

Review Article

# Healthcare Providers' Motivation Status and Its Associated Factors in Ethiopia: Systematic Review and Meta-analysis

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## ABSTRACT

Strong work motivation plays a vital role in retaining healthcare providers, ensuring the provision of quality health services, and improving patient outcomes. To effectively motivate healthcare professionals, it is necessary for health sectors and other stakeholders to evaluate the overall motivation of health workers and the factors that contribute to it. Therefore, this systematic review and meta-analysis aimed to investigate the overall levels of work motivation amongst healthcare providers in Ethiopia and the factors associated with it. This review only included articles that were published in English. The main databases included Medline/PubMed, Web of Science, Google Scholar, EMBASE and CINAHL, Scopus, Ethiopian University Repository Online, and Cochrane Library. The review included cross-sectional studies and met the inclusion criteria. The overall health workers' motivational level was assessed using a random effects model. Furthermore, publication bias was evaluated using funnel plots and Egger's test. STATA 14 was used for conducting all statistical analyses. Meta-analysis was done to identify factors that affected healthcare providers' work motivation. This review analysed 16 studies that included 5,650 participants. It was found that 47.29% (95% confidence interval [39.74; 54.83]; I<sup>2</sup> = 97.30%, P < 0.001) of healthcare providers were motivated by their work. Factors influencing motivation included supervision, resource provision, career development opportunities, experience, educational qualifications, and job satisfaction. In addition, subgroup analysis revealed that the Sidama region had the highest level of work motivation at 64%, while the Southern Ethiopia region reported the lowest level at 19.5%. Overall, only 47% of the participants reported feeling motivated in their work. As a result, national and regional governments, as well as other relevant stakeholders, must take swift action to boost the motivation of healthcare providers and tackle the factors that have been identified.

**Keywords:** Ethiopia, Healthcare providers, Meta-analysis, Systematic review, Work motivation

## INTRODUCTION

Motivation is defined as the level of an individual's willingness to engage in effective and efficient work to achieve both personal and organisational goals. It involves the emotional responses and processes through which individuals react to various stimuli presented by their environment, which challenge them to enhance their performance and become positively energised.<sup>1,2</sup> Motivation can be categorised into two types: Intrinsic and extrinsic. Intrinsic motivation is an internal driving force, particularly relevant in healthcare settings, where it is understood as the pleasure and self-fulfilment derived from performing one's duties, motivated by personal interest rather than external rewards or social pressure. In contrast, extrinsic motivation is influenced by external factors that encourage individuals to meet expected standards through external enforcement or directives, often in exchange for tangible rewards.<sup>2,3</sup>

The motivation of healthcare professionals plays a crucial role in enhancing their performance and adapting their work

behaviours to meet patient needs and workplace demands. To ensure the delivery of high-quality services, motivated staff members are vital to the overall effectiveness of the healthcare system.<sup>3,4</sup> Motivation affects an individual's choice to enter a profession, the level of effort they invest in their work, and their commitment to staying in that profession. In particular, workforce motivation is a key factor influencing performance, especially for those operating under challenging conditions, such as many healthcare workers in low- and middle-income countries.<sup>5,6</sup> Motivated healthcare providers are more likely to be present, responsive to patient needs and capable of delivering superior care. The relationship between motivation and health workforce performance is complex, as motivation can be shaped by various factors, including the work environment, job responsibilities, support systems and governance structures. Ultimately, motivation significantly impacts health worker effort, retention and the quality of care provided.<sup>5-7</sup>

The lack of motivation amongst healthcare professionals can have harmful effects on individuals, institutions and

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the healthcare system as a whole.<sup>8,9</sup> Motivation plays a vital role in the effective functioning of organisations; without it, employees are unlikely to perform at their best, leading to decreased organisational efficiency.<sup>10</sup> A significant factor contributing to the decline in healthcare service quality and patient experience is the low motivation of healthcare workers. This can manifest in various ways, including extended waiting times, increased rates of nonattendance, dissatisfaction, neglect in performing necessary patient assessments, rudeness towards clients, staff weakness, absenteeism, inefficiency, burnout amongst providers, elevated turnover rates, lower engagement levels and decreased productivity. Furthermore, it may result in unofficial fees, inadequate knowledge application, poor performance and unfavourable clinical outcomes.<sup>11-15</sup>

In recent years, there has been a marked enhancement in the motivation of professionals, particularly in developed countries, due to diverse efforts; however, this issue persists in many countries.<sup>16,17</sup> On a global scale, low motivation amongst health professionals has emerged as the second most significant problem confronting health workers.<sup>9</sup> Statistical data from the UK indicated that in each year, over \$450 billion in losses are recorded due to having unmotivated employees. When employees do not share a company's mission, vision and are demotivated, they are neither inspired to innovate nor likely to perform effectively.<sup>18</sup>

The African region is currently facing a dual challenge of a high disease burden and a critically low density of healthcare workers,<sup>11</sup> many of whom are demotivated.<sup>19</sup> In developing countries, low motivation amongst staff and shortages in the workforce can critically hinder healthcare systems, adversely affecting their performance. Ethiopia, as a developing country with the second-largest population in Africa, is especially at risk of facing these challenges.<sup>17,20</sup> Healthcare organisations fundamentally require a skilled and motivated workforce that can adapt to the swift progress in medical technology and the rising demand for improved service quality. The quality, efficiency and effectiveness of health services are contingent upon the availability of motivated healthcare providers, particularly in resource-poor countries.<sup>21</sup> The motivation levels of healthcare professionals differ across the globe, with figures showing 15% worldwide,<sup>18</sup> 33% in the USA,<sup>18</sup> 8% in the UK,<sup>18</sup> 60–74% in Zambia,<sup>4</sup> 58.7% in West Amhara,<sup>17</sup> 25% in Oromia,<sup>22</sup> and 54.8% in Gedeo.<sup>10</sup>

The need for a motivated workforce is a common goal amongst organisations; this is why motivation is crucial for their survival. For healthcare service providers to operate effectively and achieve success, it is essential for both workers and managers to understand the factors that contribute to motivation, both in general and specifically for each individual employee.<sup>17,20,21</sup> Existing literature suggests that the motivation of healthcare providers is influenced by several

factors, including effective leadership practices, support from supervisors, opportunities for career development, financial aspects, educational development and the infrastructure of health facilities.<sup>11,17,23</sup> Furthermore, motivation theories identify intrinsic factors, such as recognition, the nature of the work, educational background, marital status, years of service, responsibilities and promotions as well as extrinsic factors such as organisational policies, interpersonal relationships with peers, subordinates and supervisors, working conditions, compensation, status and job security, all of which play a significant role in motivating the healthcare workforce.<sup>10,24,25</sup>

Evaluating the prevalence and contributing factors of work motivation amongst healthcare providers in Ethiopia are essential for enhancing healthcare services. To effectively boost the work motivation of healthcare professionals, it is imperative to conduct a systematic review, as the results and conclusions drawn from individual studies may lack consistency and conclusiveness. The formulation of policies and the development of strategies for the healthcare system heavily rely on insights gained from systematic reviews and meta-analyses. This approach is vital for improving the quality of health services and reducing patient mortality and disabilities. Consequently, this review aimed to address two primary questions: (1) What is the level of work motivation amongst healthcare providers in Ethiopia? (2) What factors are associated with the work motivation of healthcare providers in Ethiopia?

## MATERIAL AND METHODS

### Search strategy

Databases such as Medline/PubMed, Web of Science, Google Scholar, Scopus, EMBASE and CINAHL, Ethiopian University Online Repository and Cochrane Library were used to search for studies between April 18 and March 18, 2025. We checked the database at (<http://www.library.ucsf.edu>) and the Cochrane Library to ensure that this study was not conducted and to avoid duplication of effort. PROSPERO has also registered this review under registration number CRD420251012031. After confirming that no similar studies had previously been conducted in Ethiopia, a comprehensive search strategy was developed using several Boolean operators for the questions on Exposure and Standard Population Outcomes.

The words 'or' and 'and' are used to combine search terms. The terms 'work motivation' or 'job motivation' AND 'healthcare provider' OR 'health professional' OR 'midwife' OR 'doctor' OR 'nurse' AND Ethiopia were searched using Boolean operators [Table 1]. Those articles met the inclusion criteria in terms of title and abstract, having been read in full. Three authors (TG, EE and TA) carried out the search strategy. All articles retrieved from the database were checked for title and abstract before exporting to the

EndNote library. Those articles met the inclusion criteria in terms of title and abstract fully read. Three authors (TG, EE and TA) applied the search strategy. We strictly followed the Preferred Reporting Items for the Systematic Reviews and Meta-Analyses (PRISMA) guidelines to estimate the general status of healthcare providers' work motivation and associated factors in Ethiopia.

### Eligibility criteria

#### Inclusion and exclusion criteria

The articles included in this review assessed the level of healthcare providers' work motivation and associated factors in Ethiopia. This review included studies conducted using a cross-sectional design and published in English. It also included all healthcare providers or participants from Ethiopia. It also included studies from 2015 to 2025. We excluded studies that did not address the level of healthcare providers' work motivation in Ethiopia. In this review, the studies conducted in a cross-sectional study design and published in English were included. This review excluded case-control, case studies, qualitative and case series study designs.

### Data extraction

PRISMA was used to screen and guide the selection of articles for this review. The parameters used to extract data included the authors, the year of publication and the study area, the sample size for each study, the population of the study, the design of the study and the results. Using Microsoft Excel spreadsheets, we collected the required data from accepted articles. The four authors (TG, TB, TA and EE) extracted the information independently of the other documents. The study that met the inclusion criteria was included after detailed agreement and discussion on data extraction and is summarised in Table 2.

### Outcome variable measures

The operational definition of the outcome variable under review aligns with findings from prior research. Motivation refers to the willingness to exert high levels of effort towards organisational goals. Numerous studies have indicated that healthcare providers' work motivation is good or motivated if the mean motivational score is greater than or equal to the mean score of the study participants. Moreover, poor or unmotivated if the mean motivational score is less than the mean score of the participants.<sup>22,26-30</sup>

**Table 1:** Example of searches for the scientific databases and grey literature on healthcare provider's work motivation status and its associated factors in Ethiopia.

Databases	Searching terms	Date and time search was done	Number of studies identified
PubMed	('health personnel'[MeSH Terms] OR ('health'[All Fields] AND 'personnel'[All Fields]) OR 'health personnel'[All Fields] OR ('healthcare'[All Fields] AND 'providers'[All Fields]) OR 'healthcare providers'[All Fields]) AND ('work'[MeSH Terms] OR 'work'[All Fields]) AND ('motivation'[MeSH Terms] OR 'motivation'[All Fields]) AND status [All Fields] AND associated[All Fields] AND factors[All Fields] AND ('ethiopia'[MeSH Terms] OR 'ethiopia'[All Fields])	April 15–March 15, 2025, at 8:00–11:00 AM	4066
EMBASE and CINAHL	(*health personnel* OR *healthcare providers*) [ti, ab, kw] AND (*determinants* OR *associated* OR influencing factors) [ti, ab, kw] AND (work motivation or job motivation) AND ('Ethiopia'[ti, ab, kw])	April 15–March 15, 2025 8:00–11:00 AM	2031
Scopus	(Title-ABS-KEY) (*health personnel*, OR *healthcare providers*) AND (*work motivation* OR (*job motivation*)) AND (*associated factors* or *influencing factors*) AND (*nurse* OR *midwife* OR *doctors*) AND (*Ethiopia*)	April 15–March 15, 2025, at 8:00–11:00 AM	112
Web of Science	(Title-ABS-KEY) (*job motivation*) AND (*work motivation* OR (*health personnel*)) AND (*associated factors* or *influencing factors*) AND (*nurse* OR *midwife* OR *doctors*) AND (*Ethiopia*)	April 15–March 15, 2025 at 8:00–11:00 AM	98
Records identified through other source	Grey literature (Ethiopian University Repository and Google Scholar)	April 15–March 15, 2025 at 8:00–11:00 AM	76
Total retrieved articles	-	April 15–March 15, 2025	6,383
Number of included studies	-	April 15–March 15, 2025	16

**Table 2:** Critical appraisal results of eligible studies for the healthcare providers' work motivation status and its associated factors in Ethiopia: Systematic review and meta-analysis, 2025 (n=15).

Authors	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Total
Abate <i>et al.</i> <sup>39</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
Haso <sup>32</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
Dagne <i>et al.</i> <sup>37</sup>	Y	N	Y	N	Y	Y	Y	Y	Y	7
Bayisa <i>et al.</i> <sup>27</sup>	Y	Y	N	Y	Y	Y	Y	Y	Y	8
Legesse <i>et al.</i> <sup>22</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
Berhanu <i>et al.</i> <sup>10</sup>	N	Y	Y	Y	Y	Y	Y	Y	Y	8
Legesse <i>et al.</i> <sup>26</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
Tesfa <i>et al.</i> <sup>33</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
Zemichael <i>et al.</i> <sup>14</sup>	Y	U	Y	Y	Y	N	Y	Y	Y	8
Yared <i>et al.</i> <sup>29</sup>	Y	U	Y	Y	Y	Y	Y	Y	Y	8
Gerawork <sup>35</sup>	Y	N	Y	Y	Y	Y	Y	Y	Y	8
Wagaye <i>et al.</i> <sup>34</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
Deressa and Zeru <sup>38</sup>	Y	Y	Y	Y	Y	N	Y	Y	Y	8
Belete <i>et al.</i> <sup>28</sup>	Y	U	Y	Y	Y	N	Y	Y	Y	8
Tegegne <i>et al.</i> <sup>36</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
Tiruneh <i>et al.</i> <sup>30</sup>	Y	Y	Y	Y	Y	N	Y	Y	Y	8

Y: Yes, N: No, U: Unclear, JBI: Joanna briggs institutes. JBI critical appraisal checklist for studies reporting prevalence data: Q1: Was the sample frame appropriate to address the target population? Q2: Were study participants sampled appropriately? Q3: Was the sample size adequate? Q4: Were the study subjects and the setting described in detail? Q5: Was the data analysis conducted with sufficient coverage of the identified sample? Q6: Were the valid methods used for the identification of the condition? Q7: Was the condition measured in a standard, reliable way for all participants? Q8: Was there an appropriate statistical analysis? Q9: Was the response rate adequate, and if not, was the low response rate managed appropriately?

### Assessment of risk of bias and quality

The Joanna Briggs Institute Review Meta-analysis and Statistical Evaluation Tool was used to evaluate the study's quality. Joana evaluated the studies and abstracts of the articles to determine whether they should be included or not. The quality of the articles was assessed before they were selected for the final review. Cross-sectional studies were assessed based on the adequacy of the source population, sample size, data collection method, data collection tools, statistical analysis and response rate and were scored on a 1–9-point scale. Three authors (TG, EE and TB) carried out this process. The quality scores were categorised into three groups: Low quality – 1–4, moderate quality – 5–6 and high quality – 7–9 (low risk of bias).<sup>31</sup> Quality assessment indicator scores of 7 or higher were considered low risk in this review [Table 2].

### Data processing and analysis

A Microsoft Excel spreadsheet was used to extract the data, and STATA version 14 was used to analyse the data. Using random-effect model analysis, the pooled prevalence of healthcare providers' work motivation in Ethiopia was calculated. Publishing bias was assessed using a funnel

plot and visual analysis. The heterogeneity of the study was tested using Cochrane Q-Static and I2. The general status of work motivation in regions was compared with an estimated prevalence using a subgroup analysis. A Forest plot with a 95% confidence interval was used to show a pooled status. Meta-analysis was conducted to assess the significant association between motivation and its associated factors. A variable with  $P < 0.005$  was considered significant for work motivation.

## RESULTS

### Identification and characteristics of included studies

Between April 18 and March 18, 2025, 6383 articles were identified in major electronic databases and other relevant sources. Of these identified articles, 129 articles were removed due to duplication, leaving 6254 articles for further review. 5661 studies were excluded because the abstract and title did not meet the requirements. Of the remaining 587 articles, 571 studies were excluded due to inconsistency with the inclusion criteria established for this study. Finally, 16 studies that met the eligibility criteria were included in this study [Figure 1].

A total of 16 articles with 5650 participants were included in this systematic review and meta-analysis. The sample size distribution ranged between 217<sup>32</sup> and 624.<sup>33</sup> Regarding

the regional distribution of the included studies, 2 in Addis Ababa,<sup>34,35</sup> 5 in the Amhara region,<sup>14,26,29,33,36</sup> 4 in the Oromia Region,<sup>27,32,33,37</sup> one in the Sidama region,<sup>38</sup> Central Ethiopia,<sup>4,30</sup> Southern Ethiopia,<sup>10</sup> and four regions.<sup>39</sup> [Table 3].

### The prevalence of work motivation amongst healthcare providers in Ethiopia

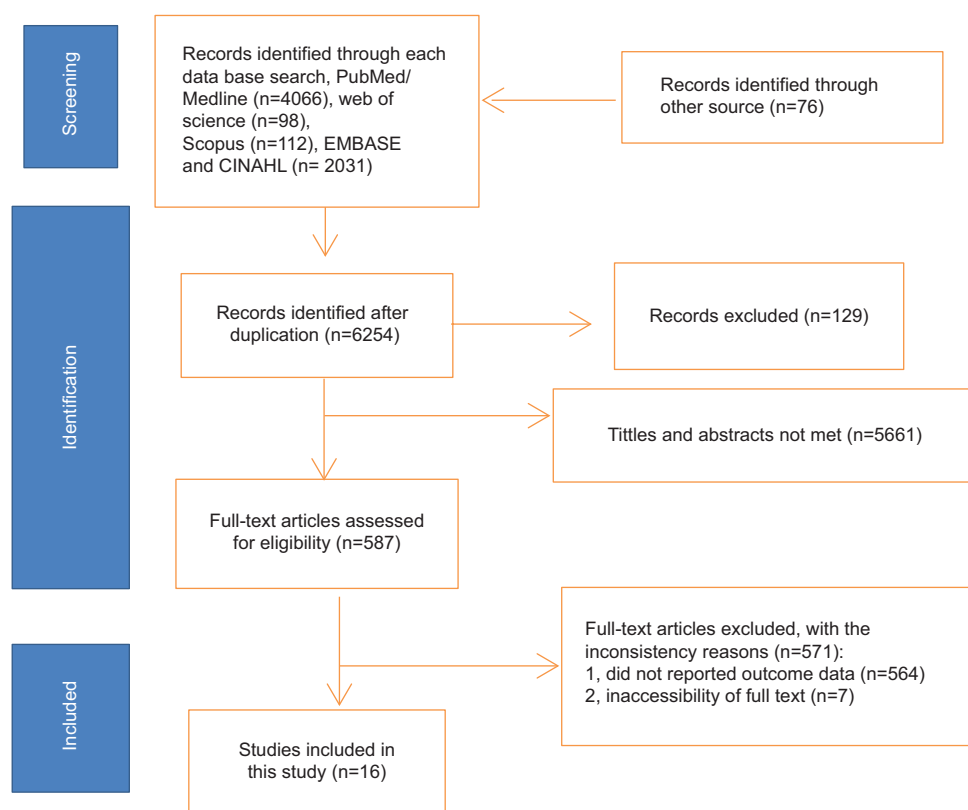
According to this study, the prevalence of work motivation amongst healthcare providers towards healthcare services in Ethiopia ranged from 19.50% (95% CI 14.96, 24.04)<sup>10</sup> to 64.10% (95% CI 57.75, 70.44).<sup>36</sup> The overall prevalence of work motivation amongst healthcare workers in Ethiopia was 47.29% (95% CI [39.74; 54.83];  $I^2 = 97.30\%$ ,  $P < 0.001$ ) [Figure 2].

### Subgroup analysis of the work motivation of healthcare providers in Ethiopia

After confirming the study heterogeneity, a subgroup analysis of the work motivation of healthcare providers in each region revealed that the Sidama region had the highest prevalence of work motivation with a score of 4.10% (95% CI: 57.75, 70.44), followed by a single done in four regions with 61% (95% CI: 56.20, 65.80). The Southern Ethiopia region had the lowest value, at 19.50% (95% CI 14.96, 24.04) [Figure 3].

### Heterogeneity and publication bias

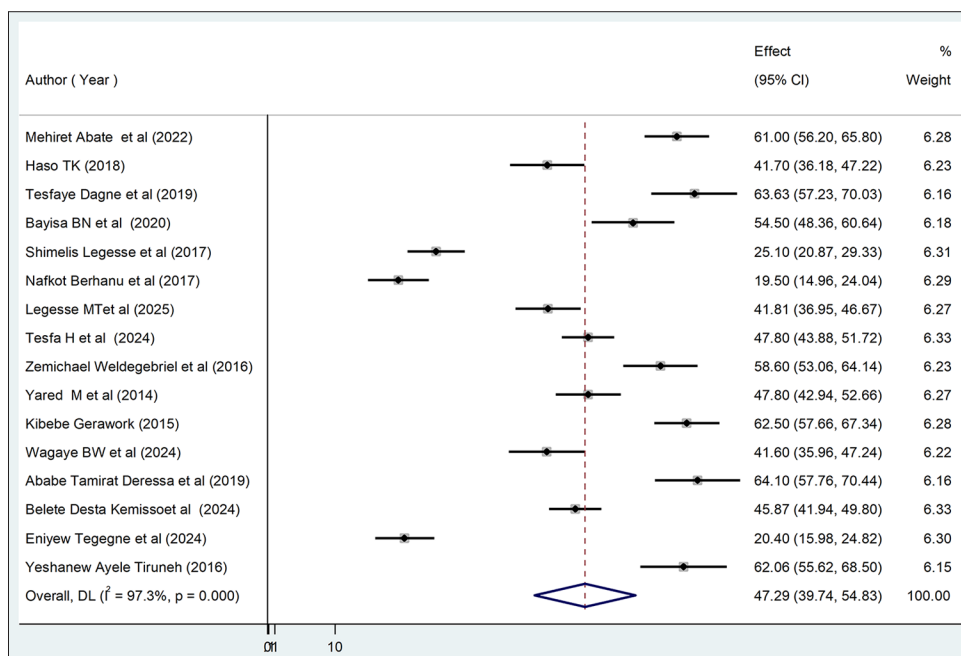
High heterogeneity in a meta-analysis significantly weakens the reliability of a pooled prevalence estimate, potentially making it inaccurate and unrepresentative of the individual study outcomes. This occurs because high heterogeneity indicates substantial differences between the studies included, suggesting that they are not measuring the same underlying phenomenon consistently. Possible reasons for high heterogeneity include variations in study populations, interventions, methodologies or measurement tools. The value of  $I^2$  indicates the heterogeneity level of the study.  $I^2$  test results below 50%, 50–75% and above 75% were considered to indicate low, moderate and high statistical heterogeneity, respectively. To minimise and control the heterogeneity of the study, we conducted subgroup analyses by region and used a random effect model. The results of the  $I^2$  test show that there was significant heterogeneity between the studies included pertaining to providers' work motivation level ( $I^2 = 97.3\%$ ,  $P < 0.001$ ). The publication bias of studies on the providers' work motivation was checked with Egger's test and visual inspection of a funnel plot. The results of the funnel diagram showed that the selected studies had a symmetric distribution after inspection [Figure 4] and the Eggers test ( $P = 0.122$ ) [Figure 5]. A significant intercept (intercept with  $P < 0.05$ , i.e., statistically significant) indicates



**Figure 1:** PRISMA Flow diagram of study selection for the healthcare providers work motivation status and its associated factors in Ethiopia: systematic review and meta-analysis, 2025 ( $n = 16$ ).

**Table 3:** Study characteristics included in the systematic review, the healthcare providers' work motivation status and its associated factors in Ethiopia: systematic review and meta-analysis, 2025( $n=16$ ).

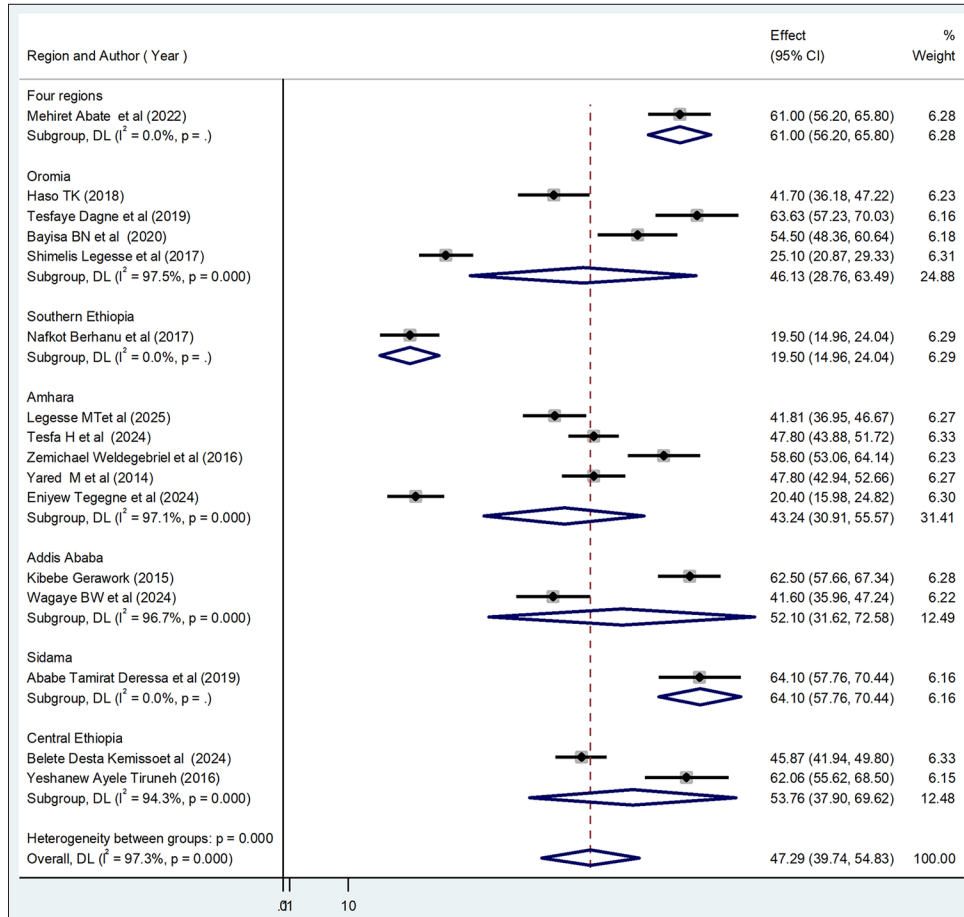
Author	Year	Region	Study area	Study design	Sample	Proportion	Participants
Abate <i>et al.</i> <sup>39</sup>	2022	Four regions	Oromia, Amhara, Tigray, south)	Cross-sectional	397	61	Healthcare providers
Haso <sup>32</sup>	2018	Oromia	West Arsi Zone	Cross-sectional	307	41.7	Healthcare providers
Dagne <i>et al.</i> <sup>37</sup>	2019	Oromia	West Shoa Zone	Cross-sectional	217	63.63	Healthcare providers
Bayisa <i>et al.</i> <sup>27</sup>	2020	Oromia	Jimma Town	Cross-sectional	253	54.5	Healthcare providers
Legesse <i>et al.</i> <sup>22</sup>	2017	Oromia	Jimma University	Cross-sectional	403	25.1	Healthcare providers
Berhanu <i>et al.</i> <sup>10</sup>	2017	Southern Ethiopia	Gedeo Zone	Cross-sectional	292	19.5	Healthcare providers
Legesse <i>et al.</i> <sup>26</sup>	2025	Amhara	Gondar zone	Cross-sectional	396	41.81	Healthcare providers
Tesfa <i>et al.</i> <sup>33</sup>	2024	Amhara	Bahirdar	Cross-sectional	624	47.8	Healthcare providers
Weldegebriel <i>et al.</i> <sup>14</sup>	2016	Amhara	West Amhara	Cross-sectional	304	58.6	Healthcare providers
Yared <i>et al.</i> <sup>29</sup>	2014	Amhara	South Godar	Cross-sectional	406	47.8	Healthcare providers
Gerawork <sup>35</sup>	2015	Addis Ababa	Addis Ababa	Cross-sectional	384	62.5	Healthcare providers
Wagaye <i>et al.</i> <sup>34</sup>	2024	Addis Ababa	Addis Ababa	Cross-sectional	293	41.6	Healthcare providers
Deressa and Zeru <sup>38</sup>	2019	Sidama	Hawassa	Cross-sectional	220	64.1	Healthcare providers
Belete <i>et al.</i> <sup>28</sup>	2024	Central Ethiopia	Kemata Tembaro zone	Cross-sectional	617	45.87	Healthcare providers
Tegegne <i>et al.</i> <sup>36</sup>	2024	Amhara	Debremarkos	Cross-sectional	319	20.4	Healthcare providers
Tiruneh <i>et al.</i> <sup>30</sup>	2016	Central Ethiopia	Hosana	Cross-sectional	218	62.06	Healthcare providers



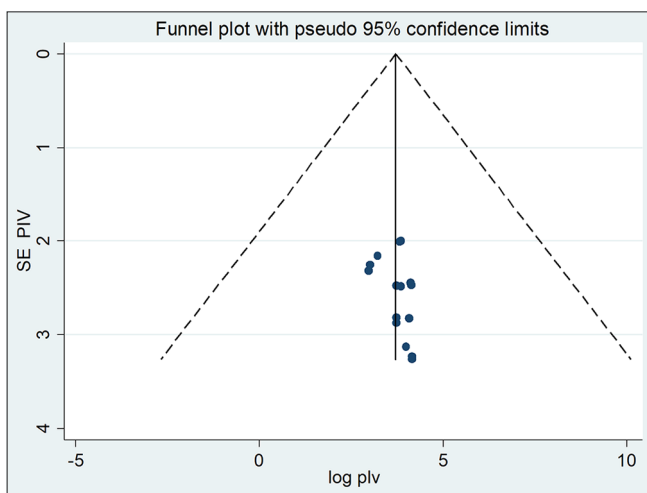
**Figure 2:** Forest plot showing the pooled prevalence of the healthcare providers work motivation status and its associated factors in Ethiopia: systematic review and meta-analysis, 2025 ( $n = 16$ ).

publication bias. In this case, both methods showed that there was no bias in the publication. We also performed a sensitivity test by removing studies step by step to evaluate

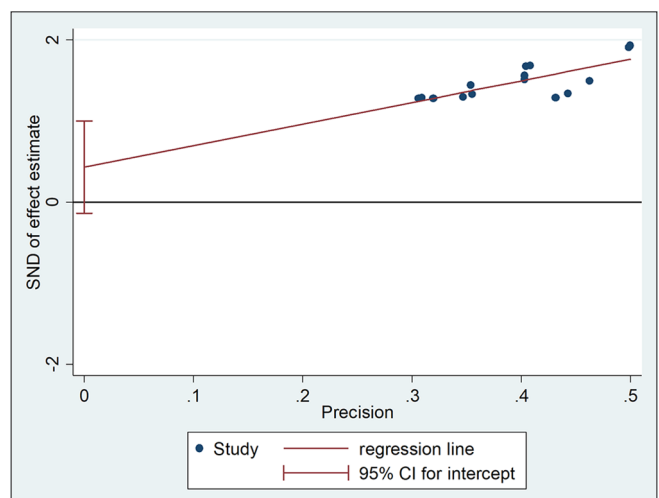
the effect of a single study on the overall effect estimate. The result indicated that removing a single study did not have a significant influence on the pooled level of healthcare



**Figure 3:** Subgroup analysis of providers work motivation status and its associated factors in Ethiopia: systematic review and meta-analysis, 2025 ( $n = 15$ ).



**Figure 4:** Funnel plot of the studies included in review on providers work motivation status and its associated factors in Ethiopia, 2025 ( $n = 15$ ).



**Figure 5:** Egger test of the studies included in review on providers work motivation status and its associated factors in Ethiopia, 2025 ( $n = 15$ ), ( $P = 0.122$ ).

providers' work motivation [Figure 6]. In addition, as part of an effort to identify potential sources of heterogeneity, we

conducted meta-regression analyses, incorporating sample size and publication year as covariates. However, our results

showed that none of these variables had a significant impact on the observed heterogeneity between studies [Table 4].

**Factors associated with healthcare providers' work motivation in Ethiopia**

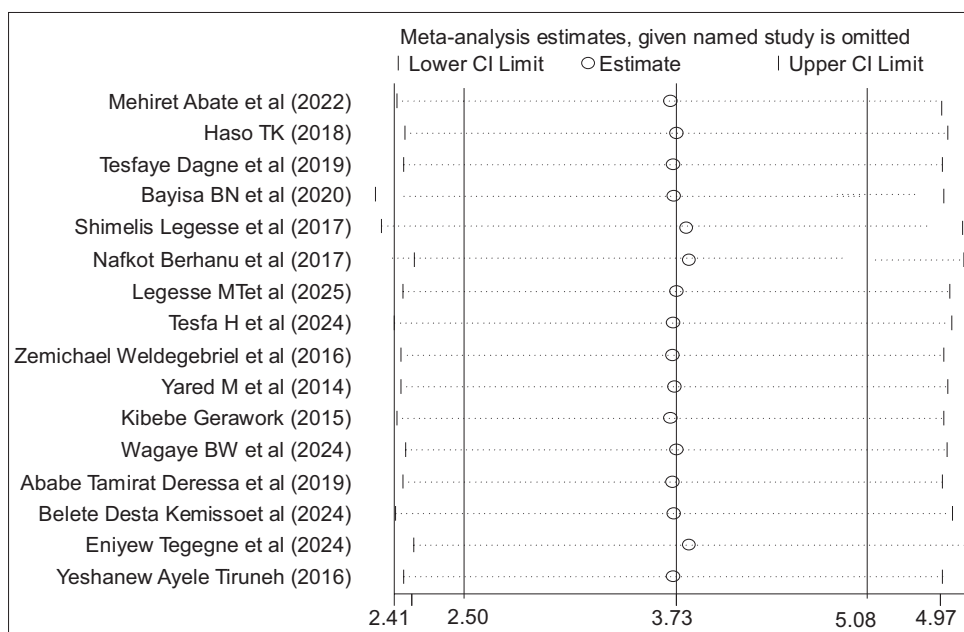
Variables such as supervision from the top management, resource supply from the health facility, professional career development, providers' experience, professional qualification and job satisfaction were significantly associated with healthcare providers' work motivation. In contrast, health professionals' commitment and training status had no statistically significant association with providers' work motivation [Table 5].

The analysis revealed that health professionals under supervision exhibited nearly triple the motivation compared to their unsupervised counterparts (odds ratio [OR] = 2.7, CI [1.5, 13.30],  $I^2 = 81.1\%$ ,  $P = 0.000$ ). This review also showed that there was a significant association between job satisfaction and the healthcare providers' work motivation. The work motivation status of the healthcare providers was almost 15.47 times higher amongst those who were satisfied

with their job than those who were dissatisfied (OR = 15.5, CI [2.49, 96.3],  $I^2 = 90.3\%$ ,  $P = 0.000$ ). Healthcare providers who had adequate resource supply were 4 times more likely to be motivated in their work than those providers who did not get adequate resource supply (OR = 4.4, CI [1.38, 51.06],  $I^2 = 94.1\%$ ,  $P = 0.000$ ). Health professionals who have a degree education level were almost 3 times more likely to be motivated than their contrast group. (OR = 2.9, CI [1.77, 11.46],  $I^2 = 89.0\%$ ,  $P = 0.003$ ). Moreover, those who received career development opportunities were 2.8 times more likely to be motivated than those who did not (OR = 2.81, CI [1.35, 4.28],  $I^2 = 83.7\%$ ,  $P = 0.003$ ). Finally, the experienced providers were 1.3 times more likely to be motivated than inexperienced ones (OR = 1.35, CI [1.05, 2.33],  $I^2 = 84.1\%$ ,  $P = 0.002$ ) [Table 5].

**Implications of the review**

Decision makers in the health sector can then focus on these to positively influence human resources for health in the country. Proposed interventions should place more emphasis



**Figure 6:** Sensitivity analysis of systematic review and meta-analysis on work motivation among health care providers in Ethiopia.

Year	Co-efficient	Standard error	t-value	P>t	(95% confidence interval)	
Sample	011383	0.0078485	1.45	0.171	-0.0055726	0.0283386
_cons	2015.71	3.108845	648.38	0.000	2008.993	2022.426

**Table 5:** Factors associated with the healthcare providers' work motivational status and its associated factors in Ethiopia: systematic review and meta-analysis, 2025 (n=16).

Factors	OR	CI	I <sup>2</sup> (%)	P-value	Significance status
Health professionals' commitment (yes)	12.8	(4.97,33.06)	0.0	0.344	Non-significant
Training status (yes)	7.5	(3.44, 16.40)	0.0	0.937	Non-significant
Supervision (yes)	2.7	(1.54, 13.30)	81.1	0.000	Significant
Resource supply (yes)	4.4	(1.38, 51.06)	94.1	0.000	Significant
Professional career development (yes)	2.8	(1.35, 4.28)	83.7	0.002	Significant
Providers' experience (>2 years)	1.3	(1.05, 2.33)	84.1	0.002	Significant
Professional qualification (BSc and above)	2.9	(1.77, 11.46)	89.0	0.003	Significant
Job satisfaction (satisfied)	15.5	(2.49, 96.3)	90.3	0.000	Significant

OR: Odds ratio, CI: Confidence interval

on healthcare providers to increase motivation and retention. A developing country like Ethiopia has high patient deaths that need more attention to improve the quality of health services, which has a direct association with providers' work motivation. This review indicated that more than half of Ethiopian healthcare providers are demotivated in their work. Thus, using this finding can help stakeholders to develop strategies and draft policies, which have a significant impact on healthcare sector improvement and prevent unnecessary patient death.

## DISCUSSION

Work motivation is the key approach to improving the health service provision in developing countries like Ethiopia. Our review assessed the pooled status of work motivation amongst healthcare providers in Ethiopia. It revealed that only 47% of healthcare professional were motivated (had good motivation) in their work in Ethiopia (95% CI [39.74; 54.83]; I<sup>2</sup> = 97.30%,  $P < 0.001$ ). Previous studies done in Nigeria (24.5%),<sup>38</sup> Amhara (20.4%),<sup>37</sup> and Gedeo (19.5%)<sup>10</sup> were lower than current review and also findings from Benin (69.4%),<sup>40</sup> UK (60%),<sup>41</sup> India (84%),<sup>41</sup> USA (75%),<sup>41</sup> Oromia (63%),<sup>37</sup> Addis Ababa (62%),<sup>35</sup> and Hawassa (64%)<sup>38</sup> indicated the higher value than the review. The discrepancy between the reviews and previous studies could be due to the difference in methodology, study area, study participants, sociodemographic characteristics of respondents and type of motivation. In addition, there was a difference in study period and time, which could lead to the discrepancy among studies.

The review also revealed data on healthcare providers' work motivation in the region. Subgroup analysis revealed that the Sidama region had the highest prevalence of work motivation, whereas a lower rate was observed in Southern Ethiopia. The variations could stem from the healthcare providers' experience and training, health facility infrastructure, socioeconomic factors and the quality of management systems. In addition, variations in proportions

amongst the studies included may impact the study's overall findings. Studies conducted in the Sidama region show higher prevalence rates compared to those conducted in Southern Ethiopia. This could result in variability amongst research findings.

Meta-analyses have revealed that various factors, including supervision, availability of resources, opportunities for professional development, the experience and qualifications of providers and overall job satisfaction, are significantly related to the motivation of healthcare providers. Supervision significantly impacts employee motivation. This finding is consistent with previous studies.<sup>14,33,40,41</sup> This could be due to the fact that effective supervision fosters a positive and motivating work environment, while poor supervision can lead to demotivation and decreased performance. In addition, supportive supervision is associated with increased job satisfaction, enhanced clinical quality and improved efficiency.<sup>41</sup> This suggests that regular supervision is crucial for healthcare providers to sustain their motivation and effectively carry out their duties.

The provision of sufficient resources is a significant factor influencing the motivation of healthcare professionals. This review aligns with previous studies.<sup>14,34,36</sup> The rationale behind this is that healthcare facilities must offer adequate resources to facilitate the effective execution of tasks by providers, thereby enhancing their job motivation. Conversely, when there is a lack of critical resources, such as medications, tools and infrastructure, healthcare providers may experience stress and frustration, which can impair their ability to deliver effective services and lead to decreased motivation.<sup>12,36</sup> Consequently, it is imperative for healthcare facilities to ensure the availability of adequate resources and to motivate their staff.<sup>25</sup>

It is so critical in healthcare, and employers in the health sector can effectively promote career development for their staff. This review indicates that career development positively influences the work motivation of healthcare

providers. Specifically, the likelihood of experiencing good job motivation was 3 times greater amongst participants who had access to career development opportunities within their facilities compared to those who did not. Supporting evidence from studies conducted in other regions corroborates these findings.<sup>25,28,33</sup> The positive impact of career development may be attributed to various factors, including financial rewards, bonuses and opportunities for professional advancement, job promotions and skill enhancement, all of which are powerful motivators for healthcare providers.<sup>25</sup> In addition, healthcare providers who benefit from career development tend to remain with their organisation longer, which leads to improved service delivery, enhanced patient outcomes and greater job satisfaction, further motivating them in their roles. To ensure motivation, healthcare providers must have access to vital career development opportunities.<sup>42</sup> This highlights the importance of healthcare institutions focusing on the career development of their employees.<sup>28,42</sup>

The motivation of healthcare providers is significantly influenced by their level of experience. This may be attributed to the idea that work experience is a vital component in reducing accidents and risks, as it allows individuals to adapt effectively to their work environment. Another explanation is that employees with more years of experience tend to possess greater experience, which reduces their exposure to accidents or risks, and often enjoy more comprehensive training, professional development and motivated.<sup>42</sup> Previous studies support these findings.<sup>27,33</sup> In addition, healthcare providers with more years of experience are frequently more likely to receive supportive supervision, recognition, financial incentives and opportunities for career advancement, all of which enhance their job motivation. Moreover, experienced professionals have good knowledge, skill and ability to finish their job without any difficulties, stress and blame, which leads to good satisfaction and job motivation in the work area.<sup>25</sup> Past experiences, including successes, failures, emotional associations and social learning, play a key role in motivating healthcare providers. This implies that healthcare providers should retain in their work area and be experienced to provide quality healthcare services, which enhances their motivation.<sup>12,25,42</sup>

Educational qualifications play a crucial role in enhancing the motivation of healthcare providers. Previous studies have indicated that a well-qualified workforce is consistently more motivated in their roles.<sup>42</sup> This phenomenon may be attributed to the fact that higher levels of education are associated with increased job motivation. The findings of this review are consistent with earlier research.<sup>10,27,33</sup> One possible explanation is that individuals with degrees or higher qualifications benefit from superior job opportunities, work in advanced healthcare facilities, receive more incentives, have access to leadership positions and possess

greater knowledge and skills, all of which contribute to their motivation. This finding suggests that healthcare facilities and other stakeholders should encourage their employees to achieve at least a degree-level education. Neglecting this could result in decreased motivation and a decline in the quality of healthcare services.<sup>25</sup>

The level of job satisfaction amongst healthcare workers plays a crucial role in influencing their motivation. Research indicates that healthcare professionals who are satisfied with their jobs are 15.47 times more likely to exhibit high levels of motivation compared to their counterparts. Similar results have been observed in studies across different areas.<sup>22,28,36</sup> This might be due to job satisfaction mostly arising from reinforcement factors such as the way of management and decision-making of supervisors, the benefits obtained from the job like, financial incentives, training opportunities, the opportunity for promotion on their job, the praise they get for doing good job, sense of accomplishment and the way of cooperation with the workers which leads to good motivation of health professional.<sup>43</sup> Consequently, creating a supportive work environment that fosters job satisfaction is vital for motivating healthcare workers.

Despite its multilevel importance, the current systematic review and meta-analysis were not without limitations. First, due to the cross-sectional nature of all included primary studies, the outcome variable can be influenced by confounders. Second, studies with small sample sizes may have a negative impact on the national estimate of work motivation amongst healthcare providers. The variation in the operational definition of the outcome variables (motivation) amongst the 16 studies included in the final review might also affect the quality of the study. The exclusion of non-English studies might impact the overall findings of the results. Finally, only seven regional states were involved due to the limited studies.

## CONCLUSION

This review found that under 50% of healthcare workers in Ethiopia exhibit motivation in their jobs. It identified several key factors that contribute to increased motivation, including supportive supervision, resource availability, job satisfaction, career development opportunities, work experience and the educational background of providers. As a result, it is highly recommended that stakeholders and responsible organisations adopt strategies such as consistent supportive supervision, promoting healthcare staff, ensuring sufficient resource provision and timely career development initiatives. Urgent action is necessary to boost healthcare workers' motivation and its influencing factors. We also recommend that policymakers and other stakeholders provide on-site training for healthcare providers to improve work motivation while enhancing their knowledge and attitudes towards

patients. Finally, we suggest that work motivation education should be integrated into the curriculum.

### Availability of data and materials

The datasets generated and/or analysed during the current study are not publicly available to prevent any kind of misuse by the public before publication but are available from the corresponding author upon reasonable request.

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