

Gender and Burnout Syndrome among Health Care Workers in Ethiopia - A Systematic Review and Meta-Analysis

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Abstract

The purpose of this meta-analysis was to assess the association between Gender and Burn out syndrome among health care workers in Ethiopia. Previous findings on the association of gender and burn out syndrome have reported different results. We use data from four studies to do a meta-analysis. We applied the random-effects analytic model and calculated a pooled odds ratio. The odds ratios for all studies revealed no statistically significant association of Burn out syndrome with Male relative to Female (OR = 1.15; 95% CI: 0.48–2.71, Heterogeneity: Tau² = 0.55; Chi² = 12.17, df = 3 (P = 0.007); I² = 75%, Test for overall effect: Z = 0.31 (P = 0.76). The proportion of Burn out syndrome among male and female health professionals is 31.31% (578). 35.43% (302) respectively. The overall proportion of Burn out syndrome among health professionals is 32.73% (880).

Keywords: Burnout • Health care workers • Ethiopia • Gender

Introduction

The term "Burnout" was coined from the USA in 1970 as a syndrome of emotional exhaustion, cynicism, depersonalization in relationships with workers, and reduced personal accomplishment that can occur in any individuals due to excessive work in stressful conditions [1].

Emotional Exhaustion (EE) is the central component of the syndrome, and for most practical purposes, the term Burnout is synonymous with the experience of exhaustion. Depersonalization (DP) is an attempt to put distance between oneself and service recipients by actively ignoring the qualities that make them unique and engaging people. It is characterized by a negative and unaffected attitude towards their patients. Feeling of lack of Personal Accomplishment (PA) arises when one's efficiency is compromised by lack of adequate resources to cope [2].

However, some occupations are more likely to have the peculiar characteristics of the syndrome. Occupations whose activities have emotional involvement are considered at higher risk for burnout syndrome, especially those who work directly with other people, assisting them or as responsible for their development and wellbeing. Therefore, people who are dedicated to teaching, nursing, medicine, psychology, and policing are considered more predisposed to the syndrome [3,4].

Study involved 53,846 nurses using Maslach burnout inventory results indicated that highest levels of burnout among nurses in Japan. Medium levels of nurse burnout were reported in United Kingdom, New Zealand, and Canada. Nurses in Germany had the lowest levels of burnout out of all the 6 countries. In addition, all the nurses in the 6 countries agreed that nurse assessed quality of care diminished as a result of burnout [5].

Naude and Rothmann reported that burnout has also been associated

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with reduced organizational efficiency and work-related problems such as employee turnover, low morale, poor quality of care, lower productivity, absenteeism and interpersonal problems [6].

In Ethiopia, very few studies were conducted on burnout but there is no study conducted on a systematic review and meta-analysis of gender for burn out syndrome among health care workers in Ethiopia and previous studies done in Ethiopia on conceptualization of burnout among primary health workers, assessing factors that affect the motivation of health care workers, and burnout status and work-related stress of the health professionals working at hospitals [7-10]. Therefore, it is useful to address this gap and manage burnout among health care workers in Ethiopia on Gender basis. Hence, this study aimed for assessing the association between gender and burnout syndrome among health care workers in Ethiopia.

Materials and Methods

Data

Electronic databases were searched on reference manager software and quality assessments of the included studies were performed by assessing the risk of bias. A meta-analysis was applied to test the association between Gender and Burn out syndrome among health care workers in Ethiopia. Words used to search literatures are, 'factors associated with burn out', 'burnt out in Ethiopia', 'factors associated with burn out in Ethiopia'

Study selection

Figure 1 shows the selection process of the articles searched. The initial database search resulted in 122 published English-language studies after deleting unrelated titles. The abstracts were read and studies that did not meet the inclusion criteria were excluded. After removing duplicates, this resulted in 27 studies on burn out among health care workers. After the full article examination, 4 studies met the inclusion criteria [11-14]. The rest were excluded for reasons being, studies not in Ethiopia and studies not report Gender and burn out.

Measures

Burnout was the outcome variable. All the included studies have used the Maslach Burnout Inventory-Human, Service Survey (MBIHSS) questionnaire to assess burnout. The MBI-HSS is a reliable and valid instrument to

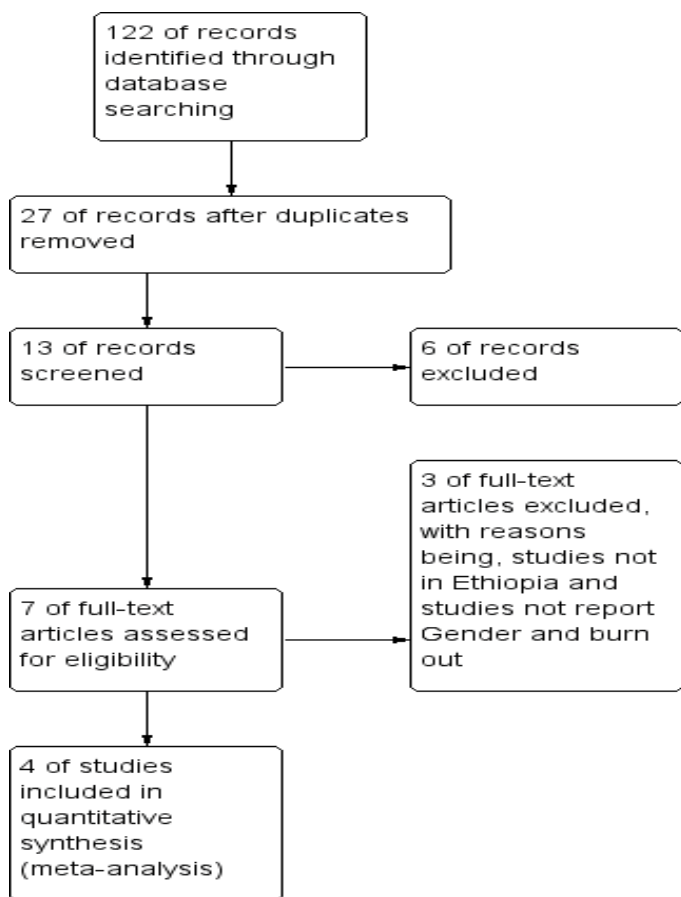


Figure 1. Study flow diagram.

assess burnout [15,16]. High emotional exhaustion is indicated by a score ≥ 27 , high depersonalization is indicated by a score ≥ 13 , and low personal accomplishment is indicated by a score ≤ 31 . Participants were identified as having a burnout if they scored high in EE and DP, and low in PA.

Analysis

By design, this study is secondary data analysis. Using Review Manager Version 5.3 software and Meta Essential software. We determined pooled odds ratios and associated 95% confidence intervals to describe the relationship between Gender and Burn out among health care workers in Ethiopia. We calculated pooled odds ratios across the studies using the Mantel-Haenszel (MH) statistic (the DerSimonian-Laird method or random effect model). We applied the random effects analytic model to account for inter survey variation and to provide a more conservative effect than a fixed model would have provided. The I^2 statistics were used to assess the variability among the included studies and above 50% was considered as significant.

Results

Study characteristics

Table 1 provides information on the research methods, year, and the focus of the included studies. The 4 studies were published between 2016 and 2019. The proportion of Burn out syndrome among male and female health professionals is 31.31% (578), 35.43% (302) respectively. The overall proportion of Burn out syndrome among health professionals is 32.73% (880). Table 2 provides information on gender and burn out among health care workers in Ethiopia. The odds ratios for all studies revealed no statistically significant association of Burn out syndrome with Male relative to Female (OR = 1.15; 95% CI: 0.48–2.71, Heterogeneity: Tau² = 0.55; Chi² = 12.17, df = 3 (P = 0.007); I² = 75%, Test for overall effect: Z = 0.31 (P = 0.76) (Figures 2-4, Tables 3 and 4).

Table 1. Characteristics of the included studies.

Author/Year	Sample Size	Title/Study Design
Bhagavathula et al. [11]	250	Prevalence of burnout syndrome among health care professionals working at Gondar University Hospital, Ethiopia/A cross-sectional study.
Adbaru et al. [12]	369	Magnitude of burnout and its associated factors among nurses working in public hospitals of Amhara regional state, Ethiopia/cross-sectional study.
Haile et al. [13]	151	Prevalence and associated factors of burnout among Debre Berhan University medical students: a cross-sectional study.
Habulu Bonsa [14]	128	The prevalence and associated factor of burn out among anesthesia providers in tash, 2019.

Table 2. Gender and Burn out among health care workers in Ethiopia.

S. No	Gender	Burn out	
		Yes	No
Bhagavathula et al. [11]	Male	27	168
	Female	7	46
Adbaru et al. [12]	Male	100	84
	Female	86	99
Haile et al. [13]	Male	37	86
	Female	12	9
Habulu B [14]	Male	17	59
	Female	2	41

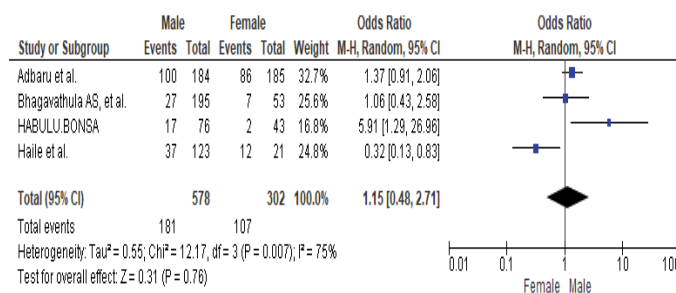


Figure 2. The forest plot on gender and burn out among health care workers in Ethiopia.

Table 3. Egger regression estimate.

Egger Regression	Estimate	SE	CI LL	CI UL
Intercept	-0.17	2.71	-8.79	8.45
Slope	0.22	0.93	-2.75	3.19
t test	-0.06			
p-value	0.956			

Begg & Mazumdar	
Δ_{xy}	-2.00
Kendall's Tau a	-0.33
z	-0.68
p	0.497

Table 4. Regression estimate.

Regression estimate	Estimate	SE	CI LL	CI UL
Intercept	0.00			
Slope	0.17	0.18	-0.39	0.72

Discussion

In our systematic review and meta-analysis the odds ratios for all studies revealed no statistically significant association of Burn out syndrome with Male relative to Female (OR = 1.15; 95% CI: 0.48-2.71, Heterogeneity: Tau² = 0.55; Chi² = 12.17, df = 3 (P = 0.007); I² = 75%, Test for overall effect: Z = 0.31 (P = 0.76).

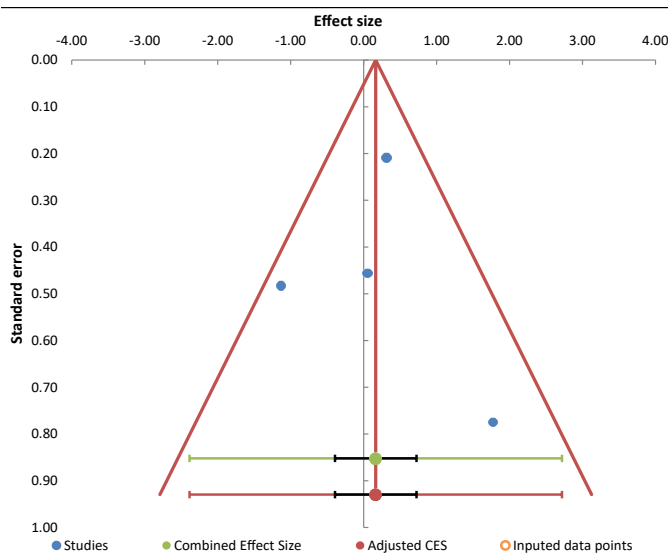


Figure 3. The funnel plot on gender and burn out among health care workers in Ethiopia.

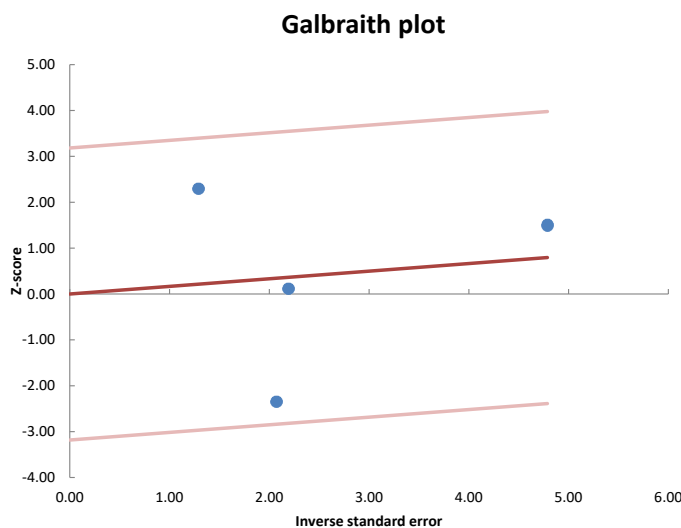


Figure 4. The Galbraith plot on gender and burn out among health care workers in Ethiopia.

Previous studies have identified that demographic variables such as gender, younger age, and experience were some of the predictive factors for burnout [17-20]. Previous study showed that a higher burnout incidence among males and other study report higher magnitude among female [11,21]. However, other studies found significant association between gender and burnout [14,22-23].

Gender and professional differences were not well understood, females and nurses were reported in higher magnitude than males in previous studies [21-24]. This variation between males and females with respect to burnout were due to cultural issues involved in socialization process [24-27].

The variation between our study finding and other previous studies may be due to difference in study population, sample size, culture and socioeconomic status. Our study showed that burnout was not significantly associated with gender and it is consistent with previous studies [13,28].

Limitations of the Study

First, this systematic review and meta-analysis included small number of studies in Ethiopia due to shortage of published articles in Ethiopia and this may be source of publication bias which is not detected by Egger Regression and Begg and Mazumdar

Second, all included studies used self-administered questionnaire that is validated MBI scale, thus, some of the respondents may be overestimated or underestimated due to motivations and cultural factors which might lead to recall bias.

Conclusion

Our study showed that there is no statistical significant difference between male and female for burnout syndrome among health care workers in Ethiopia.

Data Availability

All data are included in the paper.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Authors Contributions

1. Kaleab Tesfaye Tegegne, Eleni Tesfaye Tegegne and Mekibib Kassa Tessema were responsible for conceptualization, project administration, software, supervision, and development of the original drafting of the manuscript.
2. Kaleab Tesfaye Tegegne, Eleni Tesfaye Tegegne, Wosenyeleh Semeon Bagajjo, and Mekibib Kassa Tessema were participated in quality assessment of articles, methodology, validation, and screening of research papers.
3. All authors contributed with data analysis, critically revised the paper, and agreed to be accountable for their contribution.

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Ethics Approval and Consent to Participate

Not applicable.

Competing of Interest

The authors have declared that there is no competing interest.

Consent for Publication

Not applicable.

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