

Job Satisfaction and Associated Factors Among Health Care Professionals Working in Public Health Facilities in Ethiopia: A Systematic Review

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Background: Job satisfaction is a feeling that measure cognitive and behavioral aspects of workers' towards their job. According to the World Health Organization report, it predicts that 40% of health care professionals' (nurses, midwives, and doctors) will leave their job as a result of job dissatisfaction.

Methods: Studies were searched systematically using International databases from PubMed, Google Scholar, Cochrane Library, Embase, and CINAHL. The quality of searched articles assessed using the New Castle Ottawa scale for a cross-sectional study design. Statistical analysis was performed by using STATA version 14 software for window and systemic review carried out using a random effect method. The Preferred Reporting Item for Systematic Review and Meta-Analyses (PRISMA) guideline was followed for reporting results.

Results: From the total 1120 records screened, 8 studies with 4092 participants who fulfilled the inclusion criteria were included in this systematic review. The estimated pooled prevalence of job satisfaction of health care professionals in Ethiopia was 41.17%.

Conclusion: About one in three health care professionals were satisfied. Therefore, the government and health institution should focus on strategies to promote health care professionals' of job satisfaction.

Keywords: job satisfaction, health care professional, health institutions, Ethiopia

Background

Health professionals maintain the health of human being through the application of evidence-based medicine. Based on the international standard classification of occupations, health professionals includes medical doctors, nurse professional, midwifery professionals, dentists, medical laboratories, and pharmacists.¹

Job satisfaction is a feeling that measure cognitive and behavioral aspects of workers' towards their job.^{2,3}

According to the World Health Organization (WHO) report, it predicts that 12.9 million health care professionals' (nurses, midwives, and doctors) shortfalls will be encountered by 2035 in South East Asian and Africa (47% and 25%, respectively) and only 1% in Europe region. The report also emphasizes that around 40% of health professionals in the world will leave their employment in the coming decades because of too few incentives and low payment, which leads to a serious impact on the world population. In the same way, the internal and international migration of health professionals had an impact on the national and regional imbalance of health professionals.⁴

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The evidence did from low-income countries particularly sub-Saharan countries showed that less than 50% of the required staffs are available to serve the rural population to minimize the care given by nonqualified staff, which affects the health status of the community especially the poor peoples.⁵

In developing countries like Ethiopia, many of the health care workers are not satisfied with their jobs and other incentives including quality of life in their countries. They believed that they have less chance to learn advanced technologies for their skill and career development. These demotivated healthcare professionals in turn search for jobs in developed countries, which have a higher pull force.⁶

Particularly in Ethiopia, health care professionals were worked in the environment of the low supplies to do their job, in a decrease in professional allowances and in low health employment benefit. Even though there were compensation and benefit packages in Ethiopia like in salary, assistance with transportation, duty allowance, duty professional, and risk allowance, still there was a problem in terminal benefit, housing allowance health care in family, and food allowance benefits. These factors can lead to dissatisfaction of health professionals and exodus to a developed country.^{4,7}

Health care workers were one of the first and the major backbone for any health system or institution to provide care and manage any health-related problems.⁵ Job satisfaction grossly influences the productivity and efficiency of health care systems. Human resources are the most valuable benefit and they work as an engine to provide sustainable service delivery.⁷

Job satisfaction has been recognized as an essential factor in healthcare staff preservation. Job satisfaction of health care professionals has been found to affect the quality of care, patient satisfaction, and turnover of the health professionals. On the other hand, job dissatisfaction can affect the poor patient-to-provider ratio, longer waiting time and staff burnout.^{8–12}

In Ethiopia, there are different studies have been done to determine the job satisfaction among health care providers in a public institution. The prevalence of job satisfaction was high at 54%¹³ and low at 31.7%¹⁴ in studies conducted in Ethiopia, Amhara region state in the different study periods. The finding of these different studies reports that there was high variability in the prevalence of job satisfaction across the Ethiopia regional states of the country.

Up to the knowledge of the researcher, there was no systematic review done in Ethiopia. Therefore, conducting this study was able to give evidence on the pooled prevalence as well as major factors of job satisfaction among health care professionals. The aim of this systematic review was to determine the pooled prevalence of job satisfaction of health professionals in public facilities in the context of Ethiopia. Furthermore, findings of this study will be used as an input to policymakers in the job satisfaction of health care professionals in Ethiopia.

Methods

The Preferred Reporting Items for Systemic Review Meta-Analyses guideline (PRISMA) was used for this study.¹⁵ Eligible search reports that address the job satisfaction of healthcare professionals were included in this study. This systemic review was used published and unpublished research to estimate the pooled prevalence of job satisfaction of health care professionals in Ethiopia. Studies were searched through PubMed, Google Scholar, Cochrane Library, Embase, PsycINFO, and CINAHL. Searching was done by using terms such as job satisfaction, health care professional, health institutions, Ethiopia. The searching words were used in combination or separately using Boolean operators “OR”, “AND” “NOT” or combined with terms. Articles also searched using cross-references to retrieve additional references.

Eligibility Criteria

Study Inclusion

Quantitative studies that were reported the prevalence of overall job satisfaction of health care professionals, master's thesis and dissertations, and only studies are written in English language were incorporated in this study.

Exclusion Criteria

Qualitative study design, single case study research reports, not fully accessed articles, poor methodological quality and not written in English were excluded.

Data Extraction

Two authors (HK and CK) independently using a standardized data extraction spreadsheet to extract data. Any disagreement during data extraction is solved by discussion. Data extraction incorporates primary author, region, and publication year, the prevalence with a 95% confidence interval, study design, sample size, sampling technique, and quality score of each study.

Quality Assessment (Appraisal) of Studies

The articles searched in the database were collected and duplicate articles were removed manually using EndNote (version 7). The Newcastle-Ottawa Scale for cross-sectional study quality assessment tool is used to evaluate the quality of the included studies.¹⁶ The tool illustrates the methodological quality of the study, the comparability of, and the outcome of the study. The two independent reviewers assessed each paper's methodological quality before inclusion in the review using 10 points of the three sections of the tool. Studies with a final quality score of 5 points and above were included in the final review.

Statistical Analysis

Data were extracted with Microsoft Excel format and exported to STATA (version 14) software for analysis. The random-effect model was used to assess the pooled prevalence of job satisfaction of health care professionals for adjustment of observed variability.¹⁷ Heterogeneity or variation between reported prevalence was evaluated using I^2 and Cochran's Q statistics test of 25%, 50%, and 75%

with mild, moderate, and high heterogeneity with a p-value less than 0.05.¹⁸

The pooled effect size with a 95% confidence interval was present using a forest plot and used to visualize the presence of heterogeneity graphically. For the possible difference of primary study, we explored subgroup analysis and meta-regression subsequently using publication year, study design, study setting, sampling methods, sample size, sex, and region. Moreover, fill and trim analysis followed Egger's and Begg's test with a p-value less than 0.05 was assessed to evaluate the presence of publication bias.¹⁹ The log odds ratio was used to determine the associated factors of job satisfaction of health care professionals.

Results

A total of 1120 papers that reports the prevalence of job satisfaction of health care professionals in Ethiopia were searched by using previously stated databases. From the total research papers, 485 excluded due to duplications. After reviewing titles and abstracts, about 593 research papers were excluded since it was an irrelevance. One article

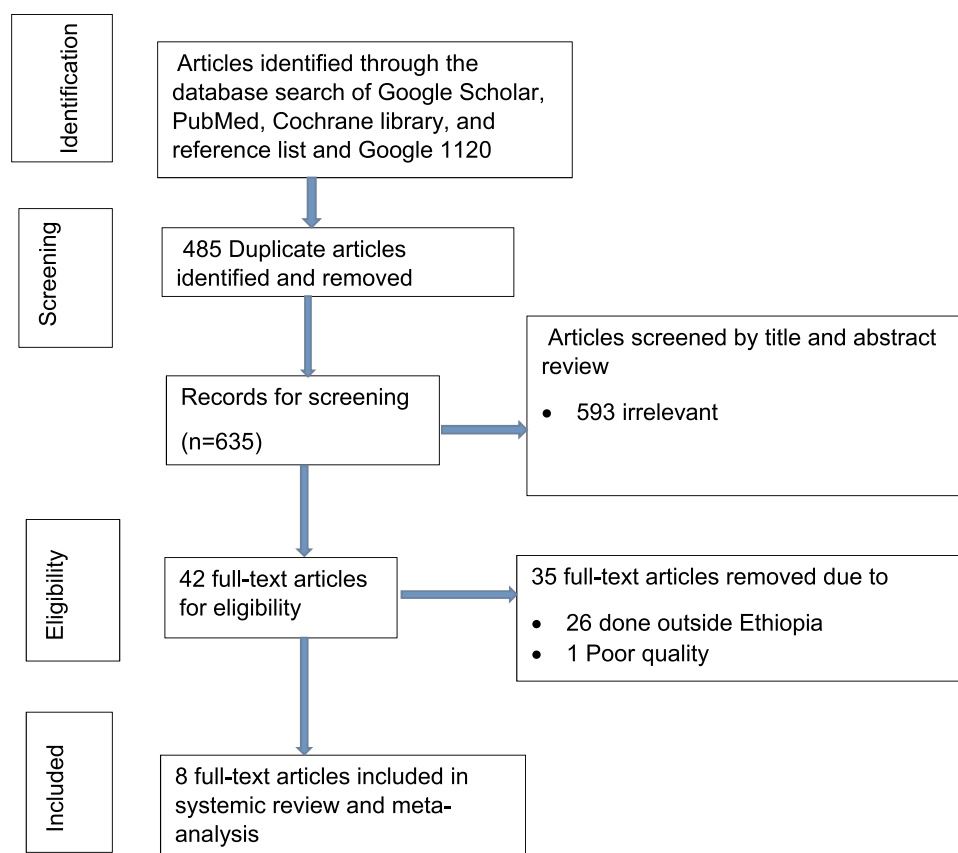


Figure 1 PRISMA flow chart diagram for systematic review and meta-analysis.

Table 1 Descriptive Summary of 8 Studies in Systematic Review of the Prevalence of Job Satisfaction of Health Care Professionals in Ethiopia

Author/Year of Publication	Region	Sample Method	Sample Size	Outcome	Prevalence
Gedif et al, 2018 ¹³	Amhara	Simple random	416	225	54
Temesgen et al, 2018 ¹⁴	Amhara	Simple random	575	182	31.7
Geleto et al, 2015 ²⁵	Harari	Stratified	405	179	44.2
Mengistu et al, 2015 ²¹	Oromia	Simple random	108	8	34.9
Yami et al, 2011 ²³	Oromia	Simple random	145	60	41.4
Deriba et al, 2017 ²²	Oromia	Simple random	320	133	41.46
Merga 2019 ⁷	Oromia	Stratified	415	160	38.5
Tadese et al, 2015 ²⁴	Addis Ababa	Simple random	296	193	43.2

was excluded due to the quality of the study.²⁰ Finally, 8 full articles were included in this systematic review (Figure 1).

Description of Included Studies

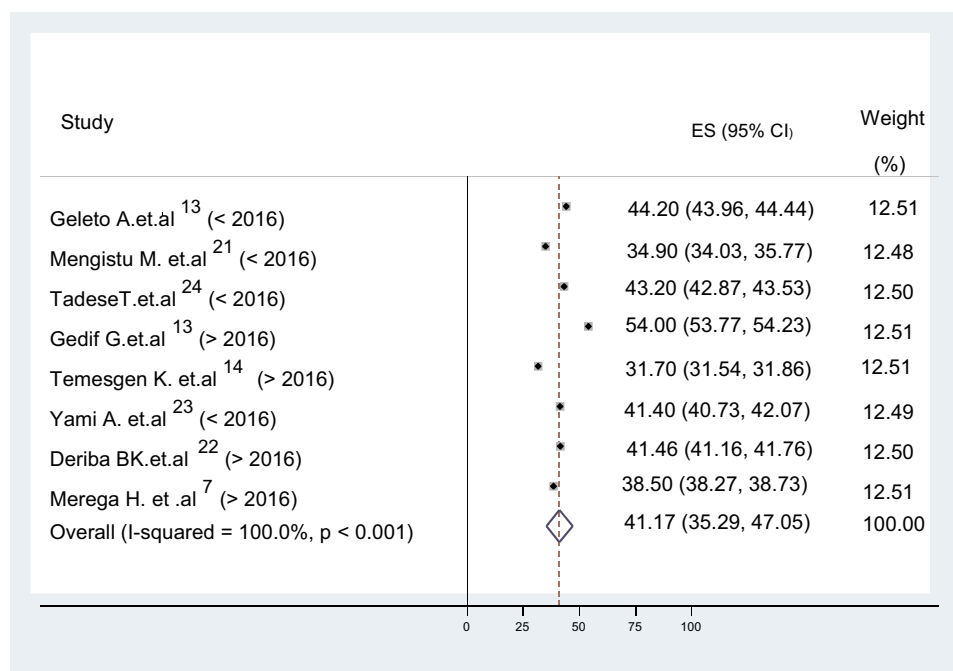
As shown in Table 1, all research articles included in this systemic review were done by cross-sectional study design and published from 2011 to 2019. Fifteen published studies with 4092 participants were included to determine the pooled prevalence of job satisfaction of health care professionals. The included studies showed that both the lowest prevalence (31.7%),¹⁴ and highest (54%)¹³ job satisfaction of health care professionals were from the Amhara region.

This review includes two studies from the Amhara region,^{13,14} four studies from the Oromia region,^{7,21–23} one from Addis Ababa,²⁴ and another one in the Harari region²⁵ (Table 1).

Systematic Review

The Pooled Prevalence of Job Satisfaction of Health Care Professionals in Ethiopia

The prevalence of job satisfaction range from 31.7% of 575 participants¹⁴ to 54% of 416 participants¹³ among health care professionals in the Amhara regional states of Ethiopia. The pooled prevalence of job satisfaction of health care professionals was 41.17% based on the DerSimonian–Laird random effect model (Figure 2).

**Figure 2** The forest plot studies on the prevalence of job satisfaction of health care professionals in Ethiopia.

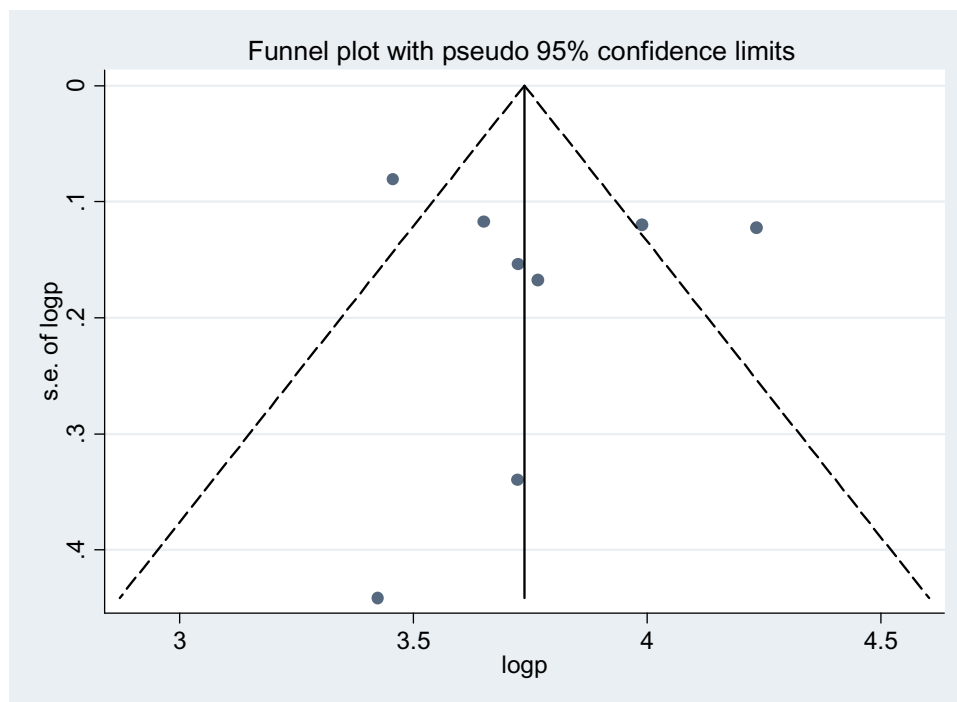


Figure 3 Funnel plot to of job satisfaction of healthcare professionals in Ethiopia.

Publication Bias and Heterogeneity of Included Studies

This study has publication bias as shown by the inverted funnel plot not symmetrically distributed ([Figure 3](#)). The overall heterogeneity of job satisfaction included was $I^2 =$

100%, with $P < 0.0001$ by use of the random effect model to adjust observed variability ([Figure 2](#)).

Begg's test and Egger test were done with $p > 0.47$ which showed that the presence of heterogeneity. Moreover, filled funnel trim analysis was done for further

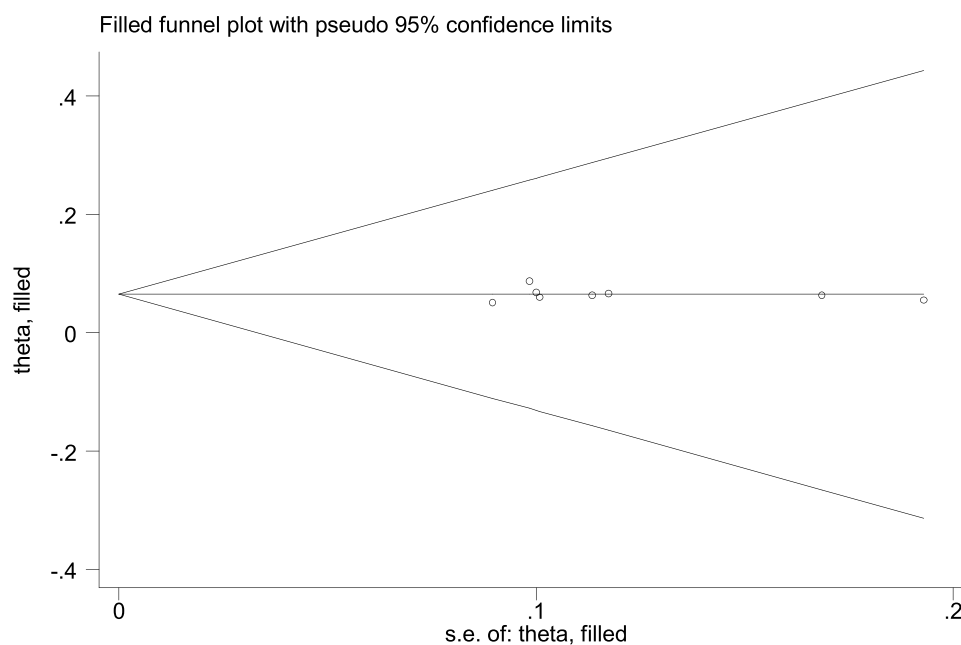


Figure 4 Funnel plot fill and trim analysis of job satisfaction of healthcare professionals in Ethiopia.

investigation of publication bias, and no studies were seen beyond the limit (Figure 4).

Subgroup Analysis

The subgroup analysis was done based on region, study year, sampling technique, and study setting. As Figure 4 analysis result showed that the source of heterogeneity is not due to region. The lowest pooled prevalence of job satisfaction of health care professionals was identified in Oromia at 39.09% (95% CI 36.68–41.32) and the highest pooled prevalence was Others (in Harari and Addis Ababa) 43.71% (95% CI (42.73–44.69)) (Figure 5).

The source of heterogeneity further assessed using study year, sampling technique, or study setting to identify the reason for variation among studies but none of them is the source of heterogeneity (Table 2).

Meta-Regression

Furthermore, of subgroup analysis, univariate meta-regression is carried out with sample size, publication year, region sample technique for possible heterogeneity. The result of the analysis indicates that none of them significantly affected heterogeneity between studies (Table 3).

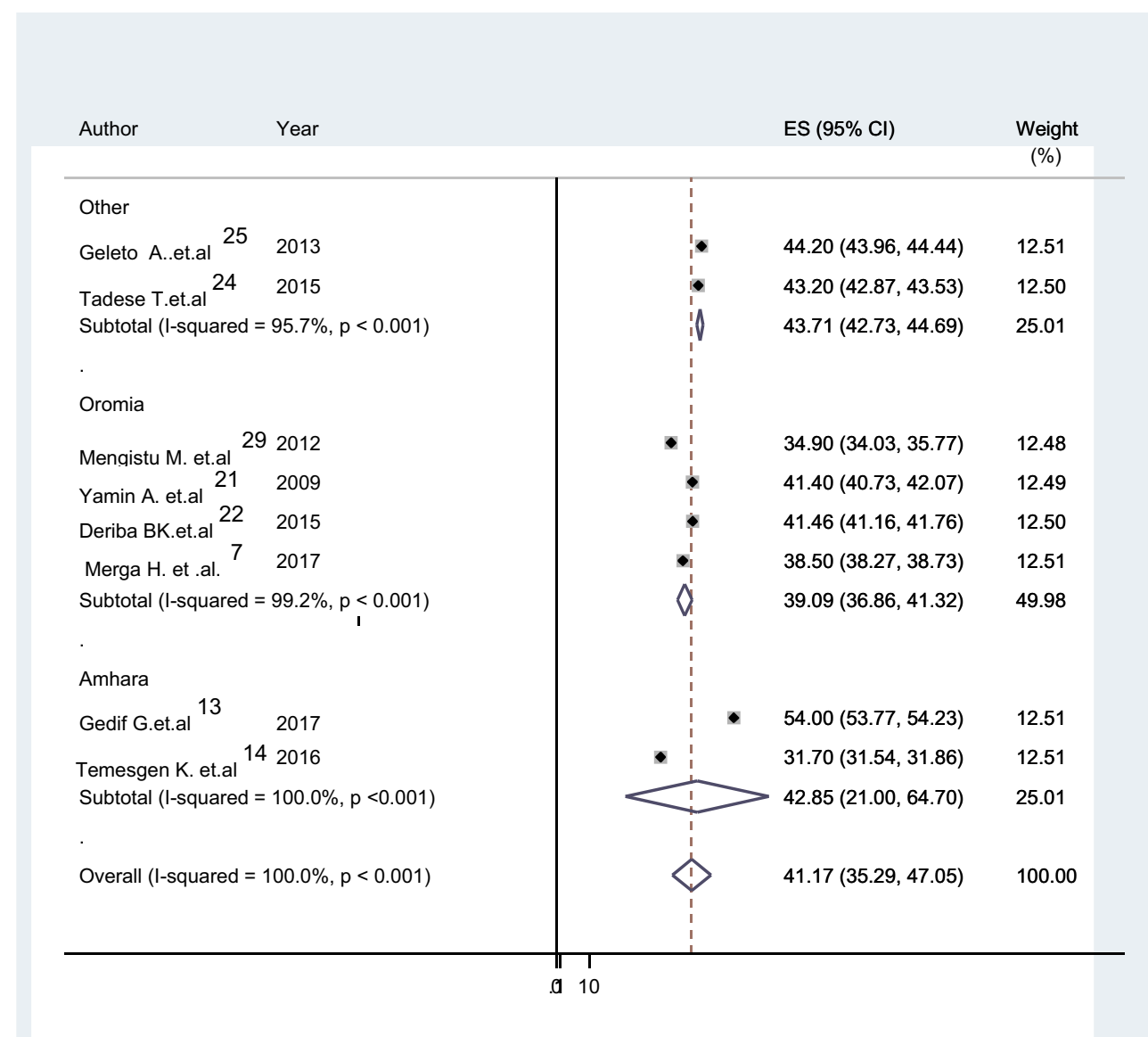


Figure 5 The subgroup analysis towards job satisfaction of healthcare professionals in Ethiopia.

Table 2 Subgroup Analysis of Pooled Prevalence Job Satisfaction of Health Care Professionals in Ethiopia

Subgroups		Number of Studies	Prevalence	Heterogeneity Statistics	p-value	I ²	Tau Squared
Sampling technique	Multistage	3	11.47 (1.621–21.33)	137.89	< 0.001	98.5%	74.26
	Simple random	3	13.33 (2.783–23.88)	75.49	< 0.001	97.4%	84.37
	Others*	2	41.35 (35.76–46.93)	72.30	< 0.001	95.9%	65.65
Study period	< 2016	5	40.96 (38.40–43.52)	447.66	< 0.001	99.3%	6.74
	≥ 2016	6	41.42 (31.45–51.38)	24086.55	< 0.001	100%	103.44

Note: *Others; systematic and stratified sampling.

Sensitivity Analysis

However, the analysis result of the sensitivity test using the random-effects model indicated that no single affected the overall estimate (Figure 6).

Discussion

The prevalence of job satisfaction of health care professionals in this review ranged from 31.7% to 54%. Both the highest¹³ and lowest¹⁴ prevalence of job satisfaction of health care professionals was from the Amhara region state, Ethiopia. The purpose of this review was to assess the prevalence of job satisfaction of health care professionals by reviewing the finding of available studies.

The pooled prevalence of job satisfaction of health care professionals in Ethiopia was 41.17% with 95% CI (35.29, 47.05). Even though there were no similar studies for this systematic review, the finding was consistent with a systematic review conducted in Iran (46.2%).²⁶ This poor health professional satisfaction might be due to the safety of the working climate, workload, long working

hours, and the leadership in the unit.^{27,28} Besides, these poor motivational factors including incentives and salaries, working climate, and working collaboration were poor in developing countries including Ethiopia.^{29,30}

This study finding was higher than the systematic review done in Korea (28.1%).³¹ The possible explanation might be because the high turnover of the nurse in Korea due to extremely low salary levels which make the dissatisfaction in their job.³²

In our sub-group analysis by region revealed that the highest level of health care professional satisfaction was reported in others (sub-city administration of Addis Ababa and Harari, Ethiopia) and the lowest was reported in the Oromia regional states of Ethiopia.

This might be variation in patient flow, the high number of patient flow, and high workload in these referral hospitals that leads to less satisfaction in the work area.³³

Evidence showed that strategies like improving salary, incentives, providing house allowance, establishing a good relationship with supervisors, and opportunities to gate training can motivate and retain the health care workers in health care facilities.^{34,35}

Improving and implementing these strategies will help to health professional job satisfaction. Furthermore, these strategies can improve the quality of patient care, increase health care service coverage, and patient satisfaction.

Limitation of the Study

The limitation of this study was only English articles were considered. Besides, studies included in this review were cross-sectional as a result; the outcome variable might be

Table 3 Meta-Regression Analysis of Studies Job Satisfaction of Health Care Professionals in Ethiopia, 2020

Heterogeneity	Coefficients	Std. Err.	p-value
Publication year	-.053	435.37	1.000
Sample size	0.00097	7.28	1.000
Sampling method	-.44	1.15	0.718
Region	-.24	0.84	0.789

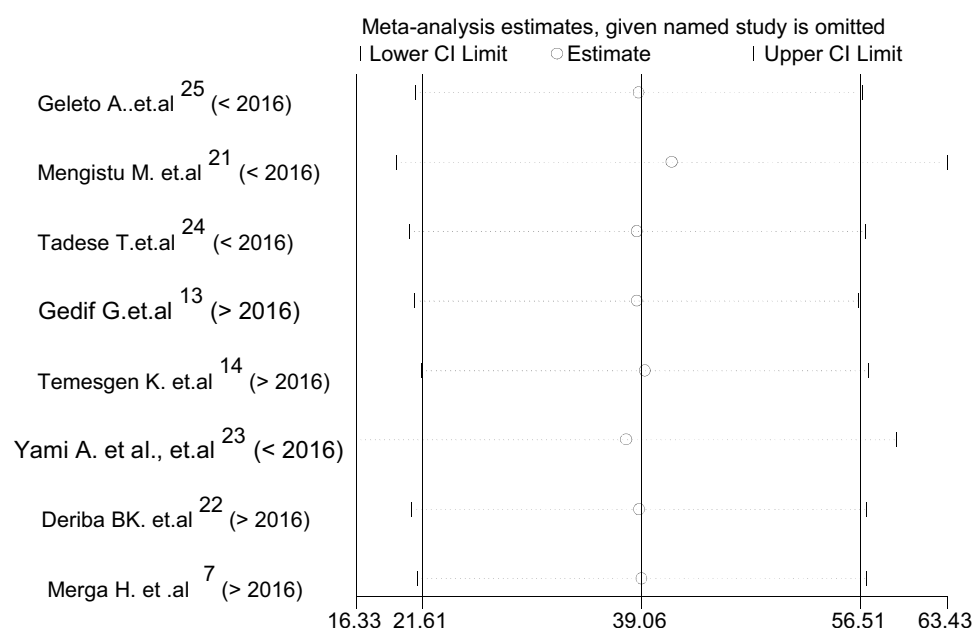


Figure 6 Sensitivity analysis which indicates the job satisfaction of health care professionals in Ethiopia.

affected by other confounding variables. Moreover, some regions were not incorporated because of lack of research may lead to an underestimate of this review.

Conclusion and Recommendation

This systematic review revealed that more than half of health care professionals had poor job satisfaction as compared to most of the previous studies conducted elsewhere in the world. This national evidence would be helpful for cross-country comparisons of the proportion of job satisfaction among healthcare professionals. It might use for healthcare policy-makers to emphasize the overall quality of the service by improving healthcare professional job satisfaction. Improving strategies like improving salary, incentives, providing house allowance, establishing a good relationship with supervisors, and opportunities to gain training can motivate and retain the health care workers in health care facilities. Moreover, further research may be needed to identify factors to enhance the job satisfaction of health care professionals.

Abbreviations

CI, confidence interval; OR, odds ratio; PRISMA, Preferred Reporting Items for Systemic Review Meta-Analyses guidelines; STATA, software for statistics and data analysis; WHO, World Health Organization.

Availability of Data and Material

Data will be available from the corresponding author upon reasonable request.

Acknowledgment

We would like to thank all authors included in this systematic review and meta-analysis.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Disclosure

The authors declare that there are no competing interests.

References

1. World Health Organization. Transforming and scaling up health professionals' education and training: World Health Organization guidelines 2013. World Health Organization; 2013.

2. Onuoha P, Stephen A, Bernard P, Corban A, Mahabir M, Israel-Richardson D. Factors that contribute to work motivation and job satisfaction among hospital nurses in Trinidad and Tobago. *Int J Health Sci Res*. 2017;7(1):208–217.
3. Ibrahim II, Boerhaneoddin A. Is job satisfaction mediating the relationship between compensation structure and organisational commitment? A study in the Malaysian power utility. *J Glob Bus Econ*. 2010;1(1):43–61.
4. Truth AU. No health without a workforce. World Health Organisation (WHO) Report; 2013:1–104.
5. Dieleman M, Harnmeijer JW. *Improving Health Worker Performance: in Search of Promising Practices* Vol 1. Geneva: World Health Organization; 2006.
6. Dodani S, LaPorte RE. Brain drain from developing countries: how can brain drain be converted into wisdom gain? *J R Soc Med*. 2005;98(11):487–491. doi:10.1177/014107680509801107
7. Merga H, Fufa T. Impacts of working environment and benefits packages on the health professionals' job satisfaction in selected public health facilities in eastern Ethiopia: using principal component analysis. *BMC Health Serv Res*. 2019;19(1):1–8. doi:10.1186/s12913-019-4317-5
8. Gilles I, Burnand B, Peytremann-Bridevaux I. Factors associated with healthcare professionals' intent to stay in hospital: a comparison across five occupational categories. *Int J Qual Health Care*. 2014;26(2):158–166. doi:10.1093/intqhc/mzu006
9. Saari LM, Judge TA. Employee attitudes and job satisfaction. *Hum Resour Manag*. 2004;43(4):395–407. doi:10.1002/hrm.20032
10. Friedberg MW, Chen PG, Van Busum KR, et al. Factors affecting physician professional satisfaction and their implications for patient care, health systems, and health policy. *Rand Health Q*. 2014;3(4).
11. Castle NG, Engberg J, Anderson R, Men A. Job satisfaction of nurse aides in nursing homes: intent to leave and turnover. *Gerontologist*. 2007;47(2):193–204. doi:10.1093/geront/47.2.193
12. McHugh MD, Kutney-Lee A, Cimiotti JP, Sloane DM, Aiken LH. Nurses' widespread job dissatisfaction, burnout, and frustration with health benefits signal problems for patient care. *Health Aff*. 2011;30(2):202–210. doi:10.1377/hlthaff.2010.0100
13. Gedif G, Sisay Y, Alebel A, Belay YA. Level of job satisfaction and associated factors among health care professionals working at University of Gondar Referral Hospital, Northwest Ethiopia: a cross-sectional study. *BMC Res Notes*. 2018;11(1):1–7. doi:10.1186/s13104-017-3088-5
14. Temesgen K, Aycheh MW, Leshargie CT. Job satisfaction and associated factors among health professionals working at Western Amhara Region, Ethiopia. *Health Qual Life Outcomes*. 2018;16(1):1–7. doi:10.1186/s12955-018-0898-7
15. Liberati A, Altman DG, Tetzlaff J, et al. The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *J Clin Epidemiol*. 2009;62(10):e1–e34. doi:10.1016/j.jclinepi.2009.06.006
16. Tricco AC, Lillie E, Zarin W, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med*. 2018;169(7):467–473. doi:10.7326/M18-0850
17. Borenstein M, Hedges LV, Higgins JP, Rothstein HR. A basic introduction to fixed-effect and random-effects models for meta-analysis. *Res Synth Methods*. 2010;1(2):97–111. doi:10.1002/jrsm.12
18. Rücker G, Schwarzer G, Carpenter JR, Schumacher M. Undue reliance on I² in assessing heterogeneity may mislead. *BMC Med Res Methodol*. 2008;8(1):1–9. doi:10.1186/1471-2288-8-79
19. Begg CB, Mazumdar M. Operating characteristics of a rank correlation test for publication bias. *Biometrics*. 1994;1088–1101.
20. Hotchkiss DR, Banteyerga H, Tharane M. Job satisfaction and motivation among public sector health workers: evidence from Ethiopia. *Hum Resour Health*. 2015;13(1):1–12. doi:10.1186/s12960-015-0083-6
21. Mengistu MM, Bali AG. Factors associated to job satisfaction among healthcare workers at public hospitals of west Shoa zone, Oromia regional state, Ethiopia: a cross sectional study. *Sci J Public Health*. 2015;3(2):161–167. doi:10.11648/j.sjph.20150302.12
22. Deriba BK, Sinke SO, Ereso BM, Badacho AS. Health professionals' job satisfaction and associated factors at public health centers in West Ethiopia. *Hum Resour Health*. 2017;15(1):1–7. doi:10.1186/s12960-017-0206-3
23. Yami A, Hamza L, Hassen A, Jira C, Sudhakar M. Job satisfaction and its determinants among health workers in jimma university specialized hospital, Southwest Ethiopia. *Ethiop J Health Sci*. 2011.
24. Tadesse T, Mohamed A, Mengistie A. Assessment of factors influencing job satisfaction among health care providers, federal police referral hospital, Addis Ababa, Ethiopia. *Ethiop J Health Dev*. 2015;29(2):PDF.
25. Geleto A, Baraki N, Atomsa GE, Dessie Y. Job satisfaction and associated factors among health care providers at public health institutions in Harari region, eastern Ethiopia: a cross-sectional study. *BMC Res Notes*. 2015;8(1):1–7. doi:10.1186/s13104-015-1368-5
26. Amiresmaili M, Moosazadeh M. Determining job satisfaction of nurses working in hospitals of Iran: a systematic review and meta-analysis. *Iran J Nurs Midwifery Res*. 2013;18(5):343.
27. Wagner A, Rieger MA, Manser T, et al. Healthcare professionals' perspectives on working conditions, leadership, and safety climate: a cross-sectional study. *BMC Health Serv Res*. 2019;19(1):1–14. doi:10.1186/s12913-018-3862-7
28. Mohanty A, Kabi A, Mohanty AP. Health problems in healthcare workers: a review. *J Family Med Prim Care*. 2019;8(8):2568.
29. Ayalew F, Kibwana S, Shawula S, et al. Understanding job satisfaction and motivation among nurses in public health facilities of Ethiopia: a cross-sectional study. *BMC Nurs*. 2019;18(1):1–13. doi:10.1186/s12912-019-0373-8
30. Muthuri RNDK, Senkubuge F, Hongoro Ceditors. Determinants of Motivation among Healthcare Workers in the East African Community between 2009–2019: a Systematic Review. In *Healthcare*. Multidisciplinary Digital Publishing Institute; 2020:164.
31. Park S, Lee T. Factors influencing Korean nurses' intention to stay: a systematic review and meta-analysis. *J Korean Acad Nurs Adm*. 2018;24(2):139–148. doi:10.1111/jkana.2018.24.2.139
32. Lee E. Why newly graduated nurses in South Korea leave their first job in a short time? A survival analysis. *Hum Resour Health*. 2019;17(1):1–9. doi:10.1186/s12960-019-0397-x
33. Birhanu M, Gebrekidan B, Tesefa G, Tareke M. Workload determines workplace stress among health professionals working in felege-hiwot referral Hospital, Bahir Dar, Northwest Ethiopia. *J Environ Public Health*. 2018;2018:1–8. doi:10.1155/2018/6286010
34. Taye A, Morankar S, Abdulahi M, Admasu B, Tadele A. Health Care Workers Motivation and Retention Approaches of Health Workers in Ethiopia: a Scoping Review. *Health Res Policy Sy*. 2019;6(3):85.
35. Haileamlak A. How Can Ethiopia Mitigate the Health Workforce Gap to Meet Universal Health Coverage? *Ethiop J Health Sci*. 2018;28(3):249. doi:10.4314/ejhs.v28i3.1

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