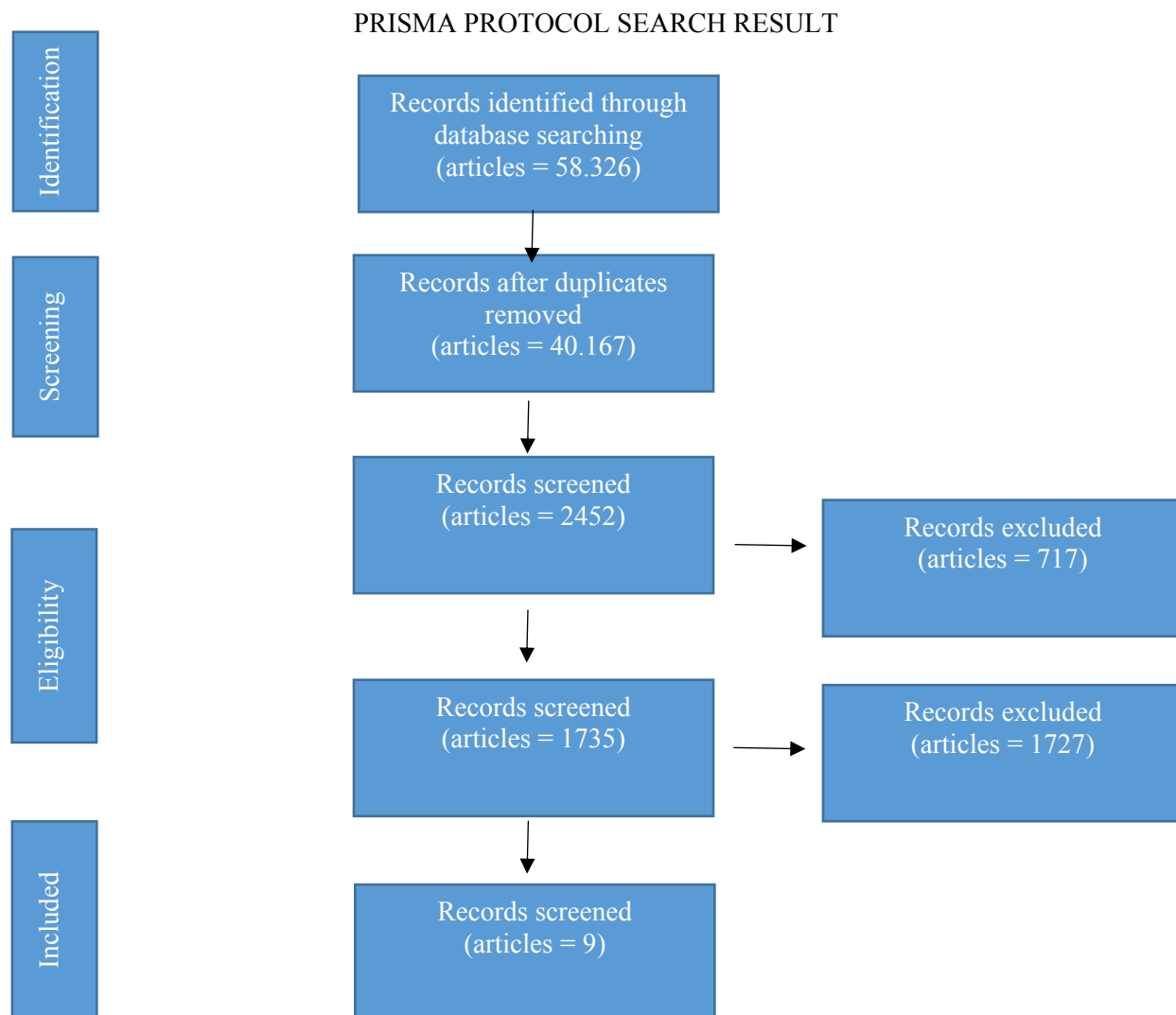
**Eligibility Criteria**

The keyword that we used in the database was “medical doctor turnover” and it comes about 58.326 manuscripts. Then we made the inclusion criteria to the last ten years. Then we made several specific keywords as inclusion criteria which is “hospital”, “healthcare”, “physicians”, and “health facilities”. We exclude other health facilities such as university and primary health care. Then we made the second inclusion criteria for researches that published in the last five years. Then we did the title screening and abstract study to see if the reference is relevant to the topic.

**Data Extraction**

Titles, abstracts and discussions are screened to identify studies that relevant to serve as a reference. We made the data into a structured table and of framework, method, and result of all the reference studies and then we analyze it to identified the factors that affect medical doctor turnover in hospital.

Figure 1. PRISMA systematic review identification, screening, eligibility, and inclusion



## **RESULTS**

The search term includes four keywords: (1) medical doctor; (2) physician; (3) turnover; (4) hospital. A total of 58.326 articles were identified from Proquest database and 40.167 unduplicated citations were scanned manually for potential inclusion. After screening the 2452 records, 717 records were excluded. The remaining 1735 records were assessed for eligibility, and finally 9 articles meet the purpose of this study.

The studies were conducted in several countries in different continents, related to factors affecting the medical doctor turnover in the hospital. Several studies showed that remuneration might influence the intention to leave the workplace, while another study showed that long work hours, heavy workload, and poor workplace relationship are the causes of physicians to leave the hospital. All studies suggested that poor employee satisfaction leads to the intention to leave the workplace. One study suggested that intent to leave is a strong predictor of physician turnover.

No	Journal Title	Data base	Place of Journal	Journal Author	Objectives	Conceptual Model	Methods	Results
1	Work hours and turnover intention among hospital physicians in Taiwan: does income matter?	BMC Health Services Research	Taiwan	Yu-Hsuan Tsai, Nicole Huang, Li-Yin Chien, Jen-Huai Chiang and Shu-Ti Chiou (2016)	investigated how pay satisfaction may influence the relationship between work hours and hospital physician's turnover intention	Dependent Variable: (DV): degree of the physicians' turnover intention to leave the current hospital Independent Variable (IV): the number of work hours	Cross sectional study using questionnaire survey. Data were obtained from a nationwide survey of full-time hospital staff members working at 100 hospitals in Taiwan. The analysis sample comprised 2423 full-time physicians	The findings show that overtime work is prevalent among hospital physicians in Taiwan, and longer work hours were associated with a stronger intention to leave a hospital

2	The relationship between job satisfaction, work stress, work–family conflict, and turnover intention among physicians in Guangdong, China: a cross-sectional study	BMJ	Guangdong, China	Lu Y, Hu X-M, Huang X-L, et al (2016)	To investigate the relationship between job satisfaction, work stress, work–family conflict and turnover intention, and explore factors associated with turnover intention, among physicians in Guangdong Province, China	A cross sectional study to describe the relationship between the influencing factors and turnover intention among physicians. The causal relationships between influencing factors and turnover intention could not be determined.	Physicians completed questionnaires and scales with regard to their job satisfaction, work stress, work–family conflict, and turnover intention. Binary logistic regression and structural equation modelling (SEM) were used in data analysis	Job satisfaction, work stress, work–family conflict, hours worked per week, working in an urban/rural area, types of institution and age are influencing factors of turnover intention.
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3	Job satisfaction and turnover intention among Iraqi doctors - a descriptive cross-sectional multicentre study	Human Resources for Health	Iraq	Ali Jadoo SAA, et al. (2015)	to explore prominent factors affecting turnover intentions among Iraqi doctors	Dependent Variables: Physicians' turnover intention Independent Variables: Job satisfaction, work hours,	A descriptive cross-sectional multicentre study was carried out among 576 doctors across 20 hospitals in Iraq using multistage sampling technique. Descriptive and bivariate and multiple logistic regression analyses were conducted to identify significant factors affecting turnover intentions	The high-turnover intention among Iraqi doctors is significantly associated with working and security conditions
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4	Relationships of work characteristics to job satisfaction, turnover intention, and burnout among doctors in the district public-private mixed health system of Bangladesh	BMC Health Services Research	Bangladesh	Ashim Roy, Trudy van der Weijden and Nannde Vries (2017)	investigated the effects of work characteristics and other predictors to job satisfaction, turnover intention, and burnout in doctors of the public primary, public secondary and private facilities of the district health system of Bangladesh.	The relationship between Work Characteristics (Organizational, social, and job characteristics) and to job satisfaction, turnover intention among doctors in public primary, secondary, and private healthcare facilities	A quantitative study using a self-administered questionnaire containing mostly structured items was conducted among the public and private doctors with a sample size of 384 from 29 out of a total 64 districts of Bangladesh during October and November 2015.	Organizational support was the strongest predictor adversely affecting job satisfaction, turnover intention and burnout of both the public and private doctors.
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5	Working Atmosphere and Job Satisfaction of Health Care Staff in Kenya: An Exploratory Study	Biomed Research International	Kenya	Goetz, K, et al (2015)	to document working atmosphere and job satisfaction of health care professionals in Kenya and to explore associations between job satisfaction staff characteristics, and working atmosphere.	a qualitative study using questionnaire to measure job satisfaction	Job satisfaction was measured with 10 items and with additional 5 items adapted to job situation in Kenya Working atmosphere was measured with 13 item questionnaire A stepwise linear regression analysis was performed with overall job satisfaction and working atmosphere, aspects of job satisfaction, and individual characteristics	Job satisfaction and working atmosphere are important indicators for retention of health care staff.
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6	The Influence of Job Satisfaction and Affective Commitment on Turnover Intention among Senior Professionals in Public Hospitals: An Empirical Study in Guangdong Province, China	ProQuest	China	Xu (2016)	X	To analyze how to improve job satisfaction and develop affective commitment so as to retain talented senior professionals	The relationship between job satisfaction, turnover intention, affective commitment was analysed relating to the senior professionals in public hospitals.	A qualitative study using 1500 respondents from 33 hospitals in Guangdong Province, China.	The size of the hospital, job tenure and job position are valid predictors of turnover intention.
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7	<p>Work Stress and Turnover Intentions Among Hospital Physicians: The Mediating Role of Burnout and Work Satisfaction</p>	<p>Journal of Work and Organizational Psychology</p>	<p>Israel</p>	<p>Tziner A, Rabenu E, Radomski R, Belkin A. (2015)</p>	<p>to examine the relationship between perceived work stress, burnout, satisfaction at work, and turnover intentions among hospital physicians.</p>	<p>The study was conducted in six hospitals in Israel. One-hundred seventy questionnaires were handed out, of which 124 were filled out and returned.</p>	<p>Binary logistic regression and structural equation modelling (SEM) were used in data analysis</p>	<p>work satisfaction partially mediated the relationship between burnout and turnover intentions</p>
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8	Factors affecting turnover intentions among public hospital doctors in a middle-level city in central China	Australian Health Review	China	Fengfan Zhang, Zhenni Luo, Ting Chen, Rui Min, Pengqian Fang (2017)	The aim of the present study was to explore prominent factors affecting turnover intentions among public hospital doctors in urban areas	sociodemographic and other factors were analyzed if had any related to the turnover intentions of public hospital doctors	a qualitative study using questionnaires to collect data from 284 public hospital doctors.	Dissatisfaction with working conditions and hospital management processes, as well as work pressures, were significant factors contributing to the turnover intentions of public hospital doctors.
9	Estimating institutional physician turnover attributable to self-reported burnout and associated financial burden: a case study	BMC Health Services Research	United States of America (USA)	Maryam S. Hamidi, Bryan Bohman, Christy Sandborg, Rebecca Smith-Coggins, Patty de Vries, Marisa S. Albert, Mary Lou Murphy, Dana Welle, Mickey T. Trockel (2018)	to examine the associations between physician self-reported burnout, intent to leave (ITL) and actual turnover within two years, and to estimate the cost of physician turnover attributable to burnout	recent longitudinal data case example, both before and after adjusting for anxiety and depression, estimate the cost of physician turnover attributable to burnout, and explore the relationship between intent to leave and actual turnover	a qualitative study using The Physician Wellness Survey to 472 physicians, data was analyzed using SPSS statistics	the economic cost of physician faculty attrition attributable to burnout is high, and intent to leave is a strong predictor of physician turnover

## **DISCUSSION**

Researches reviewed were resulted in several key findings related to doctor turnover in the hospital. These researches mostly have similar key findings that longer work hours, job satisfaction, work stress, working atmosphere (includes security), and organizational management play important role in medical doctor turnover.

In 2011 a study was conducted in Nyanza provincial general hospital resulted in factors that contributed to this high turnover were individual factors such as inexperience of young doctors, place of origin and low conscientiousness, job factors such as heavy workload, poor working conditions, strained relationship with supervisors, poor relationship with coworkers, and unfriendly work schedules; Organizational factors such as lack or insufficient prospects for training and development and environmental factors such as the desire to work in bigger cities [12]. A study conducted in 2017, resulted that turnover intentions indicates that public hospital doctors surveyed in urban China give greater weight to their professional environment and career development rather than salary in their employment decisions [5].

Many factors that have been identified as contributing factors to burnout- such as low professional satisfaction, medical-legal, health, and financial issues, lack of alignment between personal and organizational values and challenging practice arrangements are also factors that contribute to physicians' turnover or early retirement. Emotional exhaustion correlates with anxiety and depression in physicians. Previous reports examining the effect of physician burnout on intent to leave and/or actual departure have not adjusted for the effects of anxiety and depression [14].

Previous studies have indicated that psychosocial job stressors, high levels of distress, frequent sleep problems, heavy workloads, job dissatisfaction, and poor workplace relationships are plausible factors associated with high doctor turnover. Many of these work-related stress, distress, and dissatisfaction may be resulted partly from hospital physicians' long work hours. Recently in Taiwan, malpractice lawsuit, excessive workload, and unfair income are three most frequently mentioned causes of the physician shortage in hospitals. In addition, the adverse consequences of doctor turnover may include financial loss, low patient satisfaction, and poor organizational practices [4].

A raft of empirical evidence has been generated over decades suggesting that strategic work design is essential to improve job holders' attitudinal, behavioural and emotional states to achieve individual as well as organizational interests and goals. Conceptually, work design integrates 'work characteristics' such as organizational, social and job components having the potential to determine individual and organizational interests and outcomes. Notably, job-holders' attitude (e.g. job satisfaction), behaviour (e.g. turnover intention) and well-being (e.g. burnout) states are commonly-studied work design outcomes which are under the complex influence of the wider organizational environment. [7].

Job satisfaction and working atmosphere are also important indicators for recruitment and retention of health care staff hence for the provision of good quality of care. Financial and nonfinancial incentives serve as motivational factors if they are introduced in supportive work environments. Such improvement strategies should be developed with the involvement of policy makers, health facility managers, and health workers themselves [10]. Empirically, structural and managerial, social, work in itself (i.e. job characteristics) are the key attributes influence job satisfaction and turnover or retention of health professionals [10,11]. Low salary, benefits and job security correlate to low satisfaction, which likely explains the strong direct correlation between organizational supports and satisfaction in private doctors since their job security, salary, benefits and career growth opportunities are implicitly neglected. Money cannot solve everything, and there are still root causes which drive the turnover intention of physician, such as long work hours [4].

Local culture now plays a much greater role in the public environment. Regional autonomy affects the local financing regulation, as well as leadership characteristic and staffing which increase the difficulty in maintaining existing health workforce. It has been difficult for public hospitals to attract specialists, who often work extensively in the private sector in addition to their public position because of the earning potential [8].

Turnover have potential benefits, however, as it may provide an opportunity to match personnel skills better to workplace needs, facilitate the introduction of new ideas into well-established organizations, and increase organizational flexibility [2]. Future engagement is also likely to depend on whether training and development is sufficiently widespread and able to prepare doctors for the management roles they will face, which at present remains unclear and requires investigation [15].

## CONCLUSIONS

Medical doctor plays a great role in healthcare services especially in complex institution like hospital. Consequences of high medical doctor turnover in the hospital are including financial loss, low patient satisfaction, and poor organizational practices. Factors affecting medical doctor turnover in the hospital are longer work hours, low job satisfaction, work stress, workplace condition, and hospital management.

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