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DETERMINANTS OF WORK MOTIVATION AMONG DOCTORS AT COMMUNITY HEALTH CENTERS IN INDONESIA

Determinan Motivasi Kerja Dokter Puskesmas di Indonesia

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Abstract

Introduction: Effective work motivation among healthcare professionals significantly enhances health service performance and plays a pivotal role in improving service quality.
Aims: This study aims to analyze the determinants influencing work motivation among doctors at community health centers in Indonesia.
Methods: This study employed a quantitative approach with a cross-sectional design, utilizing secondary data from the 2017 Indonesian Workforce Research in the Health Sector. The study sample comprised 9,988 respondents. Logistic regression was employed for data analysis.
Results: In 2017, 55.1% of doctors at community health centers in Indonesia reported high work motivation. Significant correlations were identified between work motivation and various factors: individual characteristics (age, education, marital status, position), intrinsic factors (training and continuing education), extrinsic factors (salary/wages, work area), financial incentives (performance allowances, capitation fund incentives), and non-financial incentives (official vehicles) ($p < 0.05$). Among these, the type of position was identified as the most dominant factor influencing work motivation ($p < 0.05$; prevalence ratio (PR) = 1.805 CI 95% [1.608-2.028]).
Conclusion: Work motivation among doctors at community health centers in Indonesia is significantly influenced by individual characteristics, intrinsic and extrinsic factors, as well as financial and non-financial incentives, with the type of position being the most dominant factor. To enhance motivation and improve healthcare services, policymakers should strengthen career development, expand training opportunities, improve financial and non-financial incentives, and implement targeted retention strategies, especially in underserved areas.

Keywords: Community health center, doctor, Indonesia, work motivation,

Abstrak

Latar Belakang: *Motivasi kerja yang efektif di kalangan profesional kesehatan secara signifikan meningkatkan kinerja layanan kesehatan dan memainkan peran penting dalam meningkatkan kualitas layanan.*
Tujuan: *Penelitian ini bertujuan untuk menganalisis determinan yang memengaruhi motivasi kerja di kalangan dokter puskesmas di Indonesia.*
Metode: *Penelitian ini menggunakan pendekatan kuantitatif dengan desain potong-lintang serta memanfaatkan data sekunder dari penelitian tenaga kerja Indonesia tahun 2017 di sektor kesehatan. Sampel penelitian terdiri dari 9.988 responden. Regresi logistik digunakan untuk analisis data.*
Hasil: *Pada tahun 2017, 55.1% dokter puskesmas di Indonesia melaporkan motivasi kerja yang tinggi. Korelasi yang signifikan diidentifikasi antara motivasi kerja dan berbagai faktor: karakteristik individu (usia, pendidikan, status perkawinan, jabatan), faktor intrinsik (pelatihan dan pendidikan berkelanjutan), faktor ekstrinsik (gaji/upah, area kerja), insentif finansial (tunjangan kinerja, insentif dana kapitasi), dan insentif nonfinansial (kendaraan dinas) ($p < 0,05$). Di antara faktor-faktor tersebut, jabatan merupakan faktor yang paling dominan memengaruhi motivasi kerja ($p < 0,05$; prevalence ratio (PR) = 1,805 CI 95% [1,608-2,028]).*
Kesimpulan: *Motivasi kerja dokter puskesmas di Indonesia sangat dipengaruhi oleh karakteistik individu, factor intrinsic dan ekstrinsik, serta insetif finansial dan non-finansial. Jenis jabatan yang dipegang oleh dokter puskesmas merupakan penentu paling penting dari motivasi kerja mereka. Untuk meningkatkan motivasi dan kinerja layanan kesehatan, pemangku kepentingan perlu memperkuat pengembangan karir, memperluas kesempatan pelatihan, meningkatkan insentif finansial dan non-finansial, serta menerapkan strategi retensi tepat sasaran, terutama di wilayah yang kurang terlayani.*

Kata kunci*: Dokter, Indonesia, motivasi kerja, puskesmas,*

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Introduction

Human resources in healthcare are fundamental to advancing progress toward the Sustainable Development Goals (SDGs), particularly to ensuring healthy lives and promoting well-being across all age groups (WHO, 2016). Within the framework for strengthening health systems, the World Health Organization (WHO) identifies human resources as one of six critical components (Manyazewal, 2017). The role of doctors in achieving the SDGs is multifaceted, encompassing clinical practice, education, and community engagement. Physicians are pivotal in primary health care, which is essential for promoting health equity and addressing global challenges such as poverty and inequality. Doctors provide essential medical services, particularly in underserved areas, improving health outcomes and access to care (Renganathan *et al*. 2023) Doctors' work motivation can help improve healthcare delivery. Motivated physicians are more likely to provide high-quality care, as they are committed to patient well-being and adhere to clinical guidelines (Oxholm *et al*., 2023).

In Indonesia, human resources in healthcare are a vital subsystem within the national health system, playing a key role in achieving sustainable health development. Law Number 17 of 2023 Article 202 concerning Health mandates the central and regional governments to ensure adequate quantity, diversity, competence, and equitable distribution of healthcare personnel to support ongoing health development. To strengthen the healthcare system, the Ministry of Health has undertaken systemic transformations aimed at enhancing the quantity, distribution, and quality of healthcare workers, particularly in underserved areas (Ministry of Health of the Republic of Indonesia, 2022). The distribution of the healthcare workforce significantly impacts doctors' motivation in primary healthcare settings in Indonesia. Maldistribution leads to disparities in access to healthcare services, affecting job satisfaction and retention of healthcare professionals. Unfortunately, the distribution of health workers in Indonesia is uneven, with many areas lacking essential healthcare personnel, particularly in remote regions such as Papua and Maluku (Nurcahyo *et al.*, 2020)

Data from the World Bank in 2020 indicate that Indonesia's doctor-to-population ratio stands at 0.6 per 1,000 people, below the WHO's recommended standard of 1 per 1,000 (World Bank, 2020; WHO, 2016). Moreover, disparities in the distribution of doctors at community health centers persist, with 4.97% of health centers operating without any doctors (Ministry of Health of the Republic of Indonesia, 2022). In rural settings, motivations such as family relationships and self-actualization play critical roles in physicians' decisions to remain in their positions (Handoyo *et al*., 2018)

Community health centers serve as gatekeepers in delivering both individual and public health efforts (Anita *et al*., 2016). In the era of national health insurance, doctors face numerous responsibilities, including diagnosing patients, prescribing treatments, and managing referrals (Maharanti *et al*., 2018). Beyond the availability of doctors, their performance is essential for the success of health service delivery at these centers.

Work motivation, defined as an individual's willingness to exert and sustain effort toward achieving organizational goals (Karaferis *et al*., 2022), is a key determinant of performance. The quality of health services is vital and it can be boosted by the elevated motivation among the healthcare professionals, including doctors (Chmielewska *et al*., 2020; Ankomah *et al*., 2016)

Several factors related to the motivation of work among the doctors have been identified in the previous research. (Shah *et al*., 2016; Wáng et *al*., 2015; Purohit and Bandyopadhyay, 2014). While numerous studies have explored the factors influencing doctors' work motivation globally, research specifically addressing doctors at community health centers in Indonesia remains limited. Prior research

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has yet to comprehensively examine how individual characteristics, intrinsic and extrinsic factors, as well as financial and non-financial incentives interact to shape motivation in this context. Given the disparities in doctor distribution and the essential role of community health centers in Indonesia's healthcare system, this study aims to fill this gap by analyzing the determinants of work motivation among doctors in these settings.

Method

Data Source

This study utilized data from the 2017 Indonesian Workforce Research in the Health Sector (*Riset Ketenagaan Kesehatan*/ *Risnakes*), a national health research initiative conducted by the National Institute of Health Research and Development (NIHRD), Ministry of Health of the Republic of Indonesia. This study employed a quantitative approach with a cross-sectional design.

The population included all doctors at community health centers across 34 provinces in Indonesia. A total of 9,988 respondents were included based on the following criteria: doctors working in 9,669 community health centers and having complete data. Cases with missing data were excluded.

The dependent variable, work motivation, was categorized as low or high. Work motivation was defined as the driving force that fosters enthusiasm for an individual's work, encouraging effective collaboration, integration of efforts, and the achievement of job satisfaction. This variable was adopted from Mutale et al. and constructed using 23 Likert-scale questions (scored from 1 to 5) related to doctors' motivation. The total score was calculated and grouped into two categories, namely high if the score was equal to or greater than the mean and low if the score was below the mean.

The independent variables in the study included individual characteristics (age, gender, education, marital status, position), intrinsic factors (training, continuing education), extrinsic factors (salary/wages, work area), financial incentives (performance allowances, capitation fund incentives), and non-financial incentives (official housing, vehicles).

Age was defined as the respondent's age calculated from birth until the time of this study, which was categorized into two groups, namely <40 years and ≥40 years. Gender refers to the respondent's biological sex determined through observations and interviews, and categorized as male or female. Education was defined as the highest level of education completed by the respondent by obtaining a certificate from either a public or private school and within or outside the country, which was categorized into two groups, namely bachelor's degree and higher than bachelor's degree, such as master's or doctoral degrees (Weldegebriel *et al.,* 2016). Marital status refers to the legal and social bond between a man and a woman as husband and wife to form a family (household), categorized as unmarried and married. Finally, type of position indicated an individual's duties, responsibilities, rights, and authorities in an organization and was categorized as staff or head.

Training refers to a process of teaching certain knowledge, skills, and attitudes to healthcare workers, enabling them to perform their responsibilities more effectively in accordance with established standards, which was categorized as "no" and "yes". Continuing education was defined as a process to improve technical skills, human relations, and morale of health workers in accordance with their job requirements or predetermined standards through formal and non-formal education, categorized as "no" and "yes".

Salary/wages refers to the monetary compensation paid periodically to the respondents in accordance with the work provisions or agreements, which were categorized into two groups, namely below the median (Rp3,500,000) and at/above the median (Agyepong *et al.*, 2004; Lambrou *et al*.,2010). Working area was the status of a community health center based on an official designation of its service area, categorized as "rural and remote" and "urban".

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Table 1. Characteristics of Respondents

Variable	n	Percentage (%)
Work Motivation		
Low	4,485	44.9
High	5,503	55.1
Individual Characteristics		
Age		
<40 years	6,517	65.3
≥40 years	3,471	34.7
Gender		
Female	6,749	67.6
Male	3,239	32.4
Education		
Bachelor's degree	9,094	91.1
Higher than bachelor's degree	894	8.9
Marital Status		
Unmarried	1,062	10.6
Married	8,926	89.4
Position		
Staff	8,199	82.1
Head	1,789	17.9
Extrinsic Factors		
Salary/ Wages		
Below the median (<Rp3,500,000)	4,990	50.0
At/above the median (≥Rp3,500,000)	4,998	50.0
Work Area		
Rural and Remote	5,791	58.0
Urban	4,197	42.0
Intrinsic Factors		
Training		
No	2,744	27.5
Yes	7,244	72.5
Continuing Education		
No	9,642	96.6
Yes	346	3.4
Financial Incentive Factors		
Performance Allowance		
No	6,259	62.7
Yes	3,729	37.3
Capitation Fund Incentive		
Below the median (<Rp1,700,000)	4,910	49.2
At/ above the median (≥Rp1,700,000)	5,078	50.8
Non-Financial Incentive Factors		
Official Housing		
No	7,730	77.4
Yes	2,258	22.6
Official Vehicles		
No	8,738	87.5
Yes	1,250	12.5

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Performance allowances were incentives provided by the local government to employees at community health centers based on their performance achievements, which are categorized as “no” and “yes”. Capitation fund incentives refers to an incentive provided by community health centers to their employees allocated from the Indonesian national health insurance agency, *Badan Penyelengara Jaminan Sosial Kesehatan* (BPJS Kesehatan), using predetermined calculations and were categorized into two groups, namely below the median (Rp1,700,000) and at/above the median (Essi, 2017). Official housing was defined as accommodation provided by the community health center or local government to be used by employees, categorized as “no” and “yes”. Official vehicles refer to vehicles provided by the community health center or local government to be used by employees at community health centers for operational purposes, excluding ambulances, which were categorized as “no” and “yes”.

Statistical Analysis

Data analysis was conducted in three stages: univariate, bivariate (using simple logistic regression), and multivariate (using multiple logistic regression) to identify the dominant factors. Statistical analyses were performed using SPSS 23.0.

Results and Discussion

Table 1 shows that 55.1% of doctors at community health centers in Indonesia had high work motivation. In terms of individual characteristics, most of the respondents were under 40 years old (65.3%), female (67.6%), had a bachelor's degree or were general practitioners (91.1%), were married (89.4%), and worked as staff or functional doctors at community health centers (82.1%). In terms of extrinsic and intrinsic factors, the respondents were equally distributed between those earning below the median salary of Rp3,500,000 and those at or above. Additionally, 58% of respondents worked in rural and remote areas, 72.5% had received training in their field, and only 3.4% had the opportunity to continue their education. In terms of financial and non-financial incentives, 37.3% of respondents received performance allowances in their regions. In terms of capitation fund incentives per person, 50.8% of respondents received an amount at or above the median of Rp1,700,000 per month, but only 22.6% and 12.5% of respondents were provided with official housing and vehicles, respectively.

Table 2 shows that factors associated with work motivation among doctors at community health centers in Indonesia were individual characteristics (age, education, marital status and position), intrinsic factors (training and continuing education), extrinsic factors (salary/wages and work area), financial incentive factors (performance allowances and capitation fund incentives) and non-financial incentive factors (official vehicles), with p-values of less than 0.05. Other factors such as official housing and gender were not associated with work motivation among doctors at community health centers in Indonesia (p > 0.05).

Table 2. Bivariate Analysis Results

Variable	Work Motivation				Total		p-Value	PR (95% CI)
	Low		High					
	n	%	n	%	n	%		
Individual Characteristics								
Age								
<40 Years	3,197	49.06	3,320	50.94	6,517	100	0.000	1.632 (1.499-1.777)
≥40 Years	1,288	37.11	2,183	62.89	3,471	100	Ref	

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Variable	Work Motivation				Total		p-Value	PR (95% CI)
	Low		High					
	n	%	n	%	n	%		
Gender								
Female	3,056	45.28	3,693	54.72	6,749	100	0.274	1.048 (0.962-1.141)
Male	1,429	44.12	1,810	55.88	3,239	100	Ref	
Education								
Bachelor's degree	4,161	45.76	4,993	54.24	9,049	100	0.000	1.484 (1.284-1.716)
Higher than bachelor's degree	324	36.24	570	63.76	894	100	Ref	
Marital Status								
Unmarried	521	49.06	541	50.94	1,062	100	0.004	1.205 (1.059-1.372)
Married	3,964	44.41	4,962	55.59	8,926	100	Ref	
Position								
Staff	3,944	48.10	4,255	51.90	8,199	100	0.000	2.138 (1.913-2.390)
Head	541	30.24	1,248	69.76	1,789	100	Ref	
Extrinsic Factors								
Salary/Wages								
Below the median (<Rp3,500,000)	2,488	49.86	2,502	50.14	4,990	100	0.000	1.494 (1.379-1.619)
At/above the median (≥Rp3,500,000)	1,997	39.96	3,001	60.04	4,998	100	Ref	
Work Area								
Rural and remote	2,651	45.78	3,140	54.22	5,791	100	0.039	1.087 (1.003-1.179)
Urban	1,834	43.70	2,363	56.30	4,197	100	Ref	
Intrinsic Factors								
Training								
No	1,305	47.56	1,439	52.44	2,744	100	0.001	1.159 (1.060-1.267)
Yes	3,180	43.90	4,064	56.10	7,244	100	Ref	
Continuing Education								
No	4,360	45.22	5,282	54.78	9,642	100	0.001	1.459 (1.162-1.838)
Yes	125	36.13	221	63.87	346	100	Ref	
Financial Incentive Factors								
Performance Allowance								
No	2,862	45.73	3,397	54.27	6,259	100	0.032	1.093 (1.007-1.187)
Yes	1,623	43.52	2,106	5648	3,729	100		
Capitation Fund Incentive								
Below the median (<Rp1,700,000)	2,358	48.02	2,552	51.98	4,910	100	0.000	1.282 (1.183-1.388)
At/above the median (≥Rp1,700,000)	2,127	41.89	2,951	58.11	5,078	100		

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Variable	Work Motivation				Total		p-Value	PR (95% CI)
	Low		High					
	n	%	n	%	n	%		
Non-Financial Incentive Factors								
Official Housing								
No	3,478	44.99	4,252	55.01	7,730	100	0.739	1.016 (0.923-1.118)
Yes	1,007	44.60	1,251	55.40	2,258	100	Ref	
Official Vehicles								
No	3,985	45.61	4,753	54.39	8,738	100	0.000	1.258 (1.113-1.422)
Yes	500	40	750	60	1,250	100	Ref	

Table 3. Multivariate Analysis Results

Variable	p-Value	PR (95% CI)
Age		
<40 Years	0.000	1.276 (1.160-1.405)
≥40 Years	Ref	
Education		
Bachelor's degree	0.039	1.170 (1.008-1.356)
Higher than bachelor's degree	Ref	
Position		
Staff	0.000	1.805 (1.608-2.028)
Head	Ref	
Salary/Wages		
Below the median (<Rp3,500,000)	0.000	1.233 (1.131-1.346)
At/above the median (≥Rp3,500,000)	Ref	

Table 3 shows that the type of position was the most influential compared to other factors, as evidenced by the highest adjusted prevalence ratio (PR) of 1.805 (1.608-2.028). This indicates that respondents in staff positions were 1.8 times more likely to have low work motivation compared to those in head positions, with a CI range between 1.608 and 2.028 after controlling for age, education, and salary/wages.

Discussion

The purpose of this study was to analyze the determining factors of work motivation among the doctors at community health centers in Indonesia. The levels of the position became as the most influencing factor for the work motivation at community health centers in Indonesia. Specifically, it was counted that respondents in staff positions were 1.8 times more likely to have low work motivation than those in head positions. Based on the previous study, doctors at the managerial level were motivated by the financial remuneration in accordance with their positions and the responsibility they bear (Kaoje *et al*., 2019). The appreciation and respect received for certain positions is the cause of each person motivation. (Ibeziako *et al*., 2013). As a result, respect is earned more by the higher position such as the head of a community health center from both staff and community which can evolve the higher motivation level.

In Indonesia, individual characteristics such as education, age, and marital status are also the factors that associate with the work motivation of doctors at community health centers in Indonesia. It is found in the study that respondents below 40 years

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old were 1.6 more likely to have lower work motivation compared to above 40 years old. This finding is align with a research in Ethiopia which found that age as a strong factor of motivation among health workers (Weldegebriel *et al*., 2016). Another study found that older health works had high work motivation compared to the younger ones (Mutale *et al*., 2013). This can cause by the intrinsic factors such as rewards and recognition that made older health workers to be motivated more rewards and recognition (Ankomah *et al*., 2016). Intrinsic factors act as determinants of an individual's motivation, as motivation is inherently personal and shaped by their perceptions and mindset related to work (Nyambegera and Gicheru, 2016).

In terms of education, the results of this study showed that doctors with a bachelor's degree were 1.4 times more likely to have lower work motivation than those with education higher than a bachelor's degree. It was also indicated in the previous study that one influencing factor of work motivation was educational status, higher education level creates higher work motivation levels (Xu *et al*., 2022). Research in Nepal further suggested that the higher the education level of health workers, the higher their motivation (Ghimire *et al*., 2013). It can be drawn that motivation factors differ at each level of education. Health professionals who have completed higher education tend to get higher scores for recognition, reputation, and awards as well as greater responsibilities, promotions, and better salaries than those with lower education levels. These factors can absolutely influence their work motivation (Karaferis *et al*., 2022).

In terms of marital status, the results of this study found that unmarried respondents were 1.2 times more likely to have lower work motivation than married respondents. This finding is aligned with a study by Sato *et al*. (2017) which informed that marital status was associated with the motivation of health workers in primary health facilities in Tanzania. In contrast, a research in Pakistan indicated that doctors who are married, especially women, were having low motivation compared to those who are still single or not in marriage relationship (Shah *et al*., 2016). This probably happened because unmarried doctors tend to be more focused on career development and achievement, which can bring to higher work motivation. On the other hand, married health workers generally enjoy their earnings more compared to unmarried one (Daneshkohan *et al*., 2015).

Other intrinsic factors such as joining the training and continuing the education also became the factors that affected the work motivation. The results of this study found that respondents who had zero training were 1.1 times more likely to have lower work motivation than those who had attended training. This finding is aligned with other studies which discovered training as one of the factors influencing the motivation of health workers (Sarriot *et al*., 2021; Tuoi *et al*., 2023). Another study also informed that less information and access to training program could also affect the work motivation among health workers (Okafor *et al*., 2022). Furthermore, there were significant number for intrinsic factors such as training and continuing education in one research in Kenya. The opportunities to join and attend the trainings were found to give positive impact to work motivation as well, underlining the regular capacity-building initiatives (Momanyi *et al*., 2016). Hence, providing training and ensuring it is held more regularly for health workers, including doctors at community health centers, serves as an effective approach to increase their motivation and performance.

In regards of continuing education factor, the results of this study indicated that respondents who were showered with opportunities for further education were 1.4 times more likely to have higher work motivation compared to those who did not receive such opportunities. A study found that 61% of respondents were not received enough opportunities for learning and development, which resulted into dissatisfaction and reduced work motivation (Ankomah *et al*., 2016). In addition, providing continuing education opportunities has been shown to boost motivation and service quality (Ojakaa *et al*., 2014). Therefore, it can be concluded

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that opportunities for continuing education have a positive effect on doctors' work motivation.

In this study, the dominant factor influencing the work motivation was found in the type of position. As explained, doctors who are in managerial position will likely to have more work motivation. This may be due to the increased autonomy, authority in decision-making, and professional acknowledgment that come with leadership positions, which correspond to Herzberg's motivation-hygiene theory, where responsibility and accomplishment act as intrinsic motivators. (Kaoje *et al*., 2019; Ibeziako *et al*., 2013; Herzberg *et al*., 1959)

Similarly, financial incentives, such as performance allowances and capitation fund incentives, positively impacted motivation, likely due to their direct effect on job satisfaction and economic security. According to expectancy theory, when doctors perceive a clear link between performance and rewards, they are more likely to exert effort in their roles. However, inconsistencies or delays in financial incentives could lead to demotivation, as highlighted in previous studies on health worker retention (Kaoje *et al*., 2019; Wang *et al*., 2022; Essi, 2017; Chimwaza *et al*., 2014).

The lower motivation that is found among doctors in rural and remote areas can be explained by workload disparities, resource limitations, and professional isolation. Inadequate infrastructure, career growth opportunities, and social support made it hard for doctors to keep their long-term motivation. This is aligned with self-determination theory, which emphasizes that a lack of autonomy and relatedness can reduce intrinsic motivation (Noya *et al*., 2022; Laksono *et al*., 2019; Grujičić *et al*., 2016; Deci and Ryan, 1985).

Work motivation of doctors at community health centers was also influenced by extrinsic factors such as work area and salary. The results of this study found that higher salaries create higher motivation, which explained that respondents who were paid below the median of Rp3,500,000 were 1.4 times more likely to have lower work motivation than those paid at or above Rp3,500,000. Another study proved that the higher salaries would influence the motivation of work with highlighting the importance of fair and timely compensation (Afolabi *et al*., 2018). Conversely, some factors such as low salaries, late salary payments, delayed salary increases, or inconsistencies in allowances can demotivate health workers and contribute to their departure from healthcare facilities (Chimwaza *et al*., 2014). Therefore, salaries under the provisionsare important to emerge the work motivation of doctors at community health centers in Indonesia.

According to the results of this study, concerning the work area, the motivation was 1.0 times lower among workers in remote and rural areas compared to those in urban area. This was more explained in the further research saying that doctors in urban areas have higher motivation levels, which indicated the disparities in resources and working conditions between urban and rural area (Grujičić *et al*., 2016). Rural areas, despite having the most urgent health needs, experience the greatest shortage of health workers (WHO, 2016). In Indonesia, a big gap between urban and rural areas is shown by the inequality of health workers distribution and differences in geographic or areas which makes it difficult to staff the health centers (Laksono *et al*., 2019). It creates the low motivation among doctors in rural compared to those in urban areas. Another study indicated that work area, work environment, regional leadership, additional incentives, and management are becoming motivational factors that influence doctors' intentions to serve in rural areas (Noya *et al*., 2022). Therefore, attention from the government is needed to increase the work motivation among doctors in rural and remote areas in Indonesia.

The work motivation is highly influenced by the financial incentives, such as performance allowances and capitation fund incentives. Transparent and equitable incentive systems are vital for sustaining motivation (Wang *et al*., 2022). The results of this study found that respondents who did not receive a monthly performance allowance were 1.0 times more likely to

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have lower work motivation than those who did. Likewise, The provision of performance allowances and remuneration given to medical personnel was an influencing factor for motivation after achieving certain milestones based on a study in Nigeria (Kaoje *et al*., 2019). Another study has also shown that inconsistency in benefits could demotivate health workers (Chimwaza *et al*., 2014). Performance allowances are designed to reward discipline and work performance in carrying out the duties and functions of doctors at community health centers. Therefore, it is necessary to provide performance allowances that are fair and in accordance with workload and clear regulations, as an effort to increase work motivation among doctors will ultimately affect the quality of health services at community health centers.

Capitation fund incentives are provided by community health centers to their employees, sourced from the capitation fund allocated by the Indonesian national health insurance agency (*Badan Penyelengara Jaminan Sosial Kesehatan*/ BPJS Kesehatan). In Indonesia, the distribution of BPJS Kesehatan capitation funds at community health centers is regulated based on the Regulation of the Minister of Health Number 21 of 2016, which stipulates that at least 60% of the funds must be allocated for services to employees at community health centers, while 40% is allocated to support operational costs associated with providing services. The amount of capitation funds received by employees is calculated based on position, education, length of service, and attendance level, resulting in varied amounts received by each employee (Ministry of Health the Republic of Indonesia, 2016). The results of this study showed that respondents receiving monthly capitation fund incentives below the median of Rp1,700,000 were 1.2 times more likely to have lower work motivation than those receiving monthly capitation fund incentives at or above the median. Therefore, it can be concluded that the amount of capitation fund incentives influences the work motivation of doctors at community health centers in Indonesia. Hence, providing appropriate capitation fund incentives is crucial for increasing their work motivation.

Another factor influencing the work motivation of doctors at community health centers is non-financial incentives (official vehicles). The results of this study showed that respondents who did not receive official vehicle facilities were 1.2 times more likely to have lower work motivation than those who received such facilities. There were 74% of respondents voted for non-financial motivator being an important aspect such as staff accommodation based on one research in Ghana. In another study, the health workers are grouped into the younger age, were found to have a high motivation by the allocation of accommodation, which becomes the main motivator for retaining and attracting them to work (Ankomah *et al*., 2016). Meanwhile, non-financial incentives, such as official vehicles became pivotal in remote and rural areas where vivid logistical challenges are perceived (Dagne *et al*., 2015). In conclusion, the financial incentives, such as the providing of official vehicles, are an important and motivated factor in health centers. As such, offering official vehicles at these centers may become an effective approach to increase doctors' motivation..

Limitation

The secondary data from the 2017 Indonesian Workforce Research in the Health Sector was taken for this study which caused the less of additional relevant variables or latest trends in the work motivation among health workers. Besides, causal relationships between the identified determinants and work motivation were limited to be analyzed due to the used of the cross-sectional design. The findings may also be influenced by unmeasured confounding factors or the potential biases resulting from the use of self-reported variables. To gain a more comprehensive understanding of the motivations and challenges experienced by doctors at community health centers, future research could integrate quantitative data with qualitative approaches, such as interviews or focus group discussions. Additionally, longitudinal studies are needed to assess changes in work motivation over time and

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establish causal relationships between identified determinants and motivation levels, addressing the limitations of cross-sectional designs.

Conclusion

Work motivation among doctors at community health centers in Indonesia is influenced by individual characteristics, intrinsic and extrinsic factors, as well as financial and non-financial incentives. Position emerged as the most influential factor, with managerial roles significantly boosting motivation. To enhance doctors' motivation and improve healthcare services, policymakers should implement structured career development programs, ensuring clear pathways for promotion and leadership opportunities. Additionally, expanding training and continuing education will enhance professional growth and intrinsic motivation. Financial incentives, including equitable salary structures and performance-based allowances, should be optimized to ensure fair compensation.

Abbreviations

PR: Prevalence ratio; SDGs: Sustainable Development Goals; WHO: World Health Organization; NIHRD: National Institute of Health Research and Development; BPJS *Kesehatan*: *Badan Penyelengara Jaminan Sosial Kesehatan* (Indonesian National Health Insurance Agency)

Declarations

Ethics Approval and Consent Participant

This study received ethical approval from the Health Research Ethics Committee, Faculty of Public Health, Sriwijaya University, under a certificate number 365/UN9.1.10/KKE/2019.

Conflict of Interest

The authors have no conflict of interest to declare.

Availability of Data and Materials

Not applicable.

Authors' Contribution

R, FF, and HI conceptualized the study, collected, analyzed, and interpreted the data, drafted the original article, and conducted the review and editing processes. R prepared the initial manuscript, while FF and HI reviewed it. All authors approved the final version of the manuscript.

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