

2-28-2023

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Recommended Citation

Despitasari M , Bachtiar A , Hendarwan H , et al. Job Satisfaction Model of Primary Health Care Midwives Based on Indonesian Workforce Research in the Health Sector. *Kesmas*. 2023; 18(1): 24-31

DOI: 10.21109/kesmas.v18i1.6355

Available at: <https://scholarhub.ui.ac.id/kesmas/vol18/iss1/4>

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Job Satisfaction Model of Primary Health Care Midwives Based on Indonesian Workforce Research in the Health Sector

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Abstract

Promotive, preventive, curative, and rehabilitative efforts that are comprehensive, integrated, and sustainable are employed to enhance the health state of the global population. Within this context, however, the quality of primary health care depends on job satisfaction, which leads to the happiness of human resources in the health sector. This study aimed to analyze and formulate a job satisfaction model among primary health care midwives in Indonesia. This study was an advanced secondary data analysis of a cross-sectional study conducted in 2017 by the National Institute of Health Research and Development, Ministry of Health of the Republic of Indonesia. A total of 87,341 midwives from all 9,669 primary health cares in Indonesia participated in this study. Data were collected by distributing the Minnesota Satisfaction Questionnaire, elaborating on the satisfaction level and relevant contributing factors. The prefilled Likert scale questionnaire was analyzed using logistic regression. The findings suggested a model indicating that motivation, work area (region), history of salary delay, and training received were important for their job satisfaction, whereas the motivation aspect contributed the most. Therefore, the local and central governments must consider these factors in the human resource policymaking process.

Keywords: Indonesia, job satisfaction, midwives, motivation

Introduction

The efforts to improve the global health status are carried out by integrating health activities for the entire community and including the broader community in comprehensive, integrated, sustainable, preventative, curative, rehabilitative, and promotive efforts.¹ Therefore, Indonesia has established six pillars of health transformation per Minister of Health Regulation No. 15 of 2022 to execute the Ministry of Health's vision of developing healthy, productive, independent, and fairly distributed human beings.² The six pillars include transformations in primary health care (PHC), referral health care, health resilience, health financing, human resources for health (HRH), and health technology. The PHC should be the foundation of Indonesian health because it is the closest to the community, providing affordable access to primary care based on practical, scientific, and globally acknowledged principles. Therefore, the implementation of PHC is essential for achieving a better health status. One method for enhancing the performance of PHC services is to focus more on the job satisfaction of the PHC's human resources.

Currently, various employment status categories for nongovernment HRH, such as provincial and district/city contract HRH, regional public service agency HRH, health operational assistance HRH, nonpermanent HRH, and volunteers working on public health facilities belonging to the regional government (provincial/district/city), are utilized to meet the demand for health services in the regions. These job categories must be readjusted to comply with Law No. 5 of 2014 Concerning State Civil Administration.³ Government Regulation No. 49 of 2018 Concerning the Management of Civil Servants with Employment Agreements also necessitates changing HRH's employment status.⁴ These regulations have led to the widespread use of contract HRH rather than permanent employees, notwithstanding the correlation between employment status and job satisfaction.^{5,6} Thus, this demands a more systematic effort to increase the job satisfaction of PHC workers.

The high maternal mortality rate (MMR) in Indonesia, which has risen from 4,627 deaths in 2020 to 7,390 in 2021, requires great attention on PHC services, specifically maternal and child health (MCH) services in

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Received : November 19, 2022
Accepted : December 26, 2022
Published : February 27, 2023

which midwives take the leading role.² The MCH service performance can be improved if the midwives, as the main health providers, can perform well; thus, job satisfaction is an important factor. Furthermore, it is well-known that job satisfaction impacts the employee's physical and mental status.⁷ Job satisfaction can vary from person to person, significantly affecting employee behavior and the satisfaction and loyalty of the organization's consumers.⁸ In addition, it may influence the level of absenteeism, which ends up in the worker turnover rate.⁸ Therefore, maintaining workers' job satisfaction is essential for the success of an institution, especially the services institution as health facilities.

Although this study cannot provide a descriptive picture of the current conditions of Indonesian PHC midwives, the massive total coverage data from 87,341 midwives in 9,669 PHC throughout Indonesia allowed this study to develop a more accurate analysis of midwives' job satisfaction as part of the aforementioned health transformation pillars. Consequently, this study's findings will contribute to optimizing the first pillar (performance of PHC services). On the one hand, the PHC's management can enhance the working conditions to meet the midwives' expectations. On the other hand, the local and central governments can harness the results to evaluate and formulate strategic interventions aiming to address health workforce issues in Indonesia. The model could be implemented in different healthcare facilities, including hospitals and clinics. Globally, this approach could be used to determine interventions regarding midwives' job satisfaction in other countries..

Method

Undertaking an advanced analysis of the first Indonesian Workforce Research in the Health Sector/*Riset Ketenagaan di Bidang Kesehatan* (Risnakes) hosted by the National Institute of Health Research and Development (NIHRD), Ministry of Health of the Republic of Indonesia, this study, was the first study conducted in Indonesia to collect data from all HRH in PHC, public hospitals, and private hospitals. A total of 249,985 individuals participated in this study, representing 14 HRH professions in Indonesia, including midwives. The report by the Indonesian Workforce Research in the Health Sector provided a descriptive analysis of all HRH types, which mainly focused on the percentage of their distribution all over Indonesia. The midwives were the second largest participants after nurses; unlike doctors or pharmacists, they were available in almost all health centers and played prominent roles in MCH as well as performed multitasking jobs in the facilities.⁹

Since the NIHRD was transformed into a policy institution in 2022, Indonesian Workforce Research in the

Health Sector may have been the last to collect such extensive total coverage data. The collected data include input (workforce regulations in the health sector: types, qualifications, and the number of workers in the health sector in health service institutions and facilities: public and private hospitals and public health centers), process (workforce management in the health sector: planning, procurement, and utilization), and output (job satisfaction, motivation, retention, and responsiveness).⁹

This study was an advanced data analysis of Indonesian Workforce Research in the Health Sector, a cross-sectional study conducted by the NIHRD. In the middle of 2017, the entire coverage data of 87,341 midwives from all 9,669 PHC centers in Indonesia were collected. Despite its inability to portray the current situation, this study provided a model of job satisfaction in Indonesia. The data were requested from the head of NIHRD using a proposal supplied with ethical approval. The Data Management Laboratory of NIHRD, in charge of data handling and management, prepared the raw data and sent the data set via e-mail.

The dependent variable in this study was job satisfaction, which was elaborated through the following independent variables: sociodemographic characteristics, work-related factors, and motivation. Sociodemographic characteristics include marital status (single or married and living with their spouse), education (diploma III or minimum diploma III), region (I, II, and III based on the Ministry of National Planning and Development categorization), and age, which was defined using mean as the cutoff point. Work-related factors included work experience, years of work in current PHC, extra income generated outside job, and travel time to PHC, which are defined using mean as the cutoff; while, the history of salary delay, training, further education received, and type of PHC (with or without admission service) were other work-related factors. The motivation was also defined using the mean as the cutoff point.

Since motivation and job satisfaction were latent variables that could not be measured with a single question, this study employed a variety of constructs. Although there was no statistical validity or reliability test result, both instruments were translated and back-translated into the Indonesian language before being evaluated for readability by health professionals from NIHRD and an expert panel. In this study, motivation was assessed using a 23-item questionnaire developed by Mutale, et al.¹⁰ The self-administered instrument used a Likert scale ranging from strongly disagree (1) to strongly agree (5), with a range of 23 to 115 for the overall motivation score.

Job satisfaction was measured using the self-administered Minnesota Satisfaction Questionnaire (MSQ) short form with 20 items on a Likert scale ranging from strongly dissatisfied (1) to strongly satisfied (5).¹¹ The two di-

mensions of the MSQ short form were intrinsic and extrinsic satisfaction. Intrinsic satisfaction comprised 12 items: activity, independence, variety, social standing, moral values, security, social service, authority, ability usage, responsibility, creativity, and achievement. The six components of extrinsic satisfaction were human relations supervision, technical supervision, firm rules and procedures, salary, progression, and recognition. While, the other two remaining items (working circumstances and coworkers) were included solely in computing the overall job satisfaction scores.

Motivation and job satisfaction scores were classified using the mean score as the cutoff. Using the free version of SPSS IBM 24.0, validity and reliability test were used to evaluate the instruments' quality. The Pearson pro-

duct-moment correlation was used to test the validity of motivation and job satisfaction instruments. The r values of the items on the motivation instrument ranged from 0.048 to 0.575 ($r_{table} = 0.006$, $p\text{-value} < 0.005$), whereas the r values of the items on the work satisfaction questionnaire ranged from 0.367 to 0.643 ($r_{table} = 0.006$, $p\text{-value} < 0.005$). These values showed that the instruments were valid. While, the reliability coefficients were 0.81 for intrinsic satisfaction and 0.78 for external satisfaction, while the overall satisfaction was 0.88. The r values and coefficients proved that the instruments were both valid and reliable (Table 1).

Motivation and job satisfaction were defined based on the mean value of 83.18 and 70.14, respectively. Those below the mean value were considered low moti-

Table 1. Dimension and Reliability of the Job Satisfaction Instrument

Dimension of Satisfaction	Number of Item	Dimension		Coefficients Reliability	%
		Mean	SD		
Intrinsic satisfaction	12	42.64	4.83	0.81	53.9
Extrinsic satisfaction	6	20.23	3.53	0.78	50.7
Overall satisfaction	20	70.15	8.24	0.88	51.6

Note: SD = Standard Deviation

Table 2. Indonesian Primary Health Care Midwives' Characteristics (n = 87,341)

Variable	Category	n	%
Age (mean = 33.40)	<33 years (below mean)	51,371	58.8
	≥33 years	35,970	41.2
Marital status	Single	20,139	23.1
	Married and living with a spouse	67,202	76.9
Education	<Diploma III	3,590	4.1
	≥Diploma III	83,751	95.9
Region	Region I: Sumatra, Java, and Bali	62,947	72.1
	Region II: Kalimantan, Sulawesi, and West Nusa Tenggara	17,987	20.6
	Region III: East Nusa Tenggara, Maluku, North Maluku, Papua, and West Papua	6,407	7.3
Work experience (mean = 11.20)	<11 years (below mean)	54,918	62.9
	≥11 years	32,423	37.1
Years of working at the current PHC (mean = 8.20)	<8 years (below mean)	56,470	64.7
	≥8 years	30,871	35.3
History of salary delay	Yes	19,064	21.8
	No	68,277	78.2
Training received	No	46,514	53.3
	Yes	40,827	46.7
Further education received*	No	80,110	91.7
	Yes	7,231	8.3
Extra income generated outside job	≥3	695	0.8
	<3	86,646	99.2
Type of PHC	PHC with admission service	35,527	40.7
	PHC without admission service	51,814	59.3
Travel time to PHC	>27 minutes	64,718	74.1
	≥27 minutes	22,623	25.9
Work motivation	Low	46,512	53.3
	High	40,829	46.7
Job satisfaction	Dissatisfied	42,292	48.4
	Satisfied	45,049	51.6

Notes: PHC = Primary Health Care

*Opportunities to continue to a formal higher education level, either paid by the institution or out of pocket

vated and dissatisfied. The relationship between sociodemographic variables, work-related variables, motivation, and job satisfaction was analyzed using the Chi-square test. Finally, the model was generated using logistic regression analysis. The results of these bivariate analyses are displayed in Table 3, while the model is presented as an equation.

Results

About 60% of Indonesian PHC midwives were over 33 years of age, had fewer than 11 years of work experience, and had worked at PHC for less than eight years. More than 70% were employed in Region I (Sumatra, Java, and Bali). Almost all midwives needed more than 27 minutes to go from home to the workplace. Nearly 80% of midwives were married, lived with their spouses, and had no history of salary delays. Nearly half of them had their skills upgraded through the training yet lacked motivation (Table 2).

Over 90% of midwives had completed at least a Diploma III education, and a portion of this proportion had even completed a doctorate. The rest were still pursuing their diploma education as the requirement for

midwives' certification in Indonesia. At the time of this research (2017), they were still called assistant health workers. More than 90% of midwives had fewer than three outside sources of income and had never received additional training from the PHC/government (Table 2).

The region, years of work in current PHC, history of salary delay, training received, further education received, and work motivation were significantly related to midwives' job satisfaction (Table 3). The sociodemographic factor associated with job satisfaction was region (p -value<0.001), while the significant work-related factor was training (p -value<0.001). Motivation emerged as the most significant factor, with a p -value of <0.001. Highly-motivated midwives were 3.206 times more likely to be satisfied with their jobs at the current PHC. In contrast, those who had the opportunity to develop their skills through training were 1.054 times more likely to be satisfied with their jobs. Current PHC midwives in Regions II and III were often more satisfied with their jobs. According to the final logistic regression model, the factors influencing Indonesian PHC midwives were region, history of salary delay, training received, and motivation. These factors explained the difference in job sat-

Table 3. Association of Demographic and Work-Related Factors with Job Satisfaction among Indonesian Primary Health Care Midwives (n = 87,341)

Variable	Category	Job Satisfaction				p-value
		Dissatisfied		Satisfied		
		n	%	n	%	
Age	<33 years (below mean)	24,907	48.5	26,464	51.5	0.662
	≥33 years	17,385	48.3	18,585	51.7	
Marital status	Single	9,596	47.9	10,483	52.1	0.126
	Married and living with a spouse	32,636	48.6	34,566	51.4	
Education	<Diploma III	1,692	47.1	1,898	52.9	0.118
	≥Diploma III	40,600	48.5	43,151	51.5	
Region	Region I: Sumatra, Java, and Bali	31,757	50.5	31,190	49.5	<0.001
	Region II: Kalimantan, Sulawesi, and West Nusa Tenggara	7,956	44.2	10,031	55.8	
	Region III: East Nusa Tenggara, Maluku, North Maluku, Papua, and West Papua	2,579	40.3	3,828	59.7	
Work experience	<11 years (below mean)	26,647	48.5	28,721	51.5	0.447
	≥11 years	15,645	48.3	1,778	51.7	
Years of working at the current PHC	<8 years (below mean)	27,461	48.6	29,009	51.4	0.098
	≥8 years	14,831	48.0	16,040	52.0	
History of salary delay	Yes	9,347	49.0	9,717	51.0	0.059
	No	32,945	48.3	35,332	51.7	
Training received	No	22,906	49.2	23,608	50.8	<0.001
	Yes	19,384	47.5	21,441	52.5	
Further education received**	No	38,868	48.5	41,242	51.5	0.059
	Yes	3,424	47.4	3,807	52.6	
Extra income generated outside job	≥3	41,956	48.5	44,690	51.5	0.998
	<3	336	48.3	359	51.7	
Type of PHC	PHC with admission service	17,152	48.3	18,375	51.7	0.488
	PHC without admission service	25,140	48.5	26,674	51.5	
Travel time to PHC	>27 minutes	22,602	48.7	11,595	51.3	0.259
	≤27 minutes	19,690	48.3	33,454	51.7	
Work motivation	Low	28,736	61.8	17,776	38.2	<0.001
	High	13,556	33.2	27,273	66.8	

Notes: PHC = Primary Health Care.

*Significant at 95% CI, **Opportunities to continue to a formal higher education level, either paid by the institution or out of pocket.

Table 4. Final Model of Indonesian Primary Health Care Midwives' Job Satisfaction (n = 87,341)

Variable	Category	Satisfied with Their Job	
		OR	95% CI
Region	Region I: Sumatra, Java, and Bali		1
	Others	1.250	3.118–3.297
History of salary delay	Yes		1
	No	1.089	1.051–1.128
Training received	No		1
	Yes	1.054	1.024–1.084
Work motivation	Low		1
	High	3.206	3.118–3.297

Notes: OR = Odd Ratio, CI = Confidence Interval

isfaction of Indonesian PHC midwives as high as 10.8%. Motivation was the primary contributing factor to job satisfaction among Indonesian PHC midwives (Table 4).

Before the regression was carried out, all independent variables listed in Table 2 were screened. As all of them had a p-value of >0.25, they were included in the initial model. Furthermore, the 13 variables were included in the logistic regression, and variables with a significance level of >0.10 were excluded from the model one by one. Therefore, the formulated final model is: $\text{Logit (dissatisfied)} = -0.623 + 1.165 * \text{work motivation (low)} + 0.207 * \text{region (1)} + 0.052 * \text{training (no)} + 0.86 * \text{history of salary delay (yes)}$. The model was proven to be significant (p-value < 0.001).

Discussion

This study's findings indicated that the sociodemographic characteristics, except work area (region), were not substantially connected with the job satisfaction of Indonesian PHC midwives. The findings were consistent with a comprehensive review of critical care nurses, which found no indication of a relationship between individual (sociodemographic) characteristics and critical care nurses' job satisfaction.¹² This comprehensive review also indicated that age, sex, and education were unrelated to work satisfaction.¹³ A longitudinal study in the United States also revealed that tenure (work period/experience) does not correlate with job satisfaction.¹⁴

According to prior studies, demographic characteristics are considered to influence job satisfaction.^{8,15-17} Sex is one of the demographic factors associated with job satisfaction.^{5,6,8} However, sex has no significant effect on veterinarians' job satisfaction.¹⁸ This study did not examine the association between sex and job satisfaction. One significantly related to job satisfaction is work tenure (work period). Employees become less satisfied as their tenure within a given organization increases.^{14,17} Age also contributes to nurses' job satisfaction, but it is insignificant for veterinarians.^{15,18} Marriage length may reduce

job satisfaction, but the marital status does not appear to correspond much with job satisfaction.^{16,18}

A contrasting result of this study was that there was no association between age and job satisfaction. The previous study demonstrated that chronological age/biological age was distinct from subjective age.¹⁹ A previous study in Uganda also stated that age is not really important in explaining variations in individual job satisfaction.¹² Subjective age causes individuals to feel either younger or older than their biological age. The dynamic aspect of the aging process is not captured by chronological age, which exhibits relatively modest correlations with major work outcomes. Yet, some scientists have developed an "age construct" that can be reliably assessed and even modified, thus establishing a new field of organizational interventions.¹⁹

In this study, the work area also affected job satisfaction. Indonesia is split into three development regions according to the Minister of National Development Planning Regulation No. 14 of 2020: Region I (Sumatra, Java, and Bali), Region II (Kalimantan, Sulawesi, and West Nusa Tenggara), and Region III (East Nusa Tenggara, Maluku, North Maluku, Papua, and West Papua).²⁰ The divisions are based on demographic, sociological, or economic similarities between islands within a region. Geographically, each region is distinctive. For instance, the mountainous terrain of Region III may present distinct difficulties to local midwives. The less rugged terrain in Region I may have made it easier for midwives to perform their daily duties. Access to the workplace proves it, and its relation to geographical situation attributes job satisfaction as well as retention.²¹

Other contributors to employee satisfaction include position, origin, number of children, education, living distance, and working hours.^{8,15,16,18,22} Professional development, pay raises, and incentives are variables which connect with job satisfaction and serve as indicators.²³ Financial and nonfinancial incentives are related to the job satisfaction of hospital HRH in South Sulawesi

Province, according to a study employing the same data from the 2017 Indonesian Workforce Research in the Health Sector for provincial levels.²⁴

This study also revealed that motivation, region, history of salary delay, and training received were substantially related to job satisfaction, with motivation as the main predicting factor. In keeping with the findings of an Indonesian Regional Water Utility Company/*Perusahaan Daerah Air Minum* (PDAM), the significance level of the relationship between work motivation and job satisfaction was less than 0.001.²⁵ The score from that study was less than 0.05, indicating a direct relationship between work motivation and job satisfaction.²⁵ A study in Iraq indicated that incentives as a kind of motivation had a considerable beneficial effect on job satisfaction at the 5% level.²⁶ Thus, it demonstrated that motivated workers tend to accept all aspects of their work lives that make them more psychologically pleased, which leads to happiness.²⁷ Prior to this, Herzberg asserted that job satisfaction resulted from the presence of intrinsic motivators.²⁸

This study denoted that the timely-paid salary and nonfinancial incentives, such as refreshment training, were substantial in maintaining job satisfaction. Payment delays caused a lack of resources to procure primary needs. Nevertheless, the salary was the only earning for most midwives. The training was also important in improving their competencies. Thus, it would escalate job satisfaction. According to a previous study, compensation and benefits accounted for around 68% of the entire variance in job satisfaction.²⁹

Since this study harnessed the 2017 data, which might be irrelevant to the changes that occurred, the current conditions might not be well depicted. However, the use of total coverage big data in this study was a supporting factor in developing the midwives' job satisfaction model. The model might also be applicable to midwives working in different types of health facilities (hospitals or clinics) in Indonesia or other countries with similar conditions. The model implies better alternatives of intervention to be applied, which in turn positively improve MCH services.

Motivated employees tend to accept all work-related circumstances, resulting in psychological contentment. This situation subsequently leads to improved psychological well-being, sometimes referred to as happiness.²⁷ Herzberg maintains that job satisfaction results from intrinsic factors known as "intrinsic motivators."²⁸ The intrinsic aspects comprise speech/achievement, acknowledgment, responsibility, advancement, work, and self-development possibilities. The absence of these intrinsic factors does not mean that the condition is particularly unpleasant.

On the one hand, if these characteristics are present,

motivation will be enhanced, resulting in superior work performance. Consequently, these intrinsic factors are frequently referred to as "satisfiers" or "motivators."²⁸ On the other hand, the absence of external factors causes job dissatisfaction. Extrinsic factors or "hygiene factors" in the context of work include wages, working conditions, job security (no fear of being fired), employment status (contract or permanent), workplace procedures, quality of supervision, and interpersonal relationships with coworkers, superiors, and subordinates. The presence of these things does not necessarily encourage employees. However, its absence can result in employee dissatisfaction.²⁸ In other words, motivation can lead to job satisfaction and happiness.^{6,28,30,31}

Even though there are some differences in the results, this study reinforced the results of previous studies,^{21,24-26} which prove that working location (region), training received, history of salary delays, and work motivation have a positive impact on midwives' job satisfaction. Analyzing data from 9,699 PHCs throughout Indonesia with nearly 90,000 midwives, the result of this study was the only available huge amount of human resource data. Although the data were obtained from the 2017 study, formulation of the contributing variables and its final model of job satisfaction can be a reference, especially for the government, to design strategic interventions not only for midwives, but also for other types of human resources in various health facilities. In some categories, the data were not normally distributed, such as the ratio of human resources among regions, which was a limitation of this study. Other than that, the variations of additional income are not suitable for midwives and have not been elaborated thoroughly. Future studies are recommended to utilize satisfaction questionnaires adapted to the Indonesian context.

Conclusion

Job satisfaction of Indonesian PHC midwives are affected by motivation, work area (region), history of salary delays, and training received. Highly motivated midwives are three times more likely to be satisfied with their jobs under the current PHC system. The model indicates that working motivation, work area, training, and history of salary delay contributed to job satisfaction. Considering the importance of motivation, several activities to enhance its levels are recommended, including group training and personal motivational sessions by the management. On a larger scale, the government should address the gaps in job satisfaction among regions by providing incentives for remote-working midwives while maintaining timely-paid salaries. In addition, participating in training rewards midwives, which can add to their job satisfaction.

Abbreviations

PHC: Primary Health Care; HRH: Human Resources on Health; MMR: Maternal Mortality Rate; MCH: Mother and Child Health; Risnakes: *Riset Ketenagaan di Bidang Kesehatan*; NIHRD: National Institute of Health Research and Development; MSQ: Minnesota Satisfaction Questionnaire; SD: Standard Deviation; CI: Confidence Interval.

Ethics Approval and Consent to Participate

The 2017 Indonesian Workforce Research in the Health Sector/*Riset Ketenagaan di Bidang Kesehatan* (Risnakes) ethical clearance was obtained from the Health Research Ethics Commission of the National Institute of Health Research and Development, Ministry of Health of the Republic of Indonesia, No. LB.02.01/2/KE.130/2017, dated on April 5, 2017. Ethical clearance for secondary data analysis was obtained from the Research and Community Engagement Ethical Committee, Faculty of Public Health, Universitas Indonesia No. Ket-686/UN2.F10.D11/PPM.00.02/2020. Before completing the questionnaire, the respondents received informed consent to participate in the study. The authors read the informed consent form aloud and offered by health professionals the opportunity to ask questions. After comprehension and agreement, the participants signed an informed consent form. Forms of informed consent were submitted and archived at the National Institute of Health Research and Development headquarters.

Competing Interest

The author declares that there are no significant competing financial, professional, or personal interests that might have affected the performance or presentation of the work described in this manuscript.

Availability of Data and Materials

Data were obtained from the National Institute of Health Research and Development and stated to be confidential.

Authors' Contribution

MD conceptualized, interpreted the data, and prepared the initial draft. AB, HH, B, and YY reviewed the draft internally and completed the manuscript.

Acknowledgment

The authors thank National Institute of Health Research and Development, Ministry of Health of the Republic of Indonesia, for allowing the data to be analyzed and Gede Eka Putrawan (Monash University's doctoral student) for proofreading the initial manuscript.

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