



Review Article (Meta-Analysis)

# Occupational Stress and Burnout Among Health Care Workers in Ethiopia: A Systematic Review and Meta-analysis



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## KEYWORDS

Burnout, psychological;  
Ethiopia;  
Meta-analysis;  
Occupational stress;  
Rehabilitation

**Abstract Objective:** To estimate the pooled national burden of occupational stress, burnout, and contributing factors among health care workers in Ethiopia.

**Data Sources:** Both published and unpublished observational studies conducted on the burden of occupational stress and burnout among health workers in Ethiopia were included.

**Study Selection:** This systematic review and meta-analysis followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines and was registered on PROSPERO (CRD42020166585). The eligibility of the studies was evaluated based on predetermined inclusion and exclusion criteria.

**Data Extraction:** Data extraction was conducted using major databases; PubMed, Google Scholar, Cumulative Index to Nursing and Allied Health, Scopes, Cochrane Library, the Web of Science, and African Journals Online were involved in the review. Two reviewers extracted data independently using a standardized data extraction checklist on Microsoft Excel. Any discrepancy was resolved by including the third reviewer for a possible consensus.

**Data Synthesis:** Fourteen studies, with a total of 4066 health care workers, were included in the meta-analysis. The pooled burdens of occupational stress and burnout were 52.9% (95% confidence interval [CI], 46.2-59.7) and 39.1% (95% CI, 23.9-52.3), respectively. Major determinants of occupational stress were being female (odds ratio [OR], 1.9; 95% CI, 1.1-3.3), being younger (OR, 1.4; 95% CI, 1.03-1.9), having a lower educational level (OR, 2.7; 95% CI, 1.05-7.2), and being satisfied with a job (OR, 0.3; 95% CI, 0.2-0.5). Being married (OR, 0.7; 95% CI, 0.5-0.9), having a lower educational level (OR, 0.5; 95% CI, 0.4-0.8), and working in shifts (OR, 0.7; 95% CI, 0.5-0.9) were significant predictors of burnout.

*List of abbreviations:* CI, confidence interval; HCW, health care worker; OR, odds ratio.

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*Conclusions:* More than half and more than one-third of health care workers were affected by occupational stress and burnout, respectively, in Ethiopia, and sociodemographic and occupation-related factors were significant factors. Measures that improve job satisfaction, career development, and educational opportunities should be strengthened.

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Occupational stress is a pattern of emotional, cognitive, behavioral, and physiological reactions to adverse and harmful aspects of work content, work organization, and the working environment.<sup>1</sup> Occupational stress can have a number of effects on health, including mental and behavioral disorders such as exhaustion, burnout, anxiety, and depression.<sup>2</sup>

Burnout is a global occupational hazard.<sup>3</sup> It is a psychological syndrome involving emotional exhaustion, feelings of helplessness, depersonalization, negative attitudes toward work and life, and reduced personal accomplishments and is emerging as a prolonged response to chronic interpersonal stressors at work.<sup>4,5</sup> Job-related stresses and burnout predispose a number of emotional and physical symptoms such as anxiety, irritability, mood swing, depression, pains, digestive upsets, musculoskeletal disorders, and cardiovascular risks.<sup>6,7</sup>

Both occupational stress and burnout affect every professionals although health care workers (HCWs) are the most at-risk group among others.<sup>5,8</sup> The prevalence of occupational stress and burnout among HCWs is high in both low- and high-income countries. The systematic review in the Middle East reported that the prevalence of burnout among HCWs ranges from 40%-60%.<sup>6</sup>

The main factors of occupational stress and burnout among HCWs include work overload, relationship with staff, leadership style, poor patient prognosis, death, and dying, among others. In Ethiopia, where the ratio of HCWs to population is much lower than the World Health Organization standard,<sup>9</sup> occupational stress and burnout among HCWs are prominent challenges in the health care system of the country.

Occupational stress and burnout lead to low-quality health services, which result in unfavorable patient outcomes.<sup>6</sup> Moreover, studies reported that health workers experiencing stress and burnout are more likely to develop job dissatisfaction, work absences, higher turnover, and early retirement.<sup>6,10-12</sup> Estimating the national burden of occupational stress and burnout is of paramount significance. However, findings from extant studies are inconsistent and inconclusive across the country, which hinders evidence-based interventions. This systematic review and meta-analysis were therefore aimed to estimate the pooled burden of occupational stress, burnout, and contributing factors among HCWs in Ethiopia.

## Methods

### Study design and setting

This systematic review and meta-analysis were conducted to assess the pooled burden of occupational stress and burnout

among HCWs in Ethiopia. Ethiopia is a landlocked country found in the Horn of Africa with an estimated population of 109 million. It shares the boundary with Eritrea to the north, Djibouti to the northeast, Somalia to the east, Kenya to the south, South Sudan to the west, and Sudan to the northwest.<sup>13</sup>

### Search strategy and review process

On the initial step of the search process, we checked for the presence of the existing systematic review and meta-analysis on a similar topic using the trial registries and the Cochrane Library to avoid repetition. The protocol has been registered on an International Prospective Register of Systematic Review (PROSPERO) with a registration number CRD42020166585. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses checklist was followed during the review process.<sup>14</sup> EndNote version 7.2<sup>a</sup> was used to maintain and manage citations and facilitate the review process. All pertinent published studies in the following major databases were involved in the review: PubMed, Google Scholar, Cumulative Index to Nursing and Allied Health, Scopes, Cochrane Library, the Web of Science, and African Journals Online. The reference lists of identified studies were also reviewed to find additional articles. Unpublished studies were retrieved from the official website of the Addis Ababa University electronic database.

The Population, Exposure, Comparison, and Outcomes statement was also used in this review; Population: HCWs (health professionals who are working in health care settings) in Ethiopia; Exposure: determinants of occupational stress and burnout such as work experience and sociodemographic characteristics; Comparison: reported reference group in each respective study; and Outcome: the burden of occupational stress and burnout among HCWs. Search terms were predefined to allow a comprehensive search strategy that included all the relevant studies.

Search terms such as “occupational stress, job-related stress, work-related stress, burnout, health workers, and Ethiopia” were used separately and/or in combination. A literature search was conducted from January 1 to January 24, 2020.

### Eligibility criteria

#### Inclusion criteria

This systematic review and meta-analysis included all observational studies that were conducted on the burden of occupational stress and burnout among health workers in Ethiopia. Both published and unpublished articles were reviewed and rated for inclusion. We limited our searches to

human studies published in the English language. Full articles were retrieved if a specific outcome of interest (occupational stress and burnout) were defined.

### Exclusion criteria

Studies with methodological problems were excluded from the analysis. Articles that reported measures other than relative risk or equivalent values or from which an odds ratio (OR) could not be calculated were also excluded. The eligibility criteria for each individual article were checked by 2 authors independently (B.M., H.A.). If there was a disagreement between the 2 authors, a third person (T.A.) resolved the disagreement. All reviewers came together in person and discussed the assessment results.

Furthermore, we excluded articles that were not fully accessible after at least 2 email contacts with the primary authors.

### Measurement of outcome variables

This study has 4 main outcomes. The primary outcome of this review was the burden of occupational stress, which was estimated as the total number of HCWs who reported occupational stress divided by sample size multiplied by 100. The second outcome was the burden burnout, which was calculated by dividing participant-reported burnout by sample size multiplied by 100. The third and fourth outcomes of this study were factors associated with occupational stress and burnout among HCWs, which were determined using the OR and calculated based on binary outcomes from the included primary studies. The determinants included in this study were sex (male vs female), marital status (married vs non-married), age ( $\leq 25$  vs  $>25$ y), work experience ( $<5$  vs  $\geq 5$ y), job satisfaction (not satisfied vs satisfied), educational status (diploma vs degree and above), and work shift (absent vs present).

### Quality assessment and data abstraction

To assess the quality of the data the Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument was used.<sup>15</sup> Two reviewers (B.M., H.A.) extracted data independently using a standardized data extraction checklist on Microsoft Excel.<sup>b</sup>

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses flow chart was used to identify and select relevant studies for this analysis. Literature was downloaded and supplemented to EndNote version 7.2. Duplicated literature was excluded by using EndNote reference management. Then, studies were screened and excluded by their titles and abstracts. Studies that were found to be nonpertinent to our study were excluded during this screening. After the literature was excluded by their titles and abstracts, the full text of the remaining literature was assessed. The eligibility of the studies was evaluated based on predetermined inclusion and exclusion criteria. Checklist for data extraction contains the title, author name, year of publication, region (the area where the study was conducted), study design, sample size, and response rate, and a number of participants with cases were prepared for the first and the second outcomes. For the third and fourth outcomes (determinants of occupational stress and burnout) data were extracted in a format of  $2 \times 2$  tables, and then the log OR was calculated based on the findings of the original studies (table 1).<sup>16-27</sup> After 2 data extractors performed the review, any discrepancy was resolved by including the third reviewer (T.A.) for a possible consensus. When articles did not have adequate data, corresponding authors of the research articles were contacted using their email.

### Heterogeneity and publication bias

Cochran  $Q$  test ( $\chi^2$  statistic) and inverse variance ( $I^2$ ) test statistic on forest plot were used to check heterogeneity among the included studies. Cochran  $Q$  statistical heterogeneity test is considered statistically significant at  $P \leq .05$ . The  $I^2$  test statistic values of 0%, 25%, 50%, and 75% were

**Table 1** Summary of included studies in the systematic review and meta-analysis on the burden of occupational stress and burnout among HCWs in Ethiopia

No.	Author	Year of publication	Region	Study Design	Sample Size	Response Rate (%)	Cases	Outcome	Participants
1	Godifay et al <sup>8</sup>	2018	Tigray	Cross-sectional	559	94.4	262	OS	All HCWs
2	Kassa et al <sup>16</sup>	2017	Amhara	Cross-sectional	178	98.3	102	OS	Nurses
3	Birhanu et al <sup>17</sup>	2018	Amhara	Cross-sectional	198	95	135	OS	All HCWs
4	Tekeletsadik et al <sup>18</sup>	2019	Addis Ababa	Cross-sectional	393	98.7	184	OS	All HCWs
5	Salilih and Abajobir <sup>19</sup>	2014	Addis Ababa	Cross-sectional	320	93	121	OS	Nurses
6	Dagget et al <sup>20</sup>	2016	Oromia	Cross-sectional	315	92.3	210	OS	Nurses
7	Gebeyehu and Zeleke <sup>11</sup>	2019	Amhara	Cross-sectional	253	86.1	123	OS	All HCWs
8	Anand and Mejid <sup>21</sup>	2018	SNNP	Cross-sectional	135	97.8	76	OS	Nurses
9	Nemera and Alemu <sup>22</sup>	2018	Oromia	Cross-sectional	177	98.3	87	OS	Nurses
10	Biksegn et al <sup>23</sup>	2016	Oromia	Cross-sectional	334	83	123	BO	All HCWs
11	Bhagavathula et al <sup>24</sup>	2018	Amhara	Cross-sectional	248	99.2	34	BO	All HCWs
12	Sebsibie et al <sup>25</sup>	2017	Amhara	Cross-sectional	369	100	186	BO	Nurses
13	Redaea et al <sup>26</sup>	2018	Tigray	Cross-sectional	229	Not reported	109	BO	All HCWs
14	Zewdu et al <sup>27</sup>	2017	Amhara	Cross-sectional	358	99.2	152	BO	Nurses

Abbreviations: BO, burnout; OS, occupational stress; SNNP, Southern Nation, Nationalities, and People Region.

considered as no, low, moderate, and high degrees of heterogeneity, respectively.<sup>28</sup> For all outcomes, a high degree of heterogeneity was observed; hence, a random-effects model was used. To identify the source of heterogeneity, meta-regression was conducted using sample size and year of publication. In addition, subgroup analysis was performed using profession and region where the studies were conducted and statistically significant results were declared in the presence of heterogeneity. The publication bias was checked by funnel plot, and Egger's test was used. A *P* value <.05 was used to declare the statistical significance of publication bias.

## Data analysis

After basic information was extracted on Microsoft Excel from each original study, the data were exported to Stata for Windows version 14<sup>c</sup> for analysis. The logarithm and standard error of the OR for each included study were generated using the "generate" command in Stata.

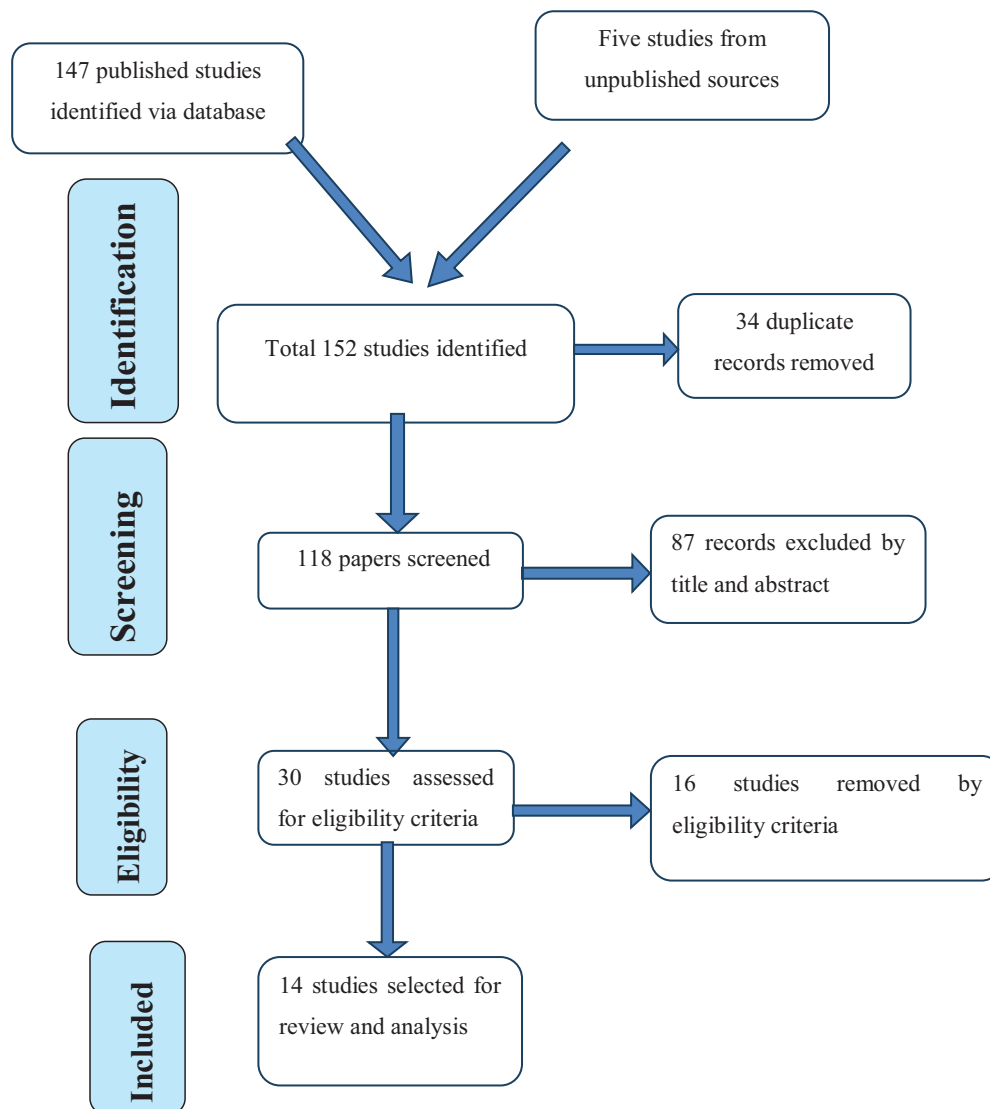
The burden of occupational stress and burnout with a 95% confidence interval (CI) and OR of associated factors were presented in the form of a forest plot.

## Results

### Study selection

A total of 147 published and 5 unpublished works of literature were identified from several electronic databases and Addis Ababa University digital library, respectively. Of the total identified studies, 34 duplicate articles were removed, and 87 articles were removed by reviewing titles and abstracts.

The full text of the remaining 30 studies was assessed and screened for eligibility. Sixteen studies were excluded based on the selection criteria, if outcomes were not occupational stress or burnout, and if participants were not HCWs. Finally, 14 articles that scored  $\geq 7$  on the Joanna Briggs Institute quality appraisal eligibility criteria



**Fig 1** PRISMA flow diagram of included studies to estimate the burden of occupational stress and burnout among HCWs in Ethiopia. Abbreviation: PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses.

were included in the systematic review and meta-analysis (fig 1).

### Features of included studies

Of the total included studies, 2 were retrieved from gray literature,<sup>22,25</sup> and all others were published articles. Regarding study design, all the included studies were cross-sectional and conducted from 2014 to 2019 in various regions of the country.<sup>11,18,19,26</sup> A total of 4066 HCWs participated in the review. Of the included studies included in the final analysis, 6 of them were in the Amhara Region, 3 in the Oromia Region, 2 in Addis Ababa, 2 in the Tigray Region, and 1 in the Southern Nation Nationalities and People Region, with the sample sizes ranging from a minimum of 135 to maximum of 559 participants from the study<sup>8,21</sup> (see table 1).

### Burden of occupational stress among HCWs in Ethiopia

Of the 14 original articles, 9 articles reported the burden of occupational stress among HCWs in Ethiopia.<sup>8,11,16-22</sup> We found significant heterogeneity across studies ( $I^2=91.7%$ ,  $P<.001$ ), so a random-effects model was used to estimate the pooled burden of occupational stress among HCWs. From the forest plot, the largest burden of occupational stress was observed in a study conducted in Amhara Region 68.2% (95% CI, 61.7-74.6),<sup>17</sup> whereas the smallest burden was found in Addis Ababa, 37.8% (95% CI, 32.5-43.1).<sup>19</sup> The

pooled burden of occupational stress among HCWs was 52.9% (95% CI, 46.2-59.7) (fig 2).

Meta-regression was computed to identify sources of heterogeneity using sample size and year of publication, but none of them showed the presence of statistically significant heterogeneity.

To minimize potential heterogeneity, subgroup analysis was conducted based on the professional category and the region where the studies were conducted. The analysis showed that the burden of occupational stress was almost similar among nurses and other health professionals (fig 3). Subgroup analysis by region indicated that the highest burden of occupational stress was observed in the Oromia Region (OR, 58.1; 95% CI, 40.9-75.3), whereas the smallest was seen in Addis Ababa (OR, 42.4; 95% CI, 33.5-51.2) (fig 4).

To detect the presence of publication bias, the graphical funnel plot and Egger's test at a 5% significance level were computed. The funnel plot indicates the absence of publication bias (fig 5), and Egger's test also showed statistically insignificant publication bias ( $P=.38$ ).

### Factors affecting occupational stress among HCWs in Ethiopia

Seven studies were included to assess the effect of sex on occupational stress, of which 3 articles reported that female HCWs were more likely to develop occupational stress.<sup>8,16,19</sup> The pooled OR from 7 primary studies indicated that female HCWs were 1.9 times more likely to develop occupational

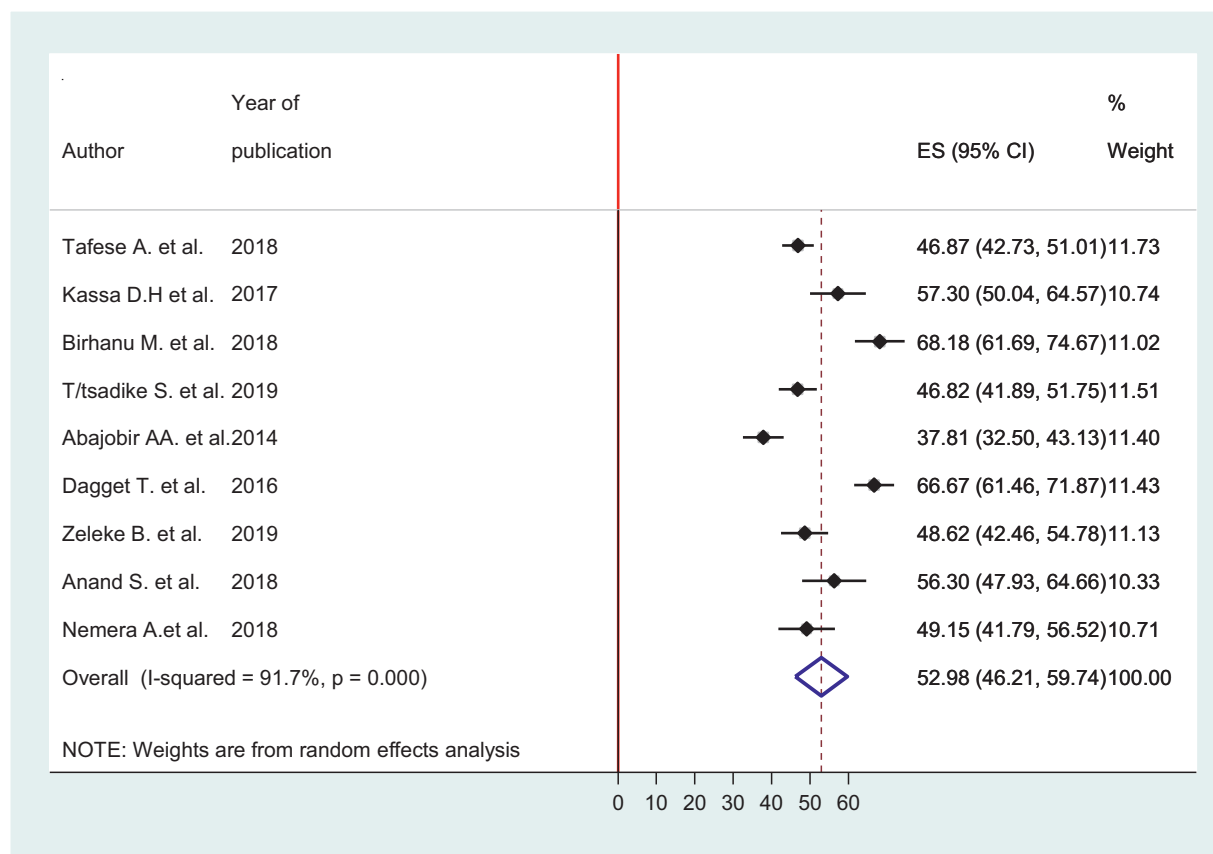
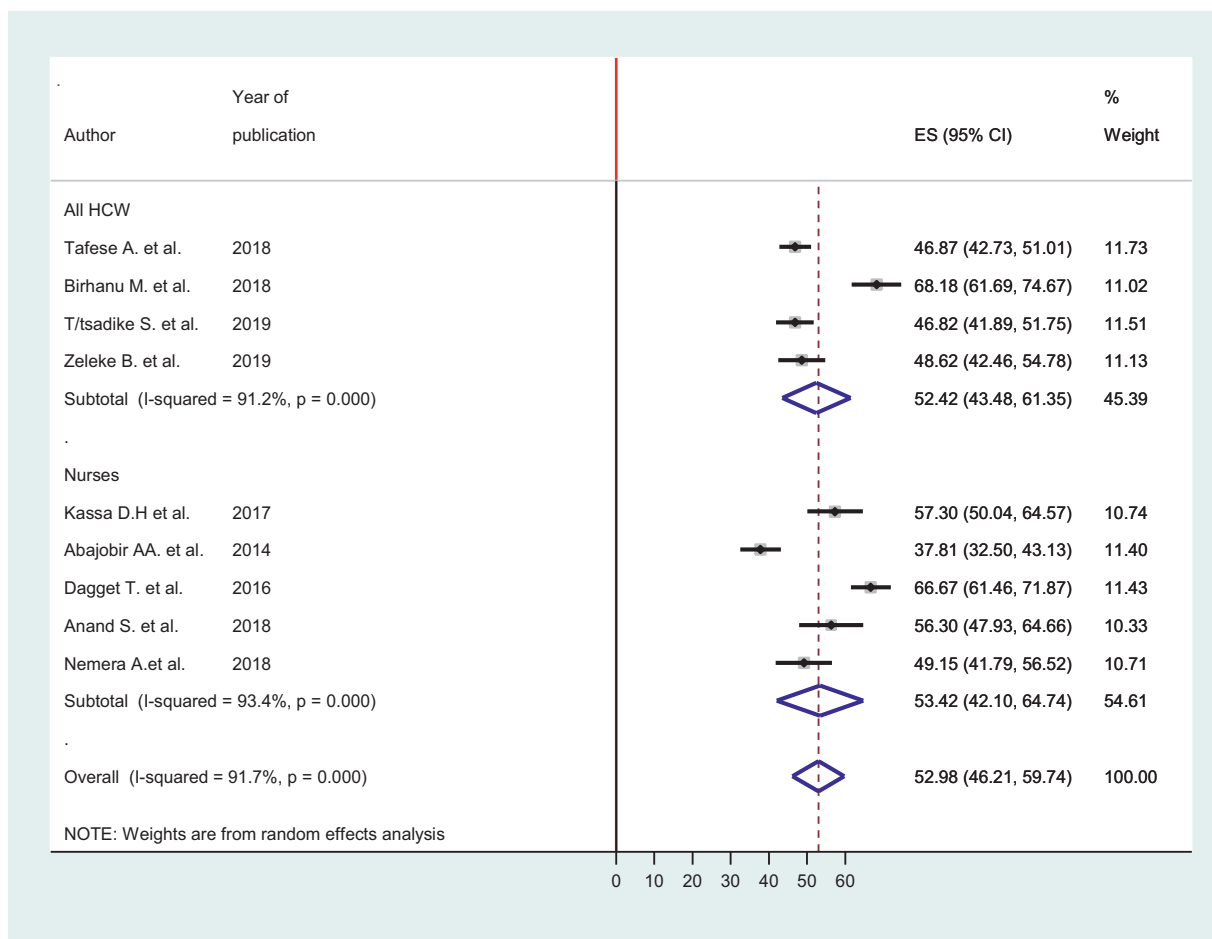


Fig 2 Forest plot showing the pooled burden of occupational stress among HCWs in Ethiopia. Abbreviation: ES, effect size.



**Fig 3** Showing subgroup analysis by profession for the burden of occupational stress among HCWs in Ethiopia.

stress compared with male HCWs (OR, 1.9; 95% CI, 1.1-3.3). Two primary studies reported that married HCWs are more likely to develop occupational stress than unmarried HCWs,<sup>21,22</sup> yet 1 study showed that nonmarried HCWs are more likely to develop HCWs.<sup>8</sup> However, it was not statically significant from a pooled analysis of ORs from 7 primary studies (OR, 1.1; 95% CI, 0.5-2.7). Five original studies were included to assess the association between work experience and occupational stress, of which 4 reported that HCWs who had <5 years of work experience were more likely to develop occupational stress<sup>11,16,21,22</sup> and 1 study reported the opposite.<sup>8</sup> However, the pooled estimate from 7 studies indicated an insignificant association between work experience and occupational stress (OR, 1.9; 95% CI, 0.4-10.2).

Four primary studies were included in the analysis to identify the effect on age on occupational stress in Ethiopia using a fixed-effect model.<sup>8,11,16,17</sup> The pooled OR revealed that HCWs 25 years or younger were 1.4 times more likely to develop occupational stress than HCWs older than 25 years (OR, 1.4; 95% CI, 1.03-1.9). Similarly, 2 original studies stated that job satisfaction was associated with occupational stress; satisfied HCWs were less likely to be stressed than nonsatisfied HCWs.<sup>8,18</sup>

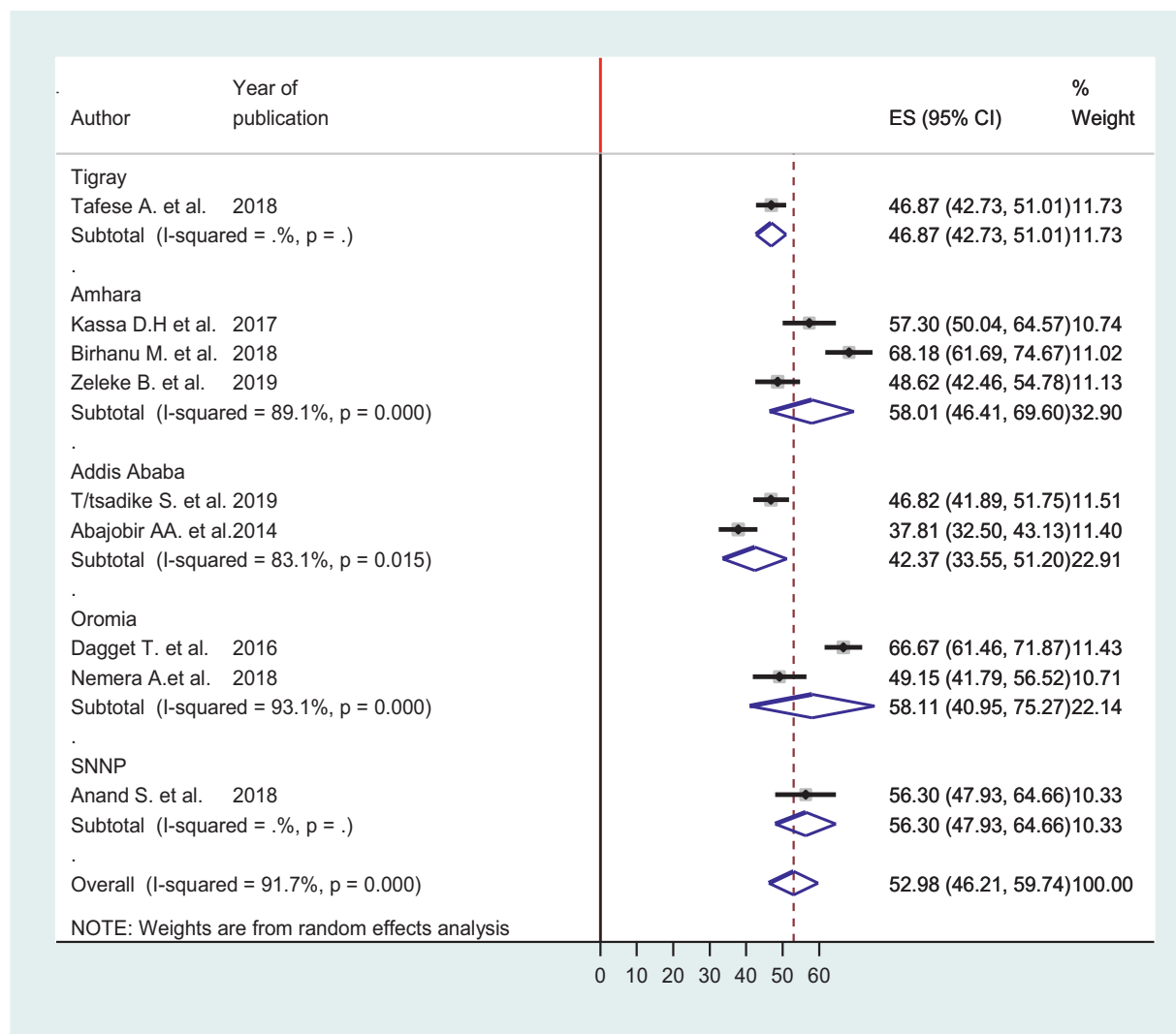
The pooled OR from 5 primary studies<sup>8,11,17,21,22</sup> indicated that diploma holding HCWs were 2.7 times more likely to develop occupational stress compared with HCWs with a degree or above (OR, 2.7; 95% CI, 1.05-7.2) (table 2).

### Burden of burnout among HCWs in Ethiopia

Five articles were included to assess the burden of burnout among HCWs in Ethiopia.<sup>23-27</sup> It was determined using a random-effect model ( $I^2=97.4%$ ,  $P<.001$ ). The pooled burden of burnout among HCWs was 38.1 % (95% CI, 23.90-52.4). The largest and the smallest burden of burnout were observed in studies conducted in the Amhara Region at 50.4% (95% CI, 45.31-55.5)<sup>25</sup> and 13.7% (95% CI, 9.43-17.9),<sup>24</sup> respectively (fig 6). Publication bias was assessed both graphically and statistically using the funnel plot and Egger's test at a 5% significance level ( $P=.13$ ), and no publication bias was detected.

### Factors affecting burnout among HCWs in Ethiopia

Two primary studies were included to assess the effect of sex on burnout, neither of which reported significant association.<sup>24,25</sup> The pooled OR from the fixed-effect model also showed a statically insignificant association (OR, 0.7; 95% CI, 0.5-1.1). From 3 studies included to assess the association of marital status with burnout,<sup>24,25,27</sup> 1 study<sup>27</sup> reported that married HCWs were less likely to develop burnout. The pooled OR from the random-effect model indicated that currently married HCWs were 0.7 times less likely to develop burnout than nonmarried HCWs (OR, 0.7; 95% CI, 0.5-0.9).



**Fig 4** Showing subgroup analysis by region for the burden of occupational stress among HCWs in Ethiopia.

OR from 2 original studies<sup>25,27</sup> revealed that HCWs who had diploma educational status were 0.5 times less likely to develop burnout than degree and above holders (OR, 0.5; 95% CI, 0.4-0.8).

Three studies<sup>23-25</sup>, were included to assess the effect of work shift on burnout, of which only 1 article<sup>23</sup> reported that HCWs working without shifts were less likely to develop burnout than HCWs working in shifts. The pooled OR showed that HCWs working without shifts were 0.7 times less likely to develop burnout than those working in shifts (OR, 0.7; 95% CI, 0.5-0.9) (table 3).

## Discussion

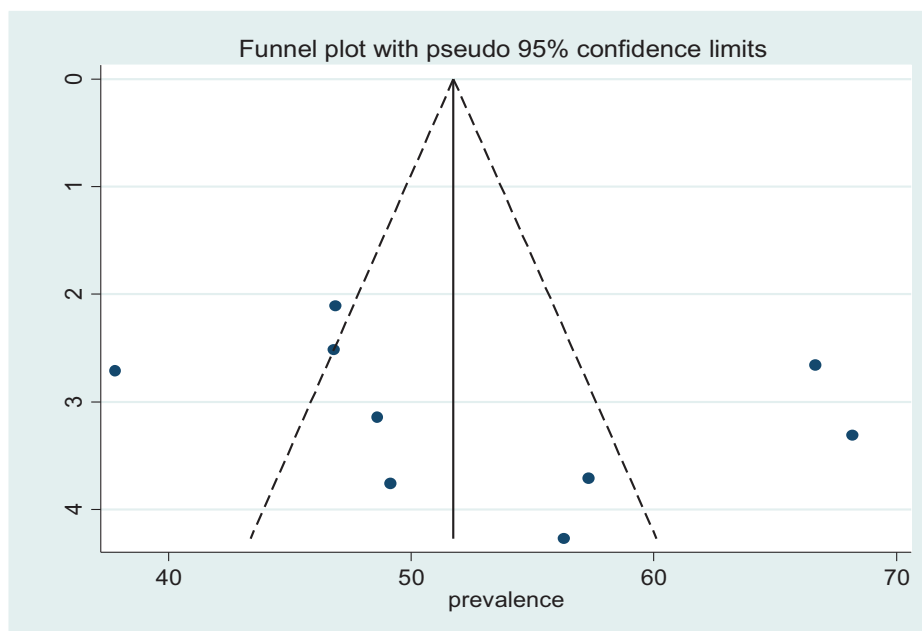
This systematic review and meta-analysis investigated available evidence on the burden and associated factors of occupational stress and burnout among HCWs in Ethiopia. Accordingly, the study indicated that the pooled burden of HCWs' occupational stress was 52.9%, and burnout was 38.1%. The largest burden of occupational stress was observed in the Amhara Region, whereas the smallest

burden was found in Addis Ababa. This difference might be because of the fact that the Amhara Region is more rural and has less infrastructure than Addis Ababa.

Factors such as being female, age of 25 years or younger, job satisfaction, and being a diploma holder were significantly associated with occupational stress. Furthermore, being married, being a diploma holder, and working without shifts were significantly associated with burnout syndrome.

The burden of occupational stress among HCWs in Ethiopia (52.9%) was higher than other studies conducted in Canada (45%),<sup>29</sup> Mashhad, Iran (40%),<sup>30</sup> Jordan (27%),<sup>31</sup> Caceres, Spain (40%),<sup>32</sup> and Brazil (27.4%).<sup>33</sup> The possible reason for this variation might be the differences in the health care provider to patient ratio, which is low in Ethiopia and increases the workload on HCWs. In addition, other possible reasons could be socioeconomic variation across the study settings and the tools used.

In this study, the burden of occupational stress among nurses was 53.4%, which is almost similar to stress among other HCWs. This finding is lower than the findings of the study conducted in Anushakti Nagar, Mumbai (87.6%)<sup>1</sup> and Slovenia (56.5%).<sup>34</sup> On the other hand, this finding is higher



**Fig 5** Funnel plot with a 95% confidence limit of the pooled burden of occupational stress among HCWs in Ethiopia.

than findings in Dammam, Saudi Arabia (45.5%)<sup>35</sup> and Karad (49%).<sup>36</sup> This discrepancy could be explained by socioeconomic variations and variations in the nature of the health care system across study areas.

The magnitude of burnout among HCWs in Ethiopia (38.1%) was comparable with the report from a study in sub-Saharan Africa (40%-80%).<sup>4</sup> In contrast, it was lower than findings from Egypt (68.2%)<sup>37</sup> and Iran (52.9%).<sup>38</sup> This could be explained by the difference in the socioeconomic

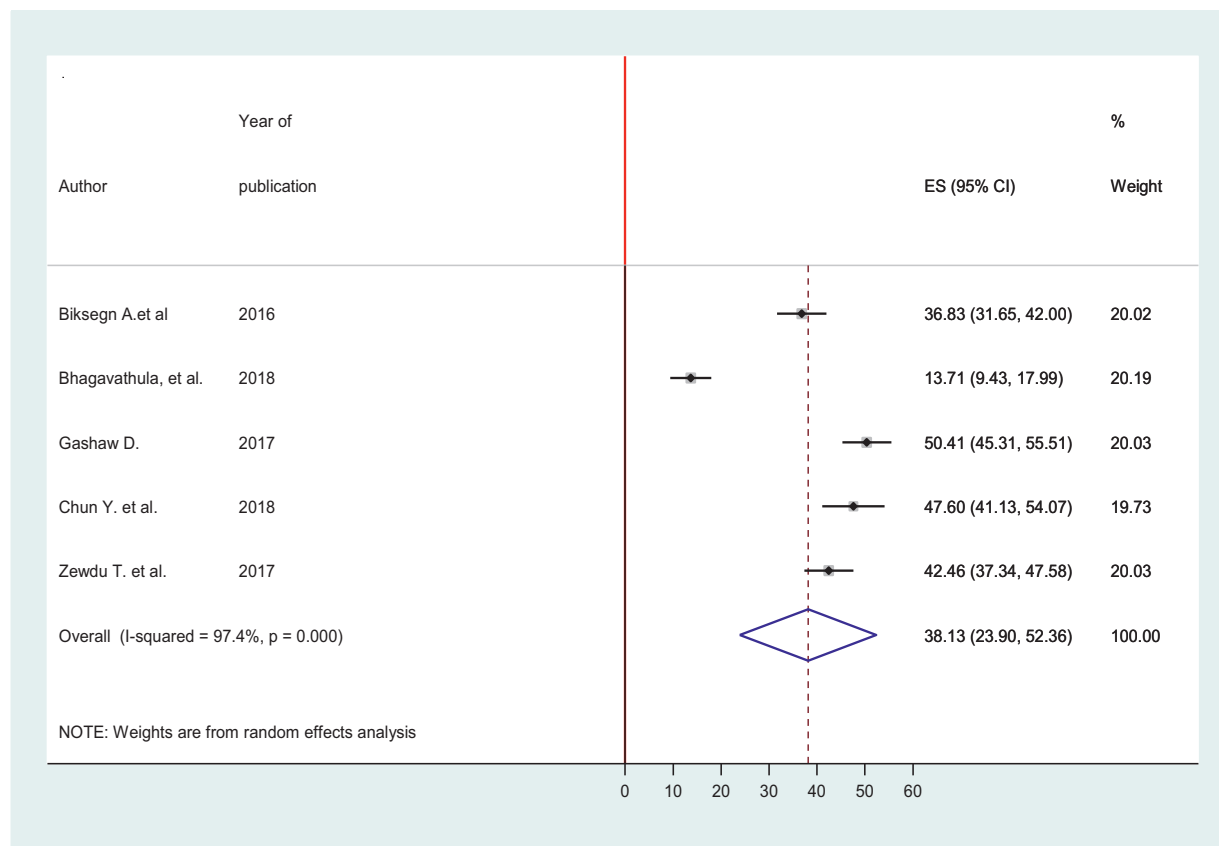
status of the study areas and participants. On the other hand, the burden of burnout in this study is higher than that of studies conducted among health professionals in Ghana (9.9%),<sup>39</sup> Ecuador (2.6%),<sup>40</sup> Andalusia, Spain (8.19%),<sup>5</sup> Canada (34.1%),<sup>41</sup> Tehran, Iran (17.6%),<sup>42</sup> and Aracaju, Brazil (6.7%-10.8%).<sup>43</sup> The possible reason for these differences could be the variation in workplace culture, the number of patients, the nature of the health system, and working conditions.

**Table 2** Factors associated with occupational stress among HCWs in Ethiopia

Variables	No. of Studies	Sample	OR (95% CI)	$I^2$ (%)	<i>P</i> Value
Sex					
Female	7	2036	1.92 (1.12-3.28)*	86.8	<.001
Male			1		
Marital status					
Married	7	2035	1.14 (0.47-2.75)	95.2	<.001
Not married			1		
Work experience					
<5 y	5	1302	1.96 (0.38-10.18)	97.5	<.001
≥5 y			1		
Age					
≤25 y	4	1188	1.40 (1.03-1.90)*	0	.55
>25 y			1		
Job satisfaction					
Satisfied	2	952	0.29 (0.16-0.52)*	77.4	.035
Not satisfied			1		
Educational status					
Diploma	5	1322	2.76 (1.05-7.24)*	92	<.001
Degree and above			1		
Work shift					
Absent	2	455	0.80 (0.18-3.47)	89.4	<.001
Present					

\* Significant at  $P < .05$ .





**Fig 6** Forest plot showing the pooled burden of burnout among HCWs in Ethiopia.

In the current study, female health workers had more vulnerability to occupational stress than their male counterparts. This finding is supported by other studies conducted in Slovenia<sup>34</sup> and Jordan.<sup>31</sup> This may be because of sociocultural effects on women such as extra responsibilities at home and workloads. Younger HCWs were more affected by occupational stress than older HCWs. The possible explanation for this finding is that young HCWs are mostly beginners so that they encounter difficulty in adapting to the health care system and responsibility as well as the patient's reaction. In addition, older workers learn how to manage occupational stress over time.<sup>38</sup>

HCWs who were satisfied with their job were less prone to occupational stress, which is in line with a previous study.<sup>34</sup> This is because workers become less stressed when they are satisfied with their job. HCWs with a lower educational level were more likely to develop occupational stress. This might be because of the lower salary scale that creates imbalance between benefits and workload. However, this finding is contradictory to a study done in Uganda.<sup>44</sup> This contradiction could be because of the difference in the career and promotion system of the 2 countries.

This study revealed that currently married HCWs were less likely to be affected by burnout syndrome than

**Table 3** Factors associated with burnout among HCWs in Ethiopia

Variables	No. of Studies	Sample	OR (95%CI)	I <sup>2</sup> (%)	P Value
Sex					
Female	2	617	0.76 (0.53-1.11)	0.0	.603
Male	1				
Marital status					
Married	3	975	0.70 (0.53-0.93)*	77.6	.012
Not married	1				
Educational status					
Diploma	2	727	0.56 (0.41-0.78)*	46.0	.174
Degree and above	1				
Work shift					
Absent	3	951	0.70 (0.52-0.93)*	77.0	.013
Present					

\* Significant at  $P < .05$ .

nonmarried HCWs. A previous study revealed that single employees are a greater risk of burnout.<sup>38</sup> This could be because of the social support between couples as unmarried workers have less social and family support.

This finding contradicted a previous study.<sup>39</sup> This discrepancy might be because of the difference in sociocultural values across the study settings. HCWs who had low educational levels (diploma) were more affected by burnout syndrome than HCWs with a high educational level (degree). This might be due to the difference in payment across carriers.

HCWs working without shifts (floating hours) were more likely to be affected by burnout syndrome. This may be because they could have extra time for recreational activities if they worked in shifts.

### Study limitations

Any interpretation of the findings of this study should be done with a consideration of some limitations. Original articles used different tools that had variable outcomes of occupational stress and burnout. Moreover, primary studies were conducted across different health professionals, and health institutions ranged from health centers to hospitals.

### Conclusions

The current study indicated that more than half and more than one-third of HCWs were affected by occupational stress and burnout, respectively, in Ethiopia. Sociodemographic and occupation-related factors affect occupational stress and burnout among HCWs. Measures that improve job satisfaction, career development, and educational opportunities should be strengthened.

### Suppliers

- a. EndNote, version 7.2; Clarivate Analytics.
- b. Microsoft Excel; Microsoft Corporation.
- c. Stata for Windows, version 14; StataCorp.

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