BURNOUT AND PROFESSIONAL SATISFACTION AMONG PRIMARY HEALTHCARE PROVIDERS IN SOUTHERN ETHIOPIA

MEDHIN SELAMU

Dissertation thesis submitted in partial fulfilment of requirement for the degree of doctor of philosophy (PhD) in Mental Health Epidemiology Addis Ababa University, Ethiopia

October 2018

ADDIS ABABA UNIVERSITY GRADUATE STUDIES

BURNOUT AND PROFESSIONAL SATISFACTION AMONG PRIMARY HEALTHCARE PROVIDERS IN SOUTHERN ETHIOPIA

A Dissertation submitted to the School of Graduate Studies of Addis Ababa University in partial fulfilment of the requirements for the Degree of Doctor of Philosophy (Ph.D.) in Mental Health Epidemiology

BY

MEDHIN SELAMU (MSW)

Supervisors

Abebaw Fekadu (MD, PhD)

Prof Sir Graham Thornicroft (MD, PhD)

Charlotte Hanlon (MD, PhD)

October 2018

DISSERTATION APPROVAL

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Dissertation Title

Burnout and professional satisfaction among primary healthcare providers in Southern Ethiopia

BY: Medhin Selamu

SCHOOLS OF MEDICINE AND PUBLIC HEALTH, ADDIS ABABA UNIVERSITY

APPROVED BY THE EXAMINING BOARD

----------	----------
Chairman, Examining Board	**Date**
----------	----------
Supervisor (Primary)	**Date**
----------	----------
Supervisor (Secondary)	**Date**
----------	----------
External Examiner	**Date**
----------	----------
Internal Examiner	**Date**
----------	----------
Internal Examiner	**Date**

DECLARATION

I declare that this thesis represents my own work, except where due acknowledgement is made and that it has not been previously included in a thesis, dissertation or report submitted to this University or to any other institution for a degree or other qualification.

Name: Medhin Selamu

Signature: _____

Date: _____

Place: _____

Date of submission: _____

This dissertation has been submitted for examination with my approval as University Supervisor.

Name: Dr Abebaw Fekadu

Signature: _____

Date: _____

DEDICATION

To My Mother W/ro Almaz Woldemariam Debalke

List of original papers

1. Selamu M, Thornicroft G, Fekadu A and Hanlon C. **Conceptualisation of job-related wellbeing, stress and burnout among healthcare workers in rural Ethiopia: a qualitative study**. BMC Health Services Research (2017). DOI 10.1186/s12913-017-2370-5
2. Selamu M, Hanlon C, Medhin G, Thornicroft G and Fekadu A. **Burnout and professional satisfaction of primary healthcare workers in rural Ethiopia**. International Journal of Mental health systems (2018) under review.
3. Selamu M, Hanlon C, Medhin G, Thornicroft G and Fekadu A. **Burnout among primary healthcare workers during implementation of integrated mental healthcare in rural Ethiopia: a cohort study.** BMC Human Resources for Health (2018) under review

Table of Contents

List of Tables

List of Figures

Acronyms

CY= Cynicism

EE= Emotional Exhaustion

FGD =Focus Group Discussion

FMOH= Federal Ministry Of Health

HSS= Human Service Survey

HCW= Healthcare Worker

HEW=Health Extension Worker

IDI =In-Depth Interview

IN= Work Engagement

IRB =Institutional Review Board

JDC =Job Demand Control

JDCR =Job Demand Control Resource

JDCS =Job Demand Control Support

JRS = Job Related Stress

MBI =Maslach Burnout Inventory

mhGAP= mental health Gap Action Programme

PA =Personal Accomplishment

PHC =Primary Health Care

PRIME= Programme foR Improvement of Mental health carE

PRISMA= Preferred Reporting Items for Systematic Reviews and Meta-Analyses

SSA= Sub Saharan Africa

SD= Standard Deviation

WHO= World Health Organisation

Abstract

Background: Wellbeing of healthcare workers (HCWs) is important for the effective functioning of health systems; it impacts the health service quality and patient outcome. HCWs are at an increased risk of stress and burnout both the nature of their work and their context of their work, but this has been little investigated in low income countries. The aim of this study was to: (1) explore the conceptualisations of wellbeing, stress and burnout, (2) assess the level of burnout and, professional satisfaction and (3) evaluate the short-term outcome of burnout and associated factors in the context of mental health service provision among HCWs providing healthcare in a rural districts in Southern Ethiopia.

The study has followed a mixed methods approach divided into three overlapping studies.

<u>Study one</u> (conceptualisation of burnout)

Methods: was a qualitative study conducted in the Silti zone. A total of 52 frontline primary HCWs participated in either the in-depth interviews (n=18) or Focus Group Discussions (FGDs) (4 groups, total n=34). Data were analysed using thematic analysis.

Results: Most participants conceptualised wellbeing as absence of stress rather than as a positive state. Many threats to wellbeing were identified. For facility-based workers, the main threats to wellbeing were inadequate supplies leading to fears of acquiring infection and concerns about performance evaluation. For community -based health workers, the main threat was role ambiguity. Workload and economic inefficiency were concerns for both groups. Burnout and its symptoms were recognised and projected by most as a problem of other healthcare workers. Derogatory and stigmatising terms, such as, “chronics”, were used to refer to those who had served for many years and who appeared to have become drained of all compassion. Most participants viewed burnout as inevitable if they continued to work in their current workplace without career progression. Structural and environmental aspects of work emerged as potential targets to improve wellbeing, combined with tackling stigmatising attitudes towards mental health problems. An unmet need for intervention for healthcare workers who develop burnout or emotional difficulties was identified.

Study two (level of burnout)

Methods: was a sequential, mixed quantitative and qualitative methods study of HCWs working in all 66 rural primary healthcare facilities (n=145) of the Sodo district, South Ethiopia, where a new integrated mental health service was being implemented. First a quantitative cross-sectional survey was conducted. The Maslach Burnout Inventory (MBI) was the primary measure of burnout, comprising three domains: emotional exhaustion, cynicism and reduced feeling of personal accomplishment. Cynicism was excluded from most analysis because of poor internal consistency of the domain. A set of instruments measuring professional satisfaction and psychosocial stress were also included. All instruments were self-administered. To assist understandings of the quantitative findings, four FGDs were conducted with 17 community and 16 facility-based HCWs.

Results: A total of 145 HCWs who had worked for a median of 5.0 (25^{th} and 75^{th} percentiles or interquartile range (IQR) 0.4, 12) years participated in the study. Most participants were female (62.1%; n=90) and working in healthcare facilities (65.5%; n=86); a third were community-based health extension workers. The median score (IQR) on the MBI was 3 (0, 8) for emotional exhaustion, and 34 (24, 40) for reduced personal accomplishment. High depression symptom scores (adjusted Odds Ratio (aOR) 1.19, 95% CI 1.05, 1.34), poor social support (aOR 1.45, 95% CI 1.12, 1.86), and experiencing two or more stressful life events (aOR 1.41, 95% CI 1.12, 1.95) were associated with higher emotional exhaustion. Only about half (50.8%) reported a high level of job satisfaction. FGD participants spoke of high levels of burnout and job-related stress, which the participants believed was under-reported in the quantitative study due to the overwhelming expectations to be strong and exemplary in the eyes of the community.

Study three (short-term outcome of burnout)

Methods: was a longitudinal follow up of the study two participants (145 primary HCWs working in the Sodo district). Burnout was assessed at baseline (when the new service was being introduced), as part of the initial cross-sectional survey, and after six months. Multivariate logistic regression and generalised estimating equations (GEE) were used to assess the association between burnout and relevant work-related and psychosocial factors. Results were considered statistically significant whenever p-value was less than 0.05.

Results: A total of 136 (93.8%) of PHC workers were re-interviewed after six months. There was a non-significant reduction in the burnout level between the two time points. In GEE regression models, high depression symptom scores (adjusted mean difference (aMD) 0.56, 95% CI 0.29, 0.83 p<0.01), experiencing two or more stressful life events (aMD 1.37, 95% CI 0.06, 2.14 p<0.01) , being a community health extension worker (aMD 5.80, 95% CI 3.21, 8.38 p<0.01) and perceived job insecurity (aMD 0.73, 95% CI 0.08, 1.38 p=0.03) were significantly associated with higher levels of emotional exhaustion.

Conclusion: Ethiopian primary healthcare workers, particularly community health workers, face job-related stress and experience symptoms of burnout, which may contribute to the dissatisfaction of both patients and HCWs. However, the overall prevalence of burnout was lower than expected. There was also little change in severity score in the short-term. At least in the short-term, there is no apparent negative impact on burnout of adding mental healthcare into the care portfolio of PHC workers.

Recommendation: Longer term and larger scale studies are required to substantiate these findings and understand the issue in depth. Future qualitative studies need to be done to understand the expression and impact of burnout in this setting and how barriers to detection may be overcome. Contextually relevant interventions also need to be developed and tested, giving priority to community health workers. Preventive works such as routine screening of HCWs for job related stress might help to prevent burnout. Improving awareness about mental health and self -care may have impact on preventing burnout.

Chapter One: Introduction

1.1 Background

Worldwide, there is a shortage of HealthCare workers (HCWs) (1), which is particularly acute in Sub-Saharan Africa (SSA) (2, 3). In 2011, World Health Organisation (WHO) identified 57 low and middle income countries (LMIC) with a critical shortage of HCWs; 37 were in SSA, including Ethiopia (4, 5). LMICs healthcare system is expected to provide care to 24% of the world disease burden with only 3% of the global healthcare work force and small financial resources (6). This condition coupled with high turnover of HCWs is a serious threat to the quality, accessibility, and equitability of healthcare services(7) . Apart from the previously mentioned problems HCWs in LMICs are also exposed to poor wages, low socioeconomic status (8, 9), high workload, role ambiguity, challenging working conditions, (8, 10), limited support in handling disturbed patients (11) and poor management (12). These factors are also shared by studies from high-income countries (13, 14). Threats to the wellbeing of HCWs in SSA are, therefore, substantial. HCWs in these countries, with critical shortage of man power, may be at special risk of developing high burnout because of the high demand for care with limited resources.

An effectively functioning healthcare system is heavily reliant on the wellbeing of HCWs (15). The wellbeing of HCWs is essential to enhance their efficency, productivity, professional motivation, (16) and professional commitment(17). Compromised HCW wellbeing has an impact on; staff turnover (18) and 'brain drain' to wealthy countries as well as in-country to private and non-governmental sectors (19). This greatly affects the healthcare organisational costs due to the need for recruitment and training of new HCWs. Health service quality is also highly influenced by the skill and enthusiasm of staff, as well as their number and the availability of material resources (20). Indeed HCW wellbeing and patient safety are strongly associated (21). There is evidence that the poor quality of health services in sub-Saharan Africa is related at least in part, to the job satisfaction and level of motivation of HCWs, both of which are associated with wellbeing (16) . Moreover, to ensure accessible and equitable health services, as well as to attain health-related development goals such as the sustainable development goals (SDGs) and universal health coverage (UHC), the wellbeing of HCWs is of great importance (22). This was also emphasised by the World

Health Organisation (WHO) health human resource strategy 2030 (23), and the global code of practice for the recruitment of HCWs (24).

Many studies have consistently demonstrated that there is a high level of mental health problems, job related stress and burnout among HCWs (9, 10, 25-27). High levels of job-related stress can adversely affect the wellbeing of HCWs, leading to mental health problems and experience of burnout (28). Burnout is one of the threats to wellbeing and a global occupational hazard among HCWs and other human service professionals (9, 10). Burnout is a phenomenon resulting from exposure to continuous job-related stress (29). It is understood as a syndrome consisting of three sub domains. The first domain is emotional exhaustion (EE), which is a feeling of being overextended and inability to be compassionate to others. The second domain is a feeling of cynicism (CY) or depersonalisation in which the HCW distances themselves from the patient and begins to see them as impersonal objects. The third domain is a reduced feeling of personal accomplishment (PA). EE is considered a core element of burnout(30). In this state, the provider evaluates his/her work negatively irrespective of patient outcomes (31, 32).

In high income countries studies, prevalence of burnout among HCWs ranges from 12.6% (33) to 29.9% (34). In a large survey of mental HCWs in the United Kingdom, emotional exhaustion was reported to affect 20.1% (35). The prevalence of burnout in low and middle income countries (LMICs) has been found to be much higher although little studied; for example, affecting 68.0% of nurses in Tunisia (10) . Mental health problems such as mental distress also appear to be common among HCWs; in an Ethiopian study it was reported by 29.9% of the tertiary level HCWs (36). Another Ethiopian study conducted in a hospital has also reported that 36.7% of the participants have burnout (37).

Several factors have been found to be associated with the development of burnout. This includes personal factors such as socio-demographic (33, 38), psychosocial condition (39), level of depression (40, 41), substance abuse problems (27, 42) and physical health problems such as low back pain(27) . There are also work related factors such as role ambiguity, lack of experience (10) and team relationships (9). Therefore, the magnitude of the problem needs due attention because of the critical impact and consequences on the HCW and health service.

Burnout may have serious consequences for the quality of healthcare delivery, patient safety (43, 44) and the wellbeing of the HCW. Lower job satisfaction and employee's negative attitude towards their job are highly linked with burnout(45) . Development of burnout can impact the HCW's motivation (46), intention to stay in the position (47), compassion to (48), communicate with patients, (49) as well as service quality (50, 51). However, many studies have indicated that African HCWs have low job satisfaction (52-54) and high prevalence of burnout in LMIC(55).

Primary healthcare (PHC) facility is the place where health services are provided for most people across the world (56). In view of this, PHC is considered to be a key place for the achievement of the United Nations Sustainable Development Goals (SDGs), particularly for the achievement of Universal Health Coverage(UHC) by 2030 (57, 58).

Despite the ongoing effort to expand the health work force through expansion of training opportunities, the workforce of Ethiopia remains very low, with a HCW to population ratio of 0.7 per1000 population, which is much lower than the WHO recommended minimum HCW per population ratio of 2.3 per 1000 (59). The country is moving towards the goal of achieving healthcare coverage for all although it remains a disadvantaged country on most health parameters, including life expectancy, maternal mortality and infant mortality (60). There is a high level of unmet need for health services (61), which is exacerbated by the high turnover of staff (62, 63). In the Ethiopian Health Sector Transformation Plan (HSTP), the need to develop 'caring, respectful and compassionate' HCWs is emphasised as a means to transform primary care (64). HCW wellbeing is critical to achieving this goal, but the construct of wellbeing has not been investigated adequately in low-income countries like Ethiopia.

Mental healthcare is one of the neglected health services in most low- and middle income countries (LMIC). The available service is mostly centralized and led by the small number of mental health specialists, due to this and many other factors mental health problems have a huge treatment gap close to 85% (65). In 2008 the World Health Organization (WHO) has launched the Mental Health Gap Action Programme (mhGAP), to narrow this gap by integrating mental health service to primary healthcare through task sharing (66).There is an evidence on the feasibility of making mental health service accessible to the majority through task sharing (67). It is also proven to be cost effective, efficient (68) and less stigmatising

(69). Recently, the Ethiopian government has begun working on integration of mental health service into primary care through task sharing since 2012/13, which may be additional task for the HCWs (70). Therefore, in the initiation of a new service or improving the existing, one needs to give attention to issues pertaining to HCWs wellbeing who are the actual forerunners of the service. Because this will have an impact on the effective and efficent utilisation of HCWs. Adding another task on top of the existing workload may potentially be emotionally burdensome and lead to job related wellbeing problems such as burnout.

HCWs wellbeing in general, and level of burnout and professional satisfaction in the context of mental health service integration in particular is a less investigated area in LMICs especially Sub-Saharan Africa. (27, 49, 71). In addition, most of the available studies on the subject under investigation in LMIC have used cross sectional study design which does not allow to establish causal relationship (9, 10, 27, 72, 73).

Therefore,the aim of this dissertation study was first to explore the conceptualisations of wellbeing, stress and burnout. Second, to assess the burnout level and professional satisfaction and finally to evaluate the short-term effect of mental health service provision on the experience of burnout and associated factors among primary healthcare workers providing healthcare in a rural district in Ethiopia.

1.2 Statement of the problem

HCWs are the key role players in the service provision; their skill, enthusiasm, and number as well as the availablity of material resources can determine the type and quality of service they provide (15) . Though health profession may be satisfying for many HCWs, it can also be emotionally demanding or taxing. Due to this fact and related factors originating from the nature of health profession, HCWs face threats to their physical, social and psychological wellbeing. HCWs who do not face these threats may have better potential to deliver good healthcare service. Burnout is one of the common job related wellbeing problems faced by HCWs (10) .

Studies from high income countries (33-35, 74) and from LMICs (9, 10, 27) have indicated that HCWs experience high level of job related stress and burnout. In Sub-Saharan Africa there is evidence of poor quality of health service that is related with the HCW job satisfaction and level of motivation (75). Problems of HCW wellbeing is significant for the

healthcare system of the region (76), though the global health system is in the era of great stride, to attain UHC by 2030 (22). Ensuring HCWs wellbeing can be a necessary step to make HCWs effective and efficent. Evidence-based intervention is helpful to properly deal with HCWs wellbeing problem.

Despite the growing interest of studies in area of job related wellbeing small number of studies are done in LMIC. Most are from high income countries, evidence from the Sub-Saharan Africa is very limited. Findings from high-income countries may not be directly applicable to LMIC context. This is due to the differences in expected HCW roles, in particular the strong reliance on task-shifting to lower cadres of healthcare worker in LMICs, the level of disease burden and the weak health system infrastructure. This study can serve as a background evidence on the HCWs wellbeing particularly the level of burnout and professional satisfaction in rural Ethiopia, so that it can be used as a spring board for the development of evidence based interventions in Ethiopian or the Sub-Saharan African health sector. The results could inform policy and practice by showing the level of the problem, the need for further study as well as the direction of intervention development.

Investigation of wellbeing of both community- and facility-based primary HCWs in rural Ethiopia is both timely and necessary. This study can serve as baseline information for design HCW wellbeing programme in rural Ethiopia. The results could inform potential intervention to prevent burnout and promote professional satisfaction and wellness.

1.3 Rationale of the study

Job-related stress is one of the main causes of burnout (32, 77), and is listed by the International Labour Organisation (ILO) as one of the psychosocial occupational hazards faced by HCWs (78). There are multiple threats to HCWs wellbeing such as workload, stressful work environment and other various challenges. These conditions will eventually cause the HCW to be unwell and experience job related wellbeing problems such as burnout. Burnout is one of the problems faced by HCW globally, as observed in high income countries (33, 35) and LMICs (73, 79, 80) .

There is evidence that burnout has an impact on patient care (81), the healthcare facility (82) and the HCW (83). HCWs with burnout are less involved (84), have difficulty to concentrate or pay attention to details (35) and poor interpersonal communication with their patients and colleagues (85). This all can affect the HCW ability to deliver quality and safe service (75). This is likely to also increase cost due to absentism, reduced efficiency and efficacy of the HCW, poorer quality of care and treatment error. HCW will also face this consequence themselves and pay the cost by being victims of physical, psychological and social problems resulting from their job.

Despite high disease burden and small number of HCWs in Sub-Sahara Africa, issue of HCWs wellbeing did not get enough attention. Wellbeing, burnout and job related stress among HCWs has not been investigated adequately in low-income countries like Ethiopia. Findings from high-income countries may not be directly applicable and generalisable to LMIC. This may be due to differences in the culture, work environment, the expected HCW roles, in particular the expectation of strong reliant on task-shifting to lower cadres of healthcare workers in LMICs, the level of disease burden and the weak health system infrastructure. Available studies are cross sectional most of the studies in LMIC have used cross sectional study design which does not allow to establish causal relationship (9, 10, 27, 72, 73, 86). As a result investigation of wellbeing of both community- and facility-based primary HCWs in rural Ethiopia is both timely and necessary. Besides limited emphasis is given to holistic concepts of HCW-wellbeing, which takes into account the physical, mental, and social aspect of the HCW .

Moreover, there are no studies carried out during the implementation of integrated mental health service to the primary healthcare (PHC). This study is one of the pioneer longitudnal studies for Ethiopia as well as Sub Saharan Africa. Therefore, any effort targeted at addressing health system problems with focus on primay healthcare and primary HCWs is very strategic to effectively and efficently utilise the small number of HCWs.

1.4 Significance of the Study

The results of this study will have a potential significance: on HCWs, patients, healthcare facilities and policy makers. It will also contribute to the improvement of healthcare service in Sub Saharan Africa by uncovering the evidence and conceptualiation of wellbeing, job related stress and burnout, as well as estimating the level of burnout and investigating the course of burnout in the context of integrating mental health service. It has significance for the following areas;

a. For research

The results of this study can serve as a baseline scientific evidence on the level of burnout and professional satisfaction as well as factors associated with HCWwellbeing in rural Ethiopia. It will provide a detailed evidence on the conceptualisation of wellbeing, job related stress and burnout among rural primary HCWs.This may have applicability to the broader Sub-Saharan African (SSA) region and LMIC primary HCWs. The results of this study showed that that there is a need for further exploration of the issue.

b. For practice

Since PHC is the place that serves most of the community members, this evidence will help to show situation of HCWs burnout. It will help identify which group of primary HCW should get priority for intervention. It may also have implication for improving quality of healthcare service.

c. For Education

The evidence will have a potential use for health sector training by showing the importance of self care or HCWs wellbeing. It will also show the importance of HCWs wellbeing to improve the health service and provide safe service.

d. For policy

This information will be benificial to HCWs and patients in order to adress issues of burnout. It will inform policy makers and planners about HCW wellbeing and the indicators of what could be done to prevent HCW burnout or to take a proactive measure.

1.5 Organisation of the thesis

This thesis contains seven chapters.

a. Chapter one: Introduction, explains the background information, statement of the problem and rationale of the study.

b. Chapter two: Literature review, a scoping review that summarises the global evidence on the broader context of wellbeing, job related stress and burnout among HCWs.

c. Chapter three: Research objective and questions as well as hypothesis

d. Chapter four: Research materials and methods, describes how the study was conducted in order to answer the research questions, how the data was analysed and described. It also presents the measures used and the rational for the use.

e. Chapter five: Results, presents the analysis of the main findings of the study

f. Chapter six: Discussion, present the findings of this study in light of the existing evidence

g. Chapter seven: Conclusion and recommendation, based on the results of the study and analysis conclusion has been made. Implication for policy, clinical practice and further research is also presented in this section.

Chapter Two: Literature review

2.1 Overview of literature

This section will systematically summarise the results of both published and unpublished literature related with healthcare workers (HCWs) wellbeing, burnout, job related stress and professional or job satisfaction. Though the main focus of this study is burnout as an umbrella concept, an extensive summary of studies on the closely linked concepts of wellbeing, and job related stress are also presented.

Scoping review methodology is guided by Joanna Briggs Institute handbook (87) on scoping reviews approach was used. The primary targets of the search was on studies on HCWs wellbeing, job related stress and burnout in LMIC but some HICs (high income countries) were also included with the rational of having comprehensive evidence. Finally, a critical appraisal of the more recent evidence on wellbeing, stress, burnout and studies from Ethiopia was done.

2.2. Methods

Outcome of interest

The main outcome of this review was healthcare workers burnout, stress and wellbeing

Search Database

For the online search the electronic database of PubMed was conducted from January 2010 up to August 2018. This was supplemented by manual search.

Search terms

The following terms were used to identify wellbeing: Wellbeing OR health. The search terms used for primary health care workers: “healthcare workers” OR “community health workers” OR “health workers” OR nurses OR midwifes. The terms used for stress and burnout were burnout OR Stress OR “job related stress” and we used the World Bank definition and list of countries to identify LMICs. The search terms for wellbeing, primary health care workers, stress and LMICs were combined with the Boolean ‘AND’. In addition, manual search was

done to identify related policies, dissertations and unpublished studies from Ethiopia and LMIC.

Eligibility criteria

Language*:* The search was limited to English language

Year of publication: was restricted to the past eight years (2010-2018) for the PubMed search only.

Study design: qualitative, cross sectional, case control and cohort studies.

Study populations: all type of healthcare workers.

Publication status: all types were included (published, thesis and unpublished).

Location of the study: Low and Middle Income Countries (for online search only)

Data extraction

Data were extracted by the principal investigator using a format that included key outcomes and methods of the studies. Articles were first screened based on their title and abstract. Then the full articles were screened. Then the data were extracted using data extraction format which was developed for the purpose of this review. Excluded studies and reason for exclusion were documented.

Method of analysis

The results of the review is analysed and presented in a narrative manner.

Review process

The detail of the review process is presented in the following PRISMA diagram (Figure 1).

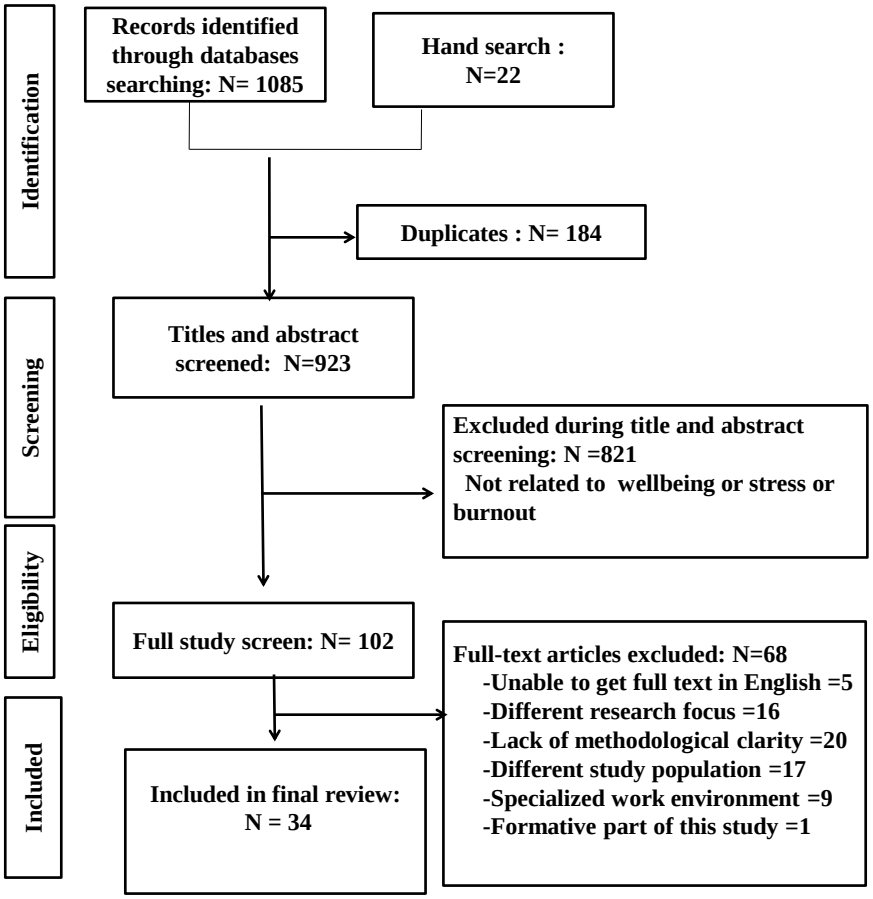


Figure 1: PRISMA flow diagram for study selection process

The summary of the review is presented in five main sections: overview of wellbeing, stress, burnout, primary healthcare work environment and Ethiopian HCWs wellbeing studies

2.3 Overview of wellbeing

This was based on an unstructured review of the broader literature on the conceptualisation and construct of wellbeing globally. Proper functioning in a daily life is highly dependent on wellbeing (88). Wellbeing is composed of an interconnected elements of physical (89), social and mental or psychological wellness (89, 90) which can impact one another (91). It is, and can be studied through subjective and objective measures based on the area of focus (92). Job related wellbeing is part of mental wellbeing that is explained by job related stress, burnout and job or professional satisfaction.

Wellbeing is a dimension of health and is conceptualised in various ways by different scholars. For some it is related to a state of mind and virtue (93), for others it is the ability to

effectively perform some life tasks. Generally speaking, the wellbeing model views the individual in a holistic manner and focuses on the interface between an individual's physical, social, psychological and spiritual life (94). Health and wellbeing are inseparable and integral elements of human life. According to the WHO, health is "the state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity"(95) .

Studies on wellbeing associate it with good life, happiness or health. Their range of focus could be on the degree to which one is feeling optimistic and enthusiastic about his/her life (96). For others it may also refer to the absence of harmful conditions in life (97) . The Ethiopian health policy has also stated a clear description and its importance by saying "physical, mental, and social wellbeing is a prerequisite for the enjoyment of life and for optimal productivity " (98). Generally wellbeing is a broad concept that is related with physical, spiritual and social domains of the individual life (99). There is evidence that care giving, job satisfaction and the interaction of all these components affects their physical, psychological and social wellbeing (100).

2.3.1 Theories/Models related to job and wellbeing

There are different theories or models in the area of job and job related wellbeing. These theories can be classified based on the area of focus as interactional, transactional, sociological, psychological, environmental, and individual. However this review focused on the first two and their description is:

2.3.3.1 Transactional theories/ models

These are theories that explain job related wellbeing in terms of emotional reaction or response to things happening in the work environment. Example of this model is the Effort-Reward Model (ERM) which gives precedence for the reward than control latitude of the job. The domains of reward are monetary, emotional or esteem related, and carrier development opportunities (85). As to this model emotional strain comes when there is an imbalance between the individuals effort and the rewards that he/she is gaining from the job (101).

2.3.3.2 Interactional theories/ models

These are theories that focus on the structural factors mainly at the work environment. These theories explain stress as a result of the work environment, particularly when there is high job

demand, low job control, and low social support that will lead to job related stress. Examples of these models are; Job-demand-control model (JDC), Job-demand-control-support (JDCS) model.

These two models (JDC and JDCS) are widely studied models. The basic assumption of JDC model is control over one's job is an important factor that determine the experience of job related stress. JDCS also took similar stand but adds the importance of social support in moderating the experience of job related stress (102).

The assumption in these models is to understand work related wellbeing the following concepts are essential.

1) Demand is the requirement of the job and it's fit with the time, skill and energy of the HCW (101, 103, 104).

2) Control is the ability to handle or the skill and knowledge to perform the job, the level of involvement in the decision making (101, 103).

3) Support is the prop up one is getting from leaders (supervisors), colleagues in the workplace and from any other social support system in his/her life.

4) Resource is the psychological, social and the physical resources that can facilitate work and contribute to the individual's job satisfaction (103, 105).

2.3.2 Classification of wellbeing

From the different conceptualisations of wellbeing the current study mainly focus on the health related descriptions of wellbeing. That is mainly the physical, social and psychological aspects of the concept.

Physical wellbeing: is an individual's wellbeing that is mainly related to a person's physical condition or stamina (97). It is an important component of wellbeing. Physical wellbeing has a profound impact on the HCWs level of engagement in their work. The inherent nature of the healthcare profession characterized by: long working hours with sleep deprivation; standing for long hours and carrying patients' takes a physical toll on the HCW. Work related musculoskeletal disorders such as neck and low back pain are common among HCWs (89).

This is also supported by a meta-analysis of studies on nurses work related psychosocial problems such as stress, burnout and its association with musculoskeletal disorder (106).

Social wellbeing: is a domain of life that has to do with an interaction between the person and his/ her surroundings. As to Keyes, social wellbeing has several domains such as integration, acceptance and contribution of an individual to the community (107). Our connection with the community is an important dimension of wellbeing in general and social wellbeing in particular (97). HCW's contribution to their community; level of integration, as well as their perceived sense of influence are important factors in determining their social wellbeing.

Psychological wellbeing: refers to the state of mind that is characterised by the ability to deal with and respond to stress and daily hassles in a socially acceptable manner (108). It is characterised by good feelings and attributes for life. From the different aspects of psychological wellbeing, in this study focus has been made on stress, job related stress and burnout.

Though wellbeing is a broad and complex concepts in many studies burnout and job related stress or stress are used as proxy measures of wellbeing (109). To summarise in this scoping review four studies reporting wellbeing were included their primary focus were health related quality of life (110), risk to health problems (89, 90) and substance abuse (111). (See Table 1)

Table 1: Summary of studies on Healthcare workers studies on wellbeing

Author Country Setting	Type of staff	Design Analysis	Sample size (response rate)	Tool	Objective	Results	Strengths/limitation	Inclusion critera
Kuo et al 2015 (90) Taiwan Population based	Physican, nurses and other professionals and controll group	Cohort Conditional logistical regression	218,319 control and 218,319 health professiona ls	Medical records using ICD 9 criteras	To compare the migraine risk differences between HCPs and the general population	Associated factors: Physicians, nurses, and other HCPs had higher migraine risks than did the general population adjusted for stroke, hypertension, epilepsy, anxiety, depression, and insomnia. Nurses and physicians had higher migraine risks than did other HCPs (AOR: 1.303; 95 % CI: 1.206–1.408, and AOR: 1.193; 95 % CI: 1.069–1.332, respectively).	Large sample size , response rate not reported. To evaluate the migarine they used the ICD 9 critra but how they measured it is not clear. Relevant study for the risks of HCWs to some physical illneses	Nation wide study
Obadejie et al 2018 (111) Nigeria Hospital	Health care workers; doctors, nurses, pharmacists and laboratory scientists	Cross sectional Descriptive statistics	256 (89%)	GHQ, AUDIT	To determine the pattern of alcohol use and factors associated with psychological well-being of HCWs	Prevalence: 5.9% were having either hazardous or harmful drinking. 17.2% had psychological distress Associated factors: marital status, years of practice, specialty of practice, presence of ongoing chronic illness, current stressors and level of alcohol use.	The inclusion critera lacks clarity. This is a good paper to see the association of alcohol use , mental distress and psychological wellbeing	Age 65 and below
Silva et al 2010 (110) São Paulo, South eastern Brazil, Hospital	registered nurses, nurse technicians and nurse assistants,	Cross sectional Ordinal logistic regression using proportiona l odds model	696 (69.9%)	Job Stress Scale, Effort-Reward Imbalance (ERI) and Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36)	To evaluate working conditions associated with health-related quality of life (HRQL) among nursing providers.	Prevalence: 22% have high strain and 8% showed an effort-reward imbalance at work. The dimensions with the lowest mean scores in the SF-36 were vitality, bodily pain and mental health. Associated factors: being a registered nurse were independently associated with low scores on the role emotional dimension. Those dimensions associated to mental health were the ones most affected by psychosocial factors at work.	Participants were predominantly females (87.8%) Registered nurses, nurse techni-cians and nurse assistants but the difference among those groups is not considered This study was secondary data analysis	Working for at least three months in the hospital
Tinubu et al 2010 (89) Nigera Hospitals	Nurses	Cross sectional Descriptive statistics	128(80%)	modification of the standardized Nordic questionnaire	to determine the lifetime, 12-months period and point prevalence of work-related musculoskeletal disorders (WMSDs); the associated job risk factors and the coping strategies toward reducing the risk among nurses from selected hospitals	Prevalence: 84.4% of the nurses have had WMSDs once or more in their occupational lives. The 12-months period and point prevalence rate of WMSDs at any body region was 78% and 66.1% respectively. Low back (44.1%), neck (28.0%), and knees (22.4%). 30.3% treated themselves or had visited other health practitioners for care. Associated factors: Nurses with > 20 years of clinical experience are about 4 times more likely to develop WMSDs than those with 11-20 years experience. Working in the same positions for long periods (55.1%), lifting or transferring dependent patients (50.8%) and treating an excessive number of patients in one day (44.9%) were the most perceived job risk factors for WMSDs.	Good response rate Participants selection and work setting is not clearly discribed	This study was delimited to nurses in active service only, those who left the workforce due to retire-ment or WMSDs or any other reason were not included in the current analysis.

2.4 Stress

There are two ways of studying stress: the first is taking stress itself as stimuli that can lead to different responses. The second is considering stress as a response to a given stimuli (112).Stress is a multifaceted process which involves a set of psychical and psychological responses to what is going on in or outside us. The interaction of the person between the physical and social environment could be the source of stress stimuli (113). Generally stress occurs when the demand in our environment exceeds the resource we have or our coping ability. Our body responds to stress in all of its dimensions: physically, psychologically, and socially.

Stressor is a factor that triggers an individual's response to stress or condition that affects the stable state and lead to stress reaction (114). Exposure to stress or stressor is not always harmful per se, but the duration of the exposure and the individual's response will determine the outcome of the exposure. For example when the exposure is for short duration the individual may respond in a peaceful manner. However, if the exposure is long term and continuous it will demand the individual more energy and tend to drain the individuals capacity to deal with it (115).

Job related stress is an occupational hazard that has its origins in the workplace (116). In workplace safety and health document of Centres for Disease Control (CDC) and prevention, it is defined as "the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker" (117). It is also defined job related stress as "a psychological state which can cause an individual to behave dysfunctionally at work and results from people's response to an imbalance between job demands and their abilities to cope" (118). Stress ~~it~~ is associated with social support (119), job satisfaction (120) , intention to stay in a given work place (121, 122) as well as health problems such as neck and or sholder pain 2016 (123) and depression (124).

A study among primary care workers in Brazil has also reported the positive association between stress and wellbeing (125). Job related stress is associated with multiple dimensions of work and personal life (See Table 2).

Seven studies were included in the review of this section. The participants of most of the studies were nurses (six out of seven) and different groups of healthcare workers were included in one study. The major outcome of the included studies were association of job related stress or occupational stress with; social support, job satisfaction, turnover, job performance, work related physical illness and workplace relationship. Most five out of seven were cross sectional studies and two were cohort studies. All studies except one (unspecified setting) were conducted in hospitals. Three studies have reported the prevalence of job related stress.

Table 2: Summary of studies on Healthcare workers studies on job related stress

Author **Study country** **Setting**	**Design** **Analysis**	**Sample size**	**Tool**	**Objective**	**Results**
Yu et al 2014 (119) China Hospital	Cross sectional logistic regression,	1144	Occupational Stress Inventory	to assess the relationship between occupational stress and social support	Social support significantly influences occupational stress
Chao et al 2015 (121) Taiwan Rural hospital	Cross sectional Structural equation modeling	344	Minnesota Satisfaction Questionnaire	To assess the relationship, between workplace stress, job satisfaction , performance, and turnover intentions	Workplace Stress had a positive effect on both Turnover Intention and job performance (JP) but a negative effect on satisfaction.
Cheng et al 2015 (120) Taiwan Hospital Longitudnal	general- ized estimating equations	206	Work Environment Nursing Satisfaction Survey Clinical Stress Scale	To explore the relationships between job stress, job satisfaction and related factors over time	Job stress was negatively correlated with job satisfaction.
Uzun et al 2015 (126) Turkey Hospital	Cross sectional Cluster analysis	120	Intercultural Sensitivity Scale, and Perceived Stress Scale.	To assess the relationship between cultural sensitivity and percieved stress	Cultural sensitivity and perceived stress are inversly correlated The average score of percieved stress (SD) 27.97(7.32)
Bahrami-Ahmadi, A et al 2016 (123) Iran Hospital	Longitudinal Descriptive statistics	1450	Nordic Questionnaire	to assess the role of work- related stress on development of neck and shoulder pain	The incidence of neck and shoulder pain was higher in nurses with high level of work- related stress. Work related stress 9.1% at baseline
Lin et al 2016 (124) Taiwan Hospital	Cross sectional Descriptive statistics	144	Nurse Stress Checklist, the Occupational Burnout Inventory and the Taiwan Depression Questionnaire	to examine the relationship between work stress and depression	There is correlations between work stress, burnout and depression. The average score of work stress (SD) 153.38 (50.56)
Oh et al 2016 (122) Korea Hospital	Crossectional Structural equationmodeling	508	Korean occupational Stress Scale-Short Form, Korean version of the Intent to Leave Instrument, quality care and adverse events items	to test a model linking workplace bullying and lateral violence with job stress, intent to leave, and, subsequently, nurse-assessed patient adverse outcomes (safety issues).	Job stress directly influence intent to leave, and nurse-assessed patient safety

2.5 Burnout

The term burnout and burnout syndrome are fairly recent construct, whose conceptualisation began in the 1970s. Herbert. J. Freudenberger (29), was the first person to coin the term burnout to explain the dynamic interaction between people's professional life and their wellbeing (127). This was mainly in relation to professionals' exposure to stress due to their work and their reaction towards that (128). For some, it is a state of psychological weariness that mostly appears among people who provide human service (105). As to Felton it has a physically and emotionally observable symptoms (129). Burnout focus on job related stress and the interface between the work environment and the person plus the individuals' response to the stress. Most agree that burnout is resulted from chronic or continuous exposure to job related stress.

Maslach and her colleagues elaborated the concept of burnout as a combination of sub-domains, these are emotional exhaustion, depersonalization or cynicism and reduced sense of personal accomplishment. Emotional exhaustion (EE) is a condition where a person runs out of the desire to help others; losses the capacity for compassion towards clients or loses their devotion to their job. Cynicism (CY) is a state when the service provider is no more able to create a humanly live connection with the patients/clients. It is a process and response to emotional exhaustion characterised by a dispassionate relationship of HCWs with clients. At this stage the HCW begins to consider the patients/ clients as objects. The third dimension of burnout is a decreased sense of personal accomplishment (PA). This happens regardless of the patients/clients outcome (128).

To this date, there is no single universal definition provided for the concept of burnout. However, there is a general understanding that it is the end result of long term exposure to job related stress, which is characterised by a collection of various psychological symptoms in reaction to the job related stressor (127). Burnout is not recognised as a mental disorder or problem in the Diagnostic and Sstatistical Manual Mental Disorders (DSM) (130). However, it is listed under adjustment disorder in the Dutch practice guideline for managing adjustment disorders (131) .Engagement is the exact opposite concept of burnout, which is a process of effectively managing stressors. It will be important to promote engagement among healthcare workers as a mechanism to enhance wellbeing (105, 116).

2.5.1 Prevalence of burnout among HealthCare Workers

The prevalence of burnout in LMIC ranges from 24.9% (132) up to 68% in Egypt and Tunisia(10) respectively, depending on the type of health profession as well as work environment of the HCW . On the other hand the prevalence of burnout in studies from high income countries ranges from 12.6% (33) up to 29.9% (34) , in addition a study on the morale of English mental health work force indicate that the level of emotional exhaustion among HCWs is 20.1% (35). An Ethiopian study among tertiary level healthcare workers indicated that 36.7% of the participants scored above the median of burnout and from those participants nurses consist 82.8% (37) (Table 3).

There were many studies who reported the prevalence of burnout among HCWs in both LMIC and high income countries. Most have used Maslach Burnout Inventory to measure burnout but their way of analysis and cut-off point is diverse. This as well as the reliability of the instrument in different context (i.e high income Vs LMIC) makes comparing the results challenging.

2.5.2 Factors associated with burnout and compromised wellbeing

The reviewed literatures revealed that HCW-wellbeing is associated with different aspect of personal and professional life. Proper understanding of the associated factors is important to know the causes, predisposing and protecting factors affecting HCW-wellbeing (77). These could be individual or work environment related.

The first factors are individual (personal) factors such as socio demographic factors, resilience, and assertiveness or HCWs ability to solve conflict. Many studies indicated that socio-demographic factors such as age, sex (27, 33, 133) are related with HCW- wellbeing, there is inconsistency with the findings. One study from LMIC indicated that being female will increase the odds of being affected by job related stress(27) . Similar result was also obtained by another study in (33) Qatar . However, the issue of gender requires caution in the interpretation because in most studies the proportion of female participants is higher than male. This may have resulted from higher number of females in the global health workforce(134).

Another interesting finding about associated factors is the one by Abdulla et al age, and year of experience are inversely associated with burnout as one’s year of service and age increase

the tendency to be affected by burnout will decrease (33) . The experience of job related stress is also influenced by level of responsibility in the healthcare team (10) . High emotional intelligence is associated with low experience of JRS and burnout (135). Similarly a study by Halbesleben, and Buckley noted that there is a relationship between burnout and personality type (77). Work family conflict is also other associated personal factor that lead to the experience of burnout (136). Work family interface and culture of the HCW are some of the related factors. Social support from the family and in the work place has also great impact in the HCWs wellbeing (119). Long working hours, high work load, conflict with co-workers or lack of harmonious work environment, responsible for wide range of tasks (137). In addition, it is worth to consider that HCW-wellbeing cannot be seen as purely emanating from challenges at the workplace.

The second main factor that is related with HCW-wellbeing is related with work environment. Work environment has a direct influence on the emotional wellbeing of HCW (138). The health care management(139, 140), work load (10, 127, 141) and risk of acquiring nosocomial infections are some of the factors that are associated with job related stress and burnout (127). Work load is a situation when the job demand is more than the capacity of the individual (116). Besides the imbalance between the demand of the job and the individual's ability to fulfil the demand is one of the risk factor to develop burnout affect engagement (142). In addition type of work has an impact on the HCW-wellbeing. Caring for chronic illness tend to increase the individuals predisposition to burnout (143).

Another set of work environment related factors that are linked with the environment and infrastructure were: weather of the area, location of the workplace such as rural versus urban has an impact on the HCW-wellbeing (34). Service type is also proved to have a link with wellbeing (35) . Exposure to traumatic incidents as well as dealing with difficult patients (11) and level of HCW performance (73). Different studies noted that HCW's burnout is associated with; job title (27) , level of education (144), job characteristics , socio-economic status particularly wage levels (34, 145), exposure to verbal or physical violence at work (132), dealing with difficult patients (27, 146) incompetence and inability to perform the job (147) lack or inadequate support from leaders (116, 139, 148).

There is, inconsistency with regard to the association between burnout and some socio-demographic factors like age, sex and level of education (116). A study by Johnson et al

indicated that job characteristics as well as belonging to different HCW group have no significant influence on the experience of job related emotional strain. However this study also indicated that qualification has an impact on the likelihood to experience job related stress (35) (see Table 3).

Table 3: Summary of studies on prevalence and factors associated with Healthcare workers burnout

Author Study country Setting	Type of staff	Design Analysis	Sample size	Tool	Objective	Results	Strengths/ limitation
Aloulou, et al 2013(10) Tunesia Hospital	Nurses	Cross sectional Multinomial logistic regression,	142 (64.5%)	MBI	Identifying prevalence, cause & perceived repercussion	Prevalence : Overall burnout 68% EE 45.8 % , CY 36.6% , and Reduced PA 22.5% Associated factors :case load, role ambiguity and undefined responsibility	The cut off point for MBI scale is no clear
Abdo et al 2015(132) Egypt Emergency hospital	Physician and nurses	Cross sectional Multivariat anallysis	Physicians 266(89.8%) nurses 284 (100%)	MBI	Prevalence of burnout and to identify some of the determinants of burnout	Prevalence: High burnout 24.9%, moderate burnout 66.0%, Reduced PA 97.7% Associated factors or predictors: age, sex, feq of exposure to violence, year of experiance, work burden, supervision and work activites	Good sample size and very good respnse rate. Burnout score was analysed as a continours variable
Lasebikan, &Oyetunde 2012(9) Nigera Hospital	Nurses	Cross sectional two-way ANOVA, multivariate risk analysis (logistic regression)	All nurses	MBI and GHQ-12	Prevalence of burnout	Prevalence: EE 39.1%, CY 29.2%, reduced PA 40.0% Associated factors: High EE with: doctor/nurse conflict, inadequate nursing personnel, and too frequent night duties. High CY with: doctor/nurse conflict and too frequent night duties Reduced PA with: high nursing hierarchy, poor wages , and too frequent night duties	Piloting was done to check the applicability and suitability of the tool / The sample size was not clearly mentioned explicitly; cultural validity of tools not assessed . MBI cutoff point is not mentioned
Karsavuran & Kaya 2017(148) Turkey Hospital	Head physicians, assistant head physicians, head nurse, assistant head nurse Administrator, assistant administrator	Cross sectional Pearson's correlation analysis	244 (54%)	MBI	Relationship between level of burnout and exposure to mobbing of the managers	Associated factors: Mobbing have a positive association with EE and CY and negaive association with PA	
Kabir et al 2016(38) Iran Health houses	Healthcare workers	Cross sectional Multinomial logistic regression	1141 (89%)	MBI	To determine job burnout job satisfaction rate and related factors	Prevalence: Average burnout 44.2%, 9.1% high burnout Associated factors: age , year of service, low level of education, number of children,	The MBI cutoff point is not clear

						dissatisfaction with income and physical enviroment	
Guo et al 2018 (145) China Hospital	Nurses	Cross sectional Linear regression	1016 (75.78%)	MBI	To investigate the prevalence and extent of burnout on nurses and its association with personal resilience.	Prevalence: mean (SD) EE 2.56 (1.26), CY 2.2 (1.14) PA 2.18 (1.12) Associated factors / predictors :Resilience (strength), demographic characteristics (exercise, marital status, alcohol use), Job characteristics (income per month, pt nurse ratio, shift work and professional rank)	Majority of the participants were female The authors used mean score as a cut off point with our informing us about data normality and rationale
Nie et al 2015 (149) China Hospital	Nurses	Cross sectional Logistic regression analysis	1212 (94.4%)	MBI	To investigate the relationship between burnout and social support	Prevalence:Moderate to severe EE 66%, 65% moderate to severe CY, 63% reduced PA Associated factor: EE, DP and PAs were negatively associated with Social Support.	Used validated version of MBI
Shi et al 2018 (146) China Hospital	Nurses	Cross sectional Multiple linear regression	696 (77.1%)	MBI	To investigate the impact of workplace incivility on job burnout of new nursing staff, to verify the partial mediating role of anxiety in the relationship between workplace incivility and job burnout	Associated factors: workplace incivility was positively correlated with anxiety and job burnout of new nurses. The positive relation between anxiety and job burnout was also significant	
Sun et al 2017 (150) China Hospital	Nurses	Cross sectional dominance analysis, regression analyses	602 (95.1%)	MBI	To quantitatively compare dimensions of job stressors' effects on nurses' burnout	Associated factors: job stressors and Burnout have strong positive correlations Interpersonal relationships and management issues most strongly predicted participants' burnout	
Wisetbor et al 2014 (151) Thailand Hospital	Healthcare workers	Cross sectional	2772 (52%)	MBI	To identify and describe the association between shift work and burnout among health care workers	Associated factors: shift worke, sleep hours per day and number of day off per month.	
Kim et al 2018 (152) Malawi Health facilites	HCWs providing HIV care	Cross sectional Chi-square test or two sample t-test	520 (99%)	MBI, SRQ, AUDIT	to examine the prevalence of burnout amongst HCWs in	Prevalence: 62% experiance burnout. 55% moderate to high EE, 31% moderate to high CY 46% low to moderate PA	Mean score was used as a cut off point

					Malawi and explore its relationship to self-reported suboptimal patient care.	89% reported providing sub optimal care 52% reported lack of knowledge leading to mistake Associated factors: sub optimal patient care was asociated with burnout (OR 3.22 CI 2.11, 4.8)	
Abdulghafour, et al 2011 (153) Kuwait Primary healthcare centres	Physicians	Cross sectional Descriptive statistiscs	200 (52.9%)	MBI	Identifying level of burnout	Prevalence: EE =29.0% , CY =22.9% , PA =26.3% and IN 29.9% . Associated factors: socio-demographic (being female) and job characteristics of the studied physicians. Nationality, place of work, job and income had a significant association with emotional exhaustion, depersonalization, and personal accomplishment domains	This study has gender bias (56% were female) since other studies have indicated that They used MBI with four domains, though they claimed that the tool was piloted. Validation of MBI
Abdulla, et al 2011 (33) Qatar Primary healthcare centres	General practitioners	Cross sectional Student T-test chi-square test or the Fisher exact test. Pearson's correlation analysis	230 (79.5%)	Astudillo and Mendinueta Questionnaire	Identifying prevalence of burnout	Prevalence: Overall burnout 12.6%, female GPs (28.1%) than male GPs (6.9%) Associated factors: years of experience and age (inversely associated). Fatigue, the use of analgesics and irritability were the most common symptoms	Used a validated tool but has limited information about its use in the other countries
Johnson, et al 2012 (35) United Kingdom Hospital & community services	Nurses, Social worker, Physicians, Psychologists, Occupational therapist, Nursing assistant, ward managers	Cross sectional Mixed effects multilevel Regression	2258 (64%)	MBI, Job related affective wellbeing scale, workplace employment relation survey and GHQ-12	Assessing staff well-being and satisfaction	Prevalence: overall EE 20.1%, reduced PA =33.7% Associated factors: working in a comunity service or psychiatric intensive care unit , high job demands, low autonomy, limited support from managers and colleagues, age under 45 years and junior grade. Greater positive engagement was associated with high job demands, autonomy and support from managers and colleagues,race/ ethnic group, being a psychiatrist or service manager and shorter length of service.	Very good study with large sample size and utilised various measures to assess the morale of the staffs. There is gender bias in this study 64% are female
Can˜adas-De la Fuente et al 2015(154) Spain Public health	Nurses	Cross sectional Student's t test and an analysis of variance	676 (81.6%)	MBI	to estimate the prevalence of burnout, to identify the variables related to burnout and to propose a risk profile for this	Prevalence: High EE 21% ,Reduced PA 44% Associated factors: age, gender, marital status, having children, level of healthcare, type of work shift, healthcare service areas	The nurses manifested average to high burnout levels.

centres					syndrome among the nursing personnel	and conducting administrative tasks. Burnout was also associated with personality-related variables.	
JRS: Job Related Stress, **EE:** Emotional Exhaustion, **CY:** Cynicism, **PA:** Personal Accomplishment, **MBI:** Maslach Burnout Inventory, GHQ: General health questionnare SD: Standard devation **IN:** work engagement							

2.5.3 Consequences of compromised healthcare workers' wellbeing

Skilfulness, dedication and number of HCW have major effects on the type as well as quality of medical service. However all can be altered by the wellbeing of the HCW. A majority of studies in the area of job satisfaction noted that there is lack of job/ professional satisfaction among HCWs (35) . Although it's impossible to conclusively point to a set of causes as attributing to this, it is fair to say wellbeing related issues account for some of this condition. The consequence or impact of HCW-wellbeing can be discussed from HCW, patient and healthcare side.

Consequence on the healthcare workers

One of the features of healthcare service is its demand for round-the-clock shift work under excessive pressure (86). This could alter the psychological, physical and social wellbeing of the HCW. Job related stress and burnout have multiple physical health consequences. These are illnesses such as headaches, gastritis, cardiovascular problems like hypertension, low back pain, and neck or shoulder pain. (27, 123, 155).

Job stress in healthcare settings has considerable harmful consequences on HCWs and patients/clients. It can lead to anxiety, depression, job dissatisfaction, burnout, poor interpersonal relationships and reduced professional competence (85). Absenteeism, and irritability are two of the behavioural impacts which result from the above condition (27) . Substance abuse is also another impact, a study conducted in China indicated that substance use has a strong association with burnout and depression among nurses (156). Studies have also shown that there is a strong tie between and job related stress and suicidal ideation (10). Difficulty to sleep, absenteeism and substance abuse are some form of the behavioural manifestations of stress (127).

The critical importance of HCW wellbeing has become clear when we begin to describe the consequences of compromised wellbeing. Hence burnout is like a two sided blade that can inflict harm to both the HCW and the client. To mention some of impacts of burnout inability to perform the job up to the standard (73) can affect both the patient and HCWs. Burnout has some observable manifestation on the individual who is experiencing it. A study done in Qatar depicted that irritability and use of pain killers more often were the most common

manifestation of burnout among their study participants (33). This finding was also shared by Boran et. al 2011 (27),

Many studies have noted that patient outcome and experience are directly related with HCW wellbeing (100). HCW wellbeing is a salient factor that is related to motivation and productivity (157) .

Consequence on patients

The wellbeing of HCWs has multiple consequences on the patients or service recipients in different aspect of care. HCW motivation has proved to have an association with quality and safe service to patients (158). It can also affect HCW interpersonal relationship, communication, the way they deliver compassionate. Being unwell has a strong link with poor quality service including compromised patient safety (122), patient satisfaction as well as outcome.

The consequence of being served by unwell HCWs will be evident by the type of the healthcare service. A longitudinal study on the interaction of patient safety and emotional exhaustion has also indicated its association (159). A recent systematic review on HCWs wellbeing and patient safety reported that poor wellbeing specifically high burnout is associated with poor patient safety (160). The HCWs will have difficulty to provide safe and quality service in terms of treating patients on time, following the exact treatment protocol or implementing a new technique (35).

Consequence on the healthcare system

The consequence on the healthcare is related with productivity of the healthcare facility. Increased HCW turnover (121) is also another consequence in the healthcare system. This will add the cost of recruitment and training new HCW to the health facility as well as loss of senior HCWs this can affect the competency of the healthcare team. These all can contribute to poor patient outcome, and satisfaction with the service. Other impacts can manifest through absenteeism, sick leave, and reduced interest to deliver care.

2.7 Primary healthcare work environment

2.7.1 Healthcare Work Environment

The healthcare work environment can be seen from two directions that is the physical and psychological work environment.

Physical environment: refers to the layout of the facility its accessibility to patients as well as HCWs. Physical facility is a component of the physical environment that consists of the availability if infrastructures that are important for the delivery of the health service without stress. It has also an influence on the HCW to patients/clients communication and their retention in care as well as outcome (161).

Psychological environment: is the emotional environment that could be perceived as a stressful or stress free. It is related with the type of cases that can make the HCW distressed or anxious, but psychological environment cannot be exclusively affected by what is happening at the workplace only. Social environment is the relationship and interaction that the individual have at the work place. Work environment has a vital effect on the employees wellbeing and productivity (162).

2.7.2 The role of healthcare workers and healthcare service

Healthcare workers at a primary care level are expected to provide a comprehensive care to all individuals who came to their service (33) . In most cases healthcare service is delivered by a team of HCWs and issues in the wellbeing of one HCW can affect other team members. If there is absenteeism or lack of motivation among HCWs it will affect the whole team. This could be by adding work overload to the rest of the team members (163). HCWs wellbeing is an imperative condition that has a direct link with the healthcare service.

Issue of HCWs'-wellbeing is worth to be researched due to the following reasons. First it will help to improve the quality of medical service(35) . Second it will improve the professional efficacy of the HCW (164). Third there are numerous studies that revealed that HCW-wellbeing and patient outcomes have relationship (165)

2.7.3 Primary HealthCare system

After the Alma-Ata declaration getting health service is considered as a basic right and primary healthcare centres are taken as the main tools to realise this objective (166). Primary Healthcare systems are established with the principle of making the health service accessible and equitable in a convenient place to the community. Similarly WHO discussion paper on PHC in Africa in 2008 also noted that the heart of PHC is provision of health service to every segment of the society despite the geographic and social class location (167).

The Ethiopian healthcare system consists of three tiers. The first level consists of rural health centres and primary hospitals; the second level is general hospitals, and the last one is specialised referral hospitals. Our focus was on the first tier. Primary health centres are generally staffed by health officers, nurses and midwives. Each facility is expected to serve 15,000-25,000 people in rural and up to 40,000 people in urban areas (64). Each health centre is linked to satellite health posts staffed by health extension workers (HEWs), who split their time between the health post and making home visits, with disease preventive and health promotion activities. The health centres and health posts together comprise the 'primary care unit'. Health officers were first degree holders with four years of training in healthcare. Nurses and midwifes have a BSc degree or a diploma in nursing or midwifery. Health extension workers (HEWs) are high school graduates with one year of training in health. Except HEWs, the primary HCWs were mainly based in the health facilities. HEWs in the district work at both rural and urban health posts and live in rural villages(168).

Ethiopia has no separate health human resource policy, but issue of health human resource is raised in the health policy as well as health sector development plan four. Meanwhile having health human resource, is an important step to tackle problems in the area and to design strategic directions in order to solve the problem. It is instrumental to deal with the challenges of HCW-wellbeing such as physical, psychological and social occupational hazards.

2.8 Professional or job satisfaction

Job satisfaction is the inherent value that is gained by working in a given profession or tasks it has direct relationship with level of motivation. It is the individual's feeling or perception towards his/her the job, professional satisfaction can be studied from two angles such as the intrinsic and extrinsic job satisfaction (169). Intrinsic job satisfaction is related to recognition,

responsibility and the job content or particular tasks that constitute that job. The extrinsic job satisfaction is related to working conditions, particularly support from co-workers, supervisors and payment (170). Studies have indicated that job or professional satisfaction is determined by factors such as occupation, age and income level (171).The professional satisfaction is associated with burnout in many studies (144, 172). It is inversely related with the level of job related stress (120) which is one of the precursor of burnout. HCW have low level of job satisfaction, a study on physician's job satisfaction showed that only 50% of the study participants were satisfied with their job (173).

2.9 Coping Mechanisms

Strong coping here is viewed as an important factor for maintaining wellbeing. Theories of stress and coping identify cognitive appraisal and coping as major processes involved in stress. Coping is the individual's response to deal with stress or any situation that he/she perceives as being stressful. It is dictated by the individual's perception of the situation and it could vary in different contexts. Cognitive appraisal is the mechanism through which a person evaluates the magnitude of the incident as well as its potential outcomes (174).

There are two types of coping mechanisms: problem focused coping and emotion focused coping. Problem focused coping is when the individual tries to deal with the source of the problem under circumstances where the individual perceives that the dealing with the cause of the stress is possible. The second one is emotion focused coping. This is the case when the individual tries to manage the results or symptoms of the problem. In most cases, this is achieved through maladaptive coping mechanisms such as denial, avoidance of the situation, and absenteeism (174, 175). The overall aim of coping is reduction of the negative impact of the stressful or inconvenient situation. It is expected that any type of coping has both long term and short term out comes (176) . A 25 years systematic review on burnout and its prevalence has indicated that coping mechanism is one of the determinant to burnout(177).

Ethiopian healthcare workers wellbeing studies

In countries where there is paucity of HCWs as well as facilities working on accessibility of service to all is quite important step. Eight Ethiopian studies were included in the review the focus of four studies was on job satisfaction and associated factors(178-180), one was focused on job related stress and one on the prevalence of burnout (37). The remaining two

studies were focused on motivation of HCWs (157) and impact of health sector reform (181) respectively. Regarding methods seven used cross sectional study design one was mixed methods (179). Though a range of HCWs participated in the studies none was focused on community based healthcare workers.

The participants of the included Ethiopian studies were only nurses for three studies, and pharmacy personnel for one study. Four studies were conducted in the whole healthcare team that is medical doctors, nurses, health officers, pharmacists, lab technicians, radiographers, midwifes and others. The reported level of dissatisfaction ranges from 39.2% (180) up to 65.1% (178). High level job related stress among nurses was reported to be 32.7 % high stress (28). (See Table 4)

HCW-wellbeing is a critical issue all over the world, with significant magnitude. This should get due attention in countries where there is high healthcare need and small number of HCWs. Several studies have indicated that HCWs are facing challenges in their wellbeing. HCWs in general mental HCWs in particular face high level job related stress and burnout (10, 35). Factors related to HCW-wellbeing are classified as personal and work related both which also need to be identified and deal with in our context. In summary, almost all the reviewed studies have used cross sectional study design. This has some challenges in terms of identifying direction of causality and the time variation of wellbeing experience. On the contrary this study has employed longitudinal study design and this has provided the opportunity to explore the change of burnout overtime. In terms of sample size of the reviewed studies the smallest size 97 (180) and 218,319 (90) was the biggest the lowest response rate was 54% (148). Most of the studies used quantitative study design, only one was mixed method study. This dissertation has employed a mixed method design. Initially and in-depth qualitative exploration, of conceptualisation of stress, burnout and wellbeing done, then longitudinally explored the change of burnout and associated factors.

Table 4:Summary of Ethiopian healthcare workers wellbeing related studies

Author Setting	Type of staff	Design Analysis	Sample size (response rate)	Tool	Objective	Results	Strengths/limitation	Inclusion critera
Tadese et al 2015(178) Fedral police hospital	Nurses, health officers, dentists, medical doctors, Lab technicians, Pharmacists, radiologist, midwives	Cross sectional Multivaria ble logistic regression	296 (96.4%)	Adapted instrument	To determine the level of job satisfaction and associated factors among health providers	Prevalence: 65.1% of HCWs were dissatisfied with their job. Associated factors: opportunity to develop, time pressure and staff relationship	Minimal information about the instrument adaptation is not specified	Being on job during the study period and service in that facility for more than six months
Dagget 2016 (28) Jimma zone public hospital	Nurses	Cross sectional Bivariate and multivaria ble linear regressions	341 (92.3%)	Adapted the expanded nursing stress scale, McCloskey/Muell er Satisfaction Scale	To assess job related stress and its predictors among nurses	Prevalence: 32.7 % high stress Average overall job related stress level of 58.46 ± 12.62. Associated factors: dealing with death & dying, , uncertainty regarding patient treatment, and workload While job related stress from sexual harassment had the lowest mean score.	Nurses with less than 6 months of work experi- ence excluded from the study.	Staff nurses who were available at work at the hospital during the data collection period were included in the study.
Ahmed et al 2013(180) Jimma, Agaro and Limmu Genet,south west Ethiopia.	Pharmacy personnel	Cross sectional discriptive statistics	97	Non strandardised tool developed by the authors	To assess the level of job satisfaction and factors associated with it among pharmacy professionals	Prevalence: 39.2% were dissatisfied in their job. Associated factors: The major reasons reported for satisfaction were helping the needy and professional gratification. The major reasons identified for dissatisfaction were inadequate salary, poor interaction with other healthcare team members, lack of motivation, insufficient on service training and poor health institution infrastructure .	The analysis technque, instrument development and sample seclection were not clearly discussed	
Manyazewal et al (181) public hospitals in Addis Ababa,	Medical doctors, laboratory professionals, nurses, health officers, pharmacists, dentists and sanitarians	Cross sectional Logistic regression	410 (88%)	Adapted a sub shararan health professionals job satisfaction instrument	to determine the impact of healthcare reform on job satisfaction in the public healthcare sector in Ethiopia.	Prevalence : 25% satisfied by the implementation of the reform..The median and mean job satisfaction scores were 50 and 49 Associated factors: Moral satisfaction, management style, workload, and task were the most significant predictors. Job satisfaction results were significantly different among the study hospitals.	This study was about the participants satisfaction on the implemetation of the reform “BPR”	Not clearly mentioned
Bikesegn et al 2016 (37) Jimma	It included physicians, nurses,	Cross sectional	403 (83%)	Copenhagen’s burnout inventory	to investigate the prevalence and predictor of	Prevalence: 36.7% scored above the mean level of burnout. Highest prevalence (82.8%) of burnout status	This study have included health professionals in different context of work . The instument is not	Inclusion critera professionals who had direct involvement in health care services.

University Teaching Hospital	pharmacist/druggist, laboratory, technicians/ technologists, physiotherapist, anaesthetist, sanitarian, x-ray technician and others.	Binary logistic regression			burnout which is assumed to bring insight about its burden and severity in low socio-economic settings	was found among nurses. The least prevalence of burnout was observed among laboratory technicians which was 2.8% (n=4). Associated factors: job insecurity, history of physical illness, low interest in profession, poor relationship status with managers, worry of contracting infection or illness and physical/verbal abuse.	validated in our context	
Asegid et al 2014 (179)	Nurses	Mixed method Discriptive statistics binary logistic regression	278 (87.0%)	adaptedfromthe Min-nesota Satisfaction Questionnaire (MSQ) short form and Mineser nurse practitioner satisfaction scale Indepth interview guide	To assess factors influencing job satisfaction and intention to turnover among nurses in Sidama zone public health facilities, in Southern Ethiopia	Prevalence: 45.5% were dissatisfied with administration support Associated factors: All job satisfaction subscale except benefit and salary sub scale. Satisfactions with work environment and group cohesion , single cohesion , and working in hospital were the significant predictors of anticipated turnover of Sidama zone nurses	Good study with rich evidence The qualitative data analysis not mentioned	Nurse with diploma have 6 months and greater work experience, who were working full time in public hospitals and health centers.
Zemechiel et al (157) West Amhara Public hospitals	doctors, nurses, laboratory personnel, pharmacists, X-ray technicians, environmental health experts, physiotherapists, health officers, and anesthetists.	Cross-sectional one-way analysis of variance, t-tests, Pearson's correlation, and hierarchical multiple linear regression analyses.	304 (93.5%)	Used a tool adapted form another study	To assess the level of motivation of health professionals and associated factors in public hospitals of, Northwest Ethiopia.	Prevalence: organisational burnout 64.0%, Mean motivation scores were 58.6% for the overall motivation score, 71.0% for the conscientiousness scale, 52.8% for the organizational commitment scale, 58.3% for the intrinsic motivation scale Associated factors: Professional category, age, type of the hospital, nonfinancial motivators like performance evaluation and management, staffing and work schedule, staff development and promotion, availability of necessary resources, and ease of communication (strong predictors of HCWs motivation). Across the hospitals and professional categories, HCWs' overall level of motivation with absolute level of compensation was not significantly associated with their overall level of motivation.	Though they have mentioned that they used an adapted measure. The use of non strandardised instrument is not adequately clear. The mixture of health workers group is diffcult to conclude them as one	Inclusion critera is not mentioned

Semachew et al 2017 (182) Jimma zone public hospitals	Nurses	Cross sectional independent sample t test and ANOVA, bivariate and multivariable linear regressions	316 (92.7%)	modified version of the McCloskey/ Mueller Satisfaction Scale	to assess job Satisfaction and influencing factors among nurses in Jimma zone public hospital.	Prevalence : 33.5% (One third) had a low level of job satisfaction. The overall mean job satisfaction was (67.43 ± 13.85). Associated factors: Mutual understandings at work and professional commitment showed significant and positive relationship. Working at an inpatient unit and work load were negatively associated.	Diploma and BSC nurses were included in this study but the impact of their level of education is not mentioned.	work experience of greater or equal to 6 months working in three public hospitals found in Jimma zone, namely Shenen Gibe, Limu Genet, and Jimma University Specialized Hospital.

Conceptual framework

The conceptual framework of this study is based on a Job Demand Control support (JDCS) model (102). This model gives emphasis on the balance between the job demands that arise from the content and the individual's capacity to deal with it the HCW's control over the job and the level of support they have. This study has explored the interaction of HCWs burnout and professional satisfaction under the perspectives of JDCS. In this model personal factor, psychosocial factors, professional groups and job content were considered as a predictors or independent variables. Work place (rural versus urban) and professional satisfaction was a mediator that lead to burnout which is dependant variable or the outcome variable.

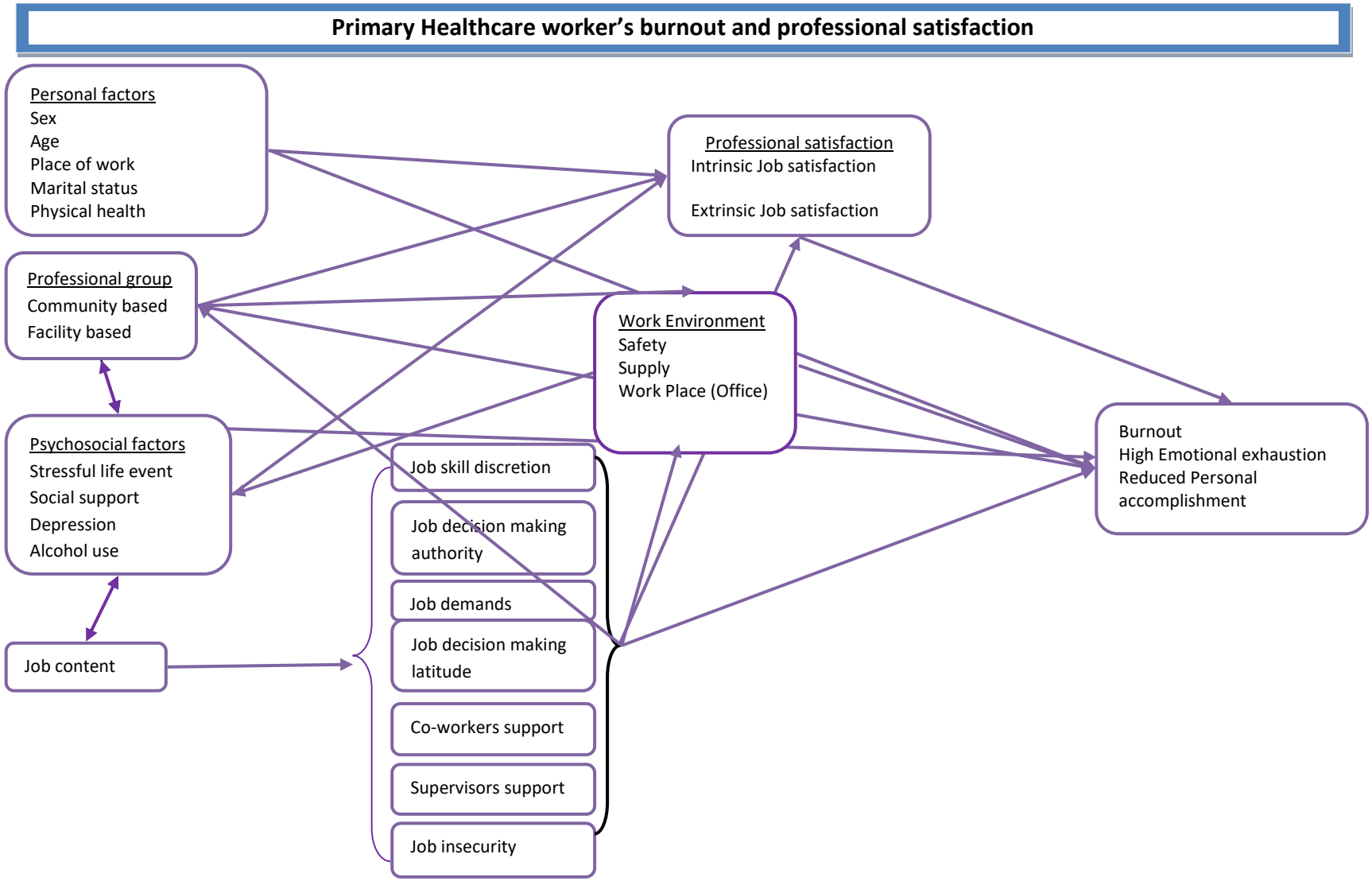


Figure 2: Conceptual frame work adapted from Job demand control and support model .

Chapter Three: Objectives and Research questions

3.1 General objective

To assess level of burnout and professional satisfation of primary healthcare workers (HCWs) in rural Ethiopia.

3.2 Specific objectives

1. To explore the conceptualisation of job related stress, burnout and wellbeing of HCWs.
2. To determine the magnitude of burnout and professional satisfaction among primary HCWs and to evaluate how the experience differs across different professional groups of HCWs (community and facility based HCWs).
3. To determine the short term change, over a six months period, in HCWs burnout level and professional satisfaction
4. To evaluate factors associated with burnout and short term change in burnout and professional satisfaction level of HCWs

3.3 Research questions

1. How do primary HCWs conceptualise job related stress, burnout and wellbeing?
2. What is the magnitude/ level of burnout and professional satisfaction among primary HCWs?
3. Does primary HCWs burnout and professional satisfaction change in the short term?
4. What are the factors associated with burnout and and professional satisfaction at base line and after 6 month ?

The first research question was answered using qualtitative study design. The seconed research question was answered using sequential mixed methods design. The third and fourth research questions were answered using cohort study design.

My personal motivation for this thesis was partly from my educational background in nursing and prior experience in healthcare workers social and emotional support for healthcare workers. In my experience as surgical intensive care unit nurse I was always curious and eager to explore the link between healthcare workers wellbeing (physical, social and emotional) wellbeing and patients' experience. Due to this fact I was able to explore the existing evidence in the area of HCWs wellbeing in general and burnout in particular.

3.4 Hypotheses

1. Low professional satisfaction, threatening life events and poor social support will increase the risk of burnout among HCWs.
2. In the short term there will be little change in the level of burnout and professional satisfaction, and changes that may occur will be associated with changes in the level of depressive symptoms and baseline threatening life events and social support.

Chapter Four: Research Materials and Methods

4.1 Study Setting

This study was conducted in two sites namely Silte and Gurage Zone of the Southern Nations, Nationalities and People's Regional State (SNNPR) of Ethiopia. The formative phase of the study was conducted in the Silte Zone, which is located around 225 Kilo meters away from the capital city Addis Ababa. This zone has a total population of approximately 750,000 people (363,750 men; 386,250 women) during the time of the study (183).

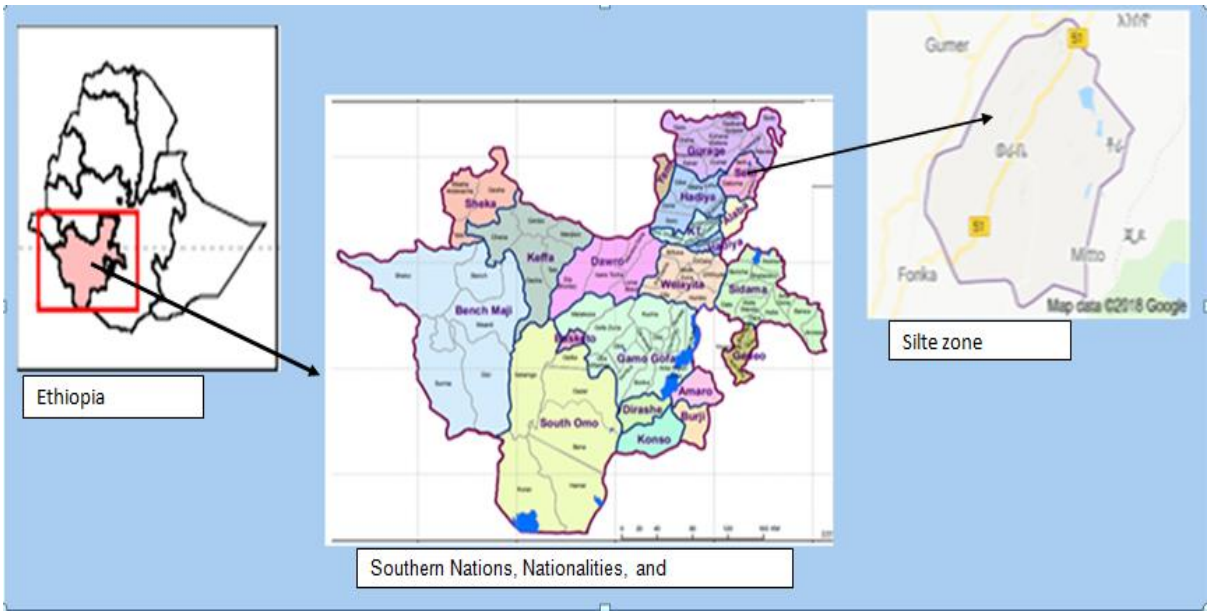


Figure 3 Silte Zone map

[Source: ethiodemographyandhealth.org/SNNPR.html]

Silte zone has a total of 33 primary healthcare (PHC) facilities in the public sector, each serving 15 to 25,000 people. The rationale for selecting this site for the formative study were: facilities in the Zone are typical of rural PHC settings in Ethiopia, the researcher has an already established relationship with the district health office administration and the zone is in close proximity to Sodo district which was the site for the main parts of the study (184) .

The main parts of the study (the second and third part of the sudy) were conducted in Sodo district of the Gurage Zone. The capital of the Sodo district, Buei, is located 103 km from Addis Ababa. In the 2007 national census, at the time of the study the total population of the district was estimated to be 161,952 residents (79,356 men; 82,596 women). This district is divided in to 58 administrative units, called '*Kebeles*', spread over a geographic area of

830.63 square kilo meters. At the time of the study Sodo district, used to have eight primary health centres ("health centres"), seven in the public sector and one in a public-private partnership as well as 58 govenment owned health posts or sattelite clinics. The health centres are staffed by health officers (practitioners with three years of clinical training), nurses and midwifes. The health posts are led by community-based health extension workers (HEWs). HEWs are high school graduates with one year training. Their work focus on prevention and health promotion mainly in community based manner. The Ethiopian healthcare system has three tiers. The first level is made of rural health centres, health posts and primary hospitals; the second level is general hospitals, and the third one is specialised referral hospitals. The workforce in the first level includes health officers, nurses and midwives, with the expectation of serving 15,000-25,000 community members in a rural area and up to 40,000 in urban areas (64).

This district has different climatic zones, high land and low land, which is typical to the climatic zones of the country. Farming is the major livelihood activity. The map of the district is shown below.

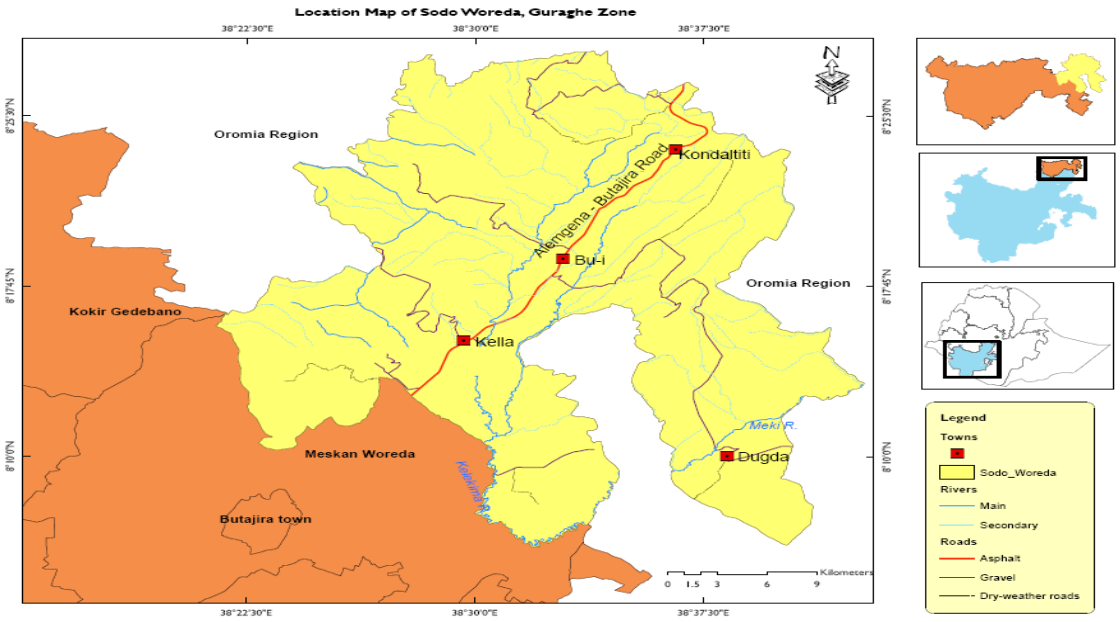


Figure 4 Sodo District map

This site was selected because it hosted PRIME (PRogramme for Improving Mental health carE) project involving five LMICs, including Ethiopia. PRIME is a health services research

project, which aimed to develop evidence to support integration of mental healthcare into primary care setting (185). It is being implemented in the Sodo district of the Gurage zone, which is close to the Silte zone (185, 186). The PRIME service approach (184) is informed by the National Mental Health Strategy of Ethiopia (98) in which through provision of the World Health Organisation (WHO) recommended mhGAP (mental health Gap Action Programme) training(187) to primary HCWs and periodic supervision to provide mental healthcare in a task-sharing model of care (188). This study was nested in the PRIME study because there is evidence that the quality of mental health delivery is highly dependent on HCWs wellbeing (189) as well as the potential integration of HCW wellbeing interventions linked to the mental health service scale up (184).

PRIME Ethiopia has developed mental healthcare plan for the district (190), which is aimed at training the primary HCWs on mental healthcare and delivering the service. This plan focuses on the service for priority mental health problems namely schizophrenia, bipolar disorder, depression, alcohol use disorder and epilepsy. Moreover, Sodo district borders Silte and Mareko districts, which have been associated with nearly 30 years history of research by Addis Ababa University, College of Health Sciences. As part of the PRIME study, initial groundwork, including a situation analysis and profile of the heath facilities within the district, has been carried out and informed the current study. In addition, resource mapping to identify the assets and needs of the districts is also done by the research project(191).

Mental health service training, guided by the mhGAP intervention guide manual (192), was provided to all facility based on an integrated district level mental healthcare plan (190). Community-based HCWs or HEWs were trained on mental health case detection, referral, adherence support and identification of medication side effect. In addition, they were also trained on promoting social inclusion for people with mental illness.

4.2 Study design

This study was a mixed methods (quantitative-qualitative) design. It has followed a pragmatic paradigm to understand the conseptualisation of wellbeing and the level of HCWs burnout and professional satisfaction. The strategy of inquiry in this study was sequential (193) , in which qualitative study was conducted in the formative phase and followed by quantitative study (194) . The mixed methods design gave the insight to understand the issue in-depth,

obtain the emic evidence and level of HCWs burnout and professional satisfaction in primary care context. In this study social constructionst view of enquery was used (195).

4.3 Components of the study

The study was divided into three overlapping components (see Appendix 8) according to the objective of the study.

The first component was a formative study focused at two main tasks. These were: (1).Qualitative exploration of the conceptualisation (understanding) of HCWs wellbeing, burnout and job related stress.

(2).Translation of survey instruments to Amharic, piloting and adaptation of the instruments was also part of the formative study.

The second component was a mixed methods study. Initally it was planned to be a cross-sectional evaluation of HCWs level of burnout and professional satisfaction in order to quantify the magnitude of burnout, professional satisfaction and potential risk factors among HCWs. However, based on the findings of this cross-sectional study, conducting a qualitative study was necessary. Then a qualitative study was conducted among some of the participants with the aim of obtaining right understanding and interpretation of the quantitative study findings.

The third component was a cohort study design and the objective was to evauate the change in the level of burnout among the HCWs. We have compared participant's level of burnout between baseline and six months follow up assessment points. The primary assessment instruments were similar to that of study two.

Details of each study component follow below.

Study one: Formative study

Objectives

1. To explore the conceptualisation of job related stress, burnout and wellbeing by HCWs.
2. To translate, adapt and pilot assessment instruments

Research question

How do HCWs conceptualise job related stress, burnout and wellbeing?

Method

Study one (A) research design 1: Qualitative

Both in-depth interviews and focus group discussions were used. A total number of 52 frontline HCWs took part in this section of the study.

In-depth interviews (IDIs)

IDIs have instrumental value when one wants to asses an individual's behaviour, thought and reaction to a given condition(196). IDIs are best when the issue under study is not observable and information has to be obtained about the participants experience in their own words. In addition, IDI has flexibility in the data collection process (197). Since IDIs is instrumental for an in-depth exploration of the understanding, attitude and perspectives of HCWs wellbeing. IDIs were conducted with nurses, health officers and health extension workers. The in-depth exploration of HCWs construct of job related stress, burnout and wellbeing in general has enabled a better understanding of the concept of wellbeing and informed the following parts of the study. IDIs were conducted using a semi structured interview guide (see Appendix 1 A&B). The IDI took a minimum of 35 up to a maximum of 90 minutes. In addition, notes were also taken during each interview, about the interview process and the non verbal expressions of the participant. All IDIs were conducted privately in a quiet place that is convenient to both the participant and the interviewer. All the interviews were conducted in Amharic and by the researcher. With the consent of the participants, all IDIs were audio recorded for further transcription and analysis.

Focus group discussions (FGDs)

FGDs were conducted with HCWs working in the primary healthcare facilities from Silte district. The aim of the FGDs is to obtain rich group level data and a range of information from a large number of participants in a short time (198) as well as to observe the extent to which a given idea is shared by the group (197). Specifically, the rationale for using FGDs in this study is to obtain information on the conceptualisation of job related stress and burnout among primary HCWs.

FGDs were organised in two groups, one for community based workers and one for facility-based workers. For each FGD, participants of similar level were grouped together to maximize homogeneity. Four FGDs were conducted with 34 HCWs (n=13 facility-based and n=21 community-based) two FGDs were with community and facility based HCWs each.

FGDs were conducted in a quiet and convenient place, for both the study participants and the interviewer. The researcher has moderated all focus group discussions and was assisted by experienced note taker. The focus group discussions were conducted in Amharic, which is the official language of the country. The FGD's took minimmun of 60 mins and maximum of 120 mins. The focus groups participant's size was ranging from 7-10. With the permission of participants, all FGDs were audio recorded. Afterwards it was transcribed in the language of the interview-Amharic-and later on translated in to English. The detailed steps of qualitative data analysis is discussed in the later sections.

Participants

Participants of this component of the study were: nurses, health officers and health extension workers from primary care facilities of Silte zone .

Inclusion criteria

1. HCW who is engaged in direct patient care (nurses, health officers, midwifes and health extension workers).
2. Minimum of 3 months work experience in the current work place
3. Willingness to participate in the study

Sample size

The study participants were selected purposively in order to investigate perspectives by gender, place of work (facility-based or community-based), type of training and levels of experience. The final sample size was decided by the point at which theoretical saturation was obtained (199). A total of 18 IDIs and 4 FGDs were conducted. (Table 1: Socio demographic information of study one participants). For each FGD, participants of similar level were grouped together to maximize homogeneity. The participants of FGDs were selected purposively. HCW from Silte district.

Assessment

Semi-structured in-depth interview and FGD guides were used for the IDIs and FGDs respectively (see Appendix 2 A&B). FGD guide was used; the discussion guide for community based and facility based HCWs was the same to allow comparable responses. During the IDIs and FGDs the Amharic terms "*kesera gar yeteyayaze metaket*" (ከስራ ጋር የተያያዘ መታከት) and "*weteret /chenket*" (ውጥረት /ጭንቀት) were used to describe burnout and stress, respectively. Apart from the two FGDs with HEWs, people working in the same health centre were grouped together.

Setting

The setting for HCWs IDIs was health facilities in the Silte zone. The main purpose of conducting the study outside the Sodo district was to reduce potential information contamination for the later studies.

Data analysis

Data analysis was carried out alongside ongoing data collection and an interim analysis informed adaptation of the topic guide and ongoing sampling. Thematic analysis was used to analyse the data (200). The following technique of systematic and rigorous steps were used to analyse the information obtained in the FGDs and IDIs (201).

- *Step 1*: The English transcripts were read repeatedly by researcher or Medhin Selamu (MS) and supervisor namely Charlotte Hanlon (CH) to ensure familiarity with the data.
- *Step 2*: After independent coding by MS and CH, have discussed and developed categories and a coding plan.
- *Step 3*: MS and CH tested the codes for clarity and consistency by selecting a given text.
- *Step 4*: MS coded the rest of the text and identified emerging themes as the data were still being collected.
- *Step 5*: MS and CH reassessed coding consistency.
- *Step 6*: MS interpreted the coded data and described the themes and categories of the data.

- *Step 7*: MS summarised the report including the method followed in order to make the study replicable (202-204). NVivo 9 software was used to support the analysis and management of the data (205). To ensure the credibility of the analysis, member checking was done with three study participants (206, 207).

Study one (B), research design 2: Adaptation and Piloting of instruments

Instrument adaptation started with translation of instruments. Translation has followed standard techniques of translating already developed instruments. The following translation process steps were followed for all instruments.

A) First the instruments were translated from English to Amharic language (forward translation) and by a bilingual translator, whose native language is Amharic and whose second language is English.

B) There was a discussion with bilingual experts (HCWs, social worker, and psychologist), based on the Amharic translated version. The aim of this step was to check if the translation has expressed the original questions as it was meant to. There was no comment by the experts or any issue that requires clarity.

C) Back translation of the instrument to English was carried out by a bilingual person who has a masters training in psychology.

D) Any disagreements was addressed and a final Amharic version developed.

E) The instruments were piloted in Silte zone. Piloting participants were asked for the clarity and cultural appropriateness of the questions. Those individuals who are included in the piloting were not included in the actual study.

At the end of these steps, the researcher have finalised the translated instruments (208-210). The rationale for employing this rigorous process is to check for the conceptual equivalence, in addition to the translation quality through semantic and content similarity(211) .

Setting

The study setting for instrument adaptation and piloting was Silte zone which was the same setting for the qualitative study.

Participants

HCWs working in primary healthcare facility of Silte zone.

Inclusion criteria for HCW

1. HCW working in one of the health centres of Silte zone
2. HCW who are engaged in direct patient care (nurses, health officers, midwives and health extension workers)
3. Minimum of 3 months work experience in their current place of work
4. Willingness to participate in the study

Sample size for piloting

For HCWs: 25 professionals with equal professional group, gender and year of service composition have participateed in the piloting. The piloting data is not inclded in the study.

Study Two

Objectives:

1. To determine the magnitude of burnout and professional satisfaction among HCWs working in primary healthcare centres and to evaluate how the experience of HCW differ across different groups of HCWs (community and facility based HCWs).

Research questions

1. What is the magnitude of burnout and professional satisfaction among HCWs in primary healthcare centres in Sodo district?

Methods

Mixed methods study, cross sectional survey followed by qualitative (focus group discussion) interviews.

Study two(A) research design Quantitative study

Participants

HCWs in Sodo district were the participants of this study.

Inclusion criteria

1. HCW(nurses, health officers, midwives and health extension workers) who are currently working in one of the health centres/ health posts of Sodo district.
2. Minimum of 3 months work experience in the current place of work
3. Willingness to participate in the study

Sample size:

At the time of the study there were 134 facility based (i.e nurses, midwifes and health officers) and 66 community based (health extension workers) HCWs in the district. All HCWs in the district were screened for eligeblity to the the study (n=200) and those who fulfiled the criteria (n=168) took part in the study (Figure 5: recritment flow chart).

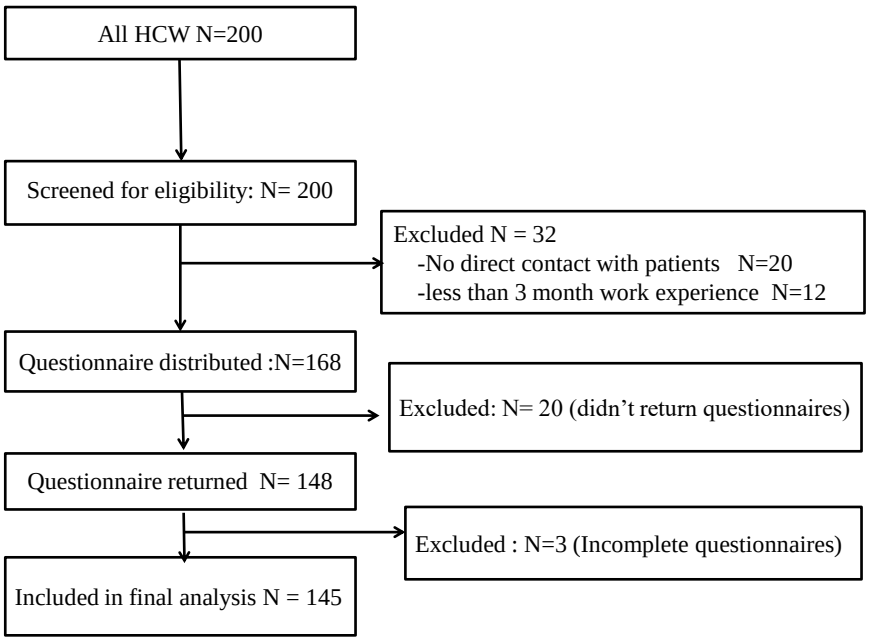


Figure 5: Recruitment flow diagram

Variables

For objective one: the dependent variables were burnout level and professional satisfaction. The independent variables are professional group (community and facility based HCW), socio-demographic characteristics and work related factors.

Assessments

The primary outcome of burnout was assessed using the Maslach Burnout Inventory (MBI) human service survey version (82). Socio-demographic, work related, and associated psychosocial factors were assessed by the fully structured instruments described below. (Appendix 3 A &B).

Burnout

Maslach Burnout Inventory (MBI): this instrument is developed by Maslach and Jackson(212). Though there is no consensus on measures of burnout, MBI is the most widely used instrument to measure burnout (213). It is generally a self-administered questionnaire with 22 items that focus on the individuals job related feelings, about the job and people he/she is working with (214). It has three main domains: emotional exhaustion (EE) with nine items, depersonalisation or cynicism (CY) with five items and personal accomplishment (PA) with eight items. The responses of individual items are rated on a seven-point scale that ranges from "0", indicating the experience never happened up to "7", indicating that the experience happens every day (214). EE is considered to be the core domain of burnout, and is evident when a person runs out of the desire to help others; loses the capacity for compassion towards clients or loses their devotion to their job (30). The standard cut-off scores to define high burnout are: EE score above 27, CY score above 13 and PA score below 32. MBI has three versions, these are general survey (MBI-GS) for educators (MBI-ED) (215) and human service survey (MBI-HSS) (213), this type was used in this study. MBI-HSS was also validated in South Africa in healthcare setting and showed good internal consistency (215). For the descriptive summary and to identify the most endorsed MBI items; we collapsed the responses for each item into three categories: (a) those who responded "never", (b) those who responded "few times a year or less", and (c) those who responded between "once a month or less" and "every day". As to the developers of MBI-HSS has good convergent and discriminate validity (212).

Work-related factors

Job Satisfaction Questionnaire (JSQ): developed by Wall, Cook & Wall (1979), has 15 items rated in a seven-point scale that ranges from extremely dissatisfied to extremely satisfied. The JSQ evaluates overall, intrinsic and extrinsic job satisfaction (169). Intrinsic job satisfaction is related to recognition, responsibility and the job content or particular tasks that constitute that job. But extrinsic job satisfaction is related to working conditions, particularly support from co-workers, supervisors and payment (170). The JSQ was used as an indicator of professional satisfaction which has been associated with burnout in many studies (144, 172). The scale reliability coefficient or Cronbach's for this study was good (α= 0.89).

Job Content Questionnaire (JCQ): is a 27 item instrument that focuses on decision latitude, psychological demand and social support. It also covers issues related to physical demands of the job and job insecurity (216). It has seven domains: Job skill discretion, Job decision making authority, job demand, job decision latitude (i.e the combination of job skill discretion and job decision making authority), co workers support, supervisions support and job insecurity. There domains are associated with the job demand as well as control which have a direct impact in the experience of burnout (217) according to the Job Demand Control (JDC) model (102).

Self reported Job performance: is a HCWs reported satisfaction with the kind of care they are providing. These are three item questions developed by the researcher with the aim of gaining an information on how the professionals evaluate their workplace performance. These questions ask about how the HCW is satisfied with the care he/she is providing, their (HCWs) perception of patient's and their colleagues satisfaction with the service they are porviding. The response to these questions ranges from "not satisfaied" to "very satisfied".

Socio-Demographic and psychosocial factors

Socio-Demographic and work-related details: were assessed with structured questions that contained the participants' basic information such as residence, age, sex, marital status, educational level and years of service.

Patient Health Questionnaire (PHQ): is a 9 item self administered questionnaire used to assess depression symptoms. The PHQ-9 has good psychometric properties (218) and has been validated in Ethiopia (219). The validated score of five was used as a cut-off point to indicate significant level of depressive symptoms (219).

Oslo Social Support scale (OSS): is a three item scale which measures the person's percieved social support system (220). This instrument has been used previously in Ethiopia and found to have convergent validity (221). It is interpreted by its total score: 3-8 means poor social support, 9-11 means moderate social support and 12-14 means strong social support (222). However, for the bivariate and multivariable regression the score was dichotomised as poor (score of 3-8) versus moderate to strong (a score from 9-14) social support.

List of Threatening Experiences (LTE): is a 12 item questionnaire which assesses the experience of 12 various groups of major stressful life events that happened during the past six months (223). This instrument has a good psychometric property (224). The item responses are scored as yes/no and a total score is obtained by adding the item responses (225).

Alcohol Use Disorders Identification Test (AUDIT): is a 10-item questionnaire which was used to assess the alcohol consumption and drinking behaviour of the participant. The AUDIT was developed by WHO to identify alcohol use disorders, and has been used in various LMICs, including Ethiopia (226).

Prescription and non prescription drug use screening: are questions to assess the participants habit of prescription medication use including habit forming medication. This instument includes 13 questions. These questions are developed by the researcher.

Physical health questionnaire: contains five questions on history of acute illness in the past four weeks and history of any chronic illness, to obtain the participants self rated health. These questions enquire the presence or absence of illness and then it checks if it has an association with burnout .

Psychometric properties of the Maslach Burnout Inventory

Since MBI has not been previously validated in a similar (low income country) the construct validity of the MBI was evaluated using exploratory factor analysis (EFA). Factors were

extracted using principal component factoring with varimax rotation and Kaiser normalisation. Kaiser-Meyer-Olkin measure of sampling adequacy was carried out prior to performing EFA, resulting in an acceptable alpha value of 0.68. Similar to other studies (227), found that MBI is a multi dimensional scale with three domains (EE, CY, PA). Three items, one from each domain, loaded poorly on the identified factors: item number 11 ("I worry that this job is hardening me emotionally") from the CY domain; item number 16 ("Working with people directly puts too much stress on me") from the EE domain; and item number 18 ("I feel exhilarated after working closely with my recipients") from the PA domain (Table 1). The overall internal consistency of the MBI for the 22 items was sufficient (Cronbach's α=0.70) and comparable with the 19 items (excluding the three items that did not load—Cronbach's α=0.71). Therefore, the full 22 items were used for the descriptive analysis. Both EE and PA domains had acceptable internal consistency (Cronbach's α=0.75 and α=0.80 respectively). The internal consistency of the domain CY was very low (Cronbach's alpha 0.18) and was excluded from the final analysis (See Table 6).

Item no and item	**PA**	**EE**	**CY**
1. I feel emotionally drained from my work. (EE)		0.70	
2. I feel used up at the end of the workday. (EE)		0.59	
3. I feel fatigued when I get up in the morning and have to face another day on the job (EE)		0.70	
4. I can easily understand how my recipients feel about things. (PA)	0.56		
5. I feel I treat some recipients as if they were impersonal objects. (CY)			0.66
6. Working with people all day is really a strain for me. (EE)		0.42	
7. I deal very effectively with the problems of my recipients. (PA)	0.70		
8. I feel burned out from my work. (EE)		0.61	
9. I feel I'm positively influencing other people's lives through my work. (PA)	0.59		
10. I've become more callous toward people since I took this job. (CY)	0.35		
11. I worry that this job is hardening me emotionally. (CY)	0.17		
12. I feel very energetic. (PA)	0.67		
13. I feel frustrated by my job. (EE)		0.63	
14. I feel I'm working too hard on my job. (EE)		0.46	
15. I don't really care what happens to some recipients. (CY)			0.44
16. Working with people directly puts too much stress on me. (EE)		0.27	
17. I can easily create a relaxed atmosphere with my recipients. (PA)	0.66		
18. I feel exhilarated after working closely with my recipients. (PA)	0.28		
19. I have accomplished many worthwhile things in this job. (PA)	0.61		
20. I feel like I'm at the end of my rope. (EE)			0.64
21. In my work, I deal with emotional problems very calmly. (PA)	0.52		
22. I feel recipients blame me for some of their problems. (CY)			0.40
EE: Emotional Exhaustion, CY: Cynicism. PA: Reduced Personal accomplishment			

Table 5: Maslach Burnout Inventory Exploratory Factor analysis indices

Study setting

Sodo district was the study site (as described above)

Procedures of data collection

Prior to the main quantitative data collection, pilot interviews were conducted with 25 PHC staff in the neighbouring Silte zone (data not included). Questionnaires were distributed to all eligible HCWs to be self-administered. Participants were given one day to complete the questionnaire. The completed questionnaires (n=148) were returned in a closed and coded envelope with no personal identifier. Three of the 148 questionnaire were partially complete and excluded from the analysis (Figure 4).

All FGDs were moderated by MS with the help of an experienced research assistant and were conducted in Amharic. The interviews were audio-recorded with the permission of the participants, transcribed in Amharic and translated into English for analysis. During the FGDs we used similar Amharic terms to refer to job related stress and burnout as our formative work (228).

Data management and analysis

Study two: Quantitative data management and analysis

Quantitative data were double-entered using EpiData version 3.1 (http://www.epidata.dk/) and exported to Stata version 13 (StataCorp, 1985-2013) for statistical analysis. For each of the three scales (i.e for MBI, JCQ, and JSQ) total scores were generated by adding up the items for each scale. The median score was taken as a cut-off value to binarize the response for the analysis and grouping of study participants into high and low scoring groups on each scales (median for MBI sub domains; EE=3, PA= 34, overall JSQ=72, intrinsic JS= 35, extrinsic JS=35 and sub domains of JCQ; job skill discretion=34, job decision making authority= 36, job demand=34, job decision making latitude=72, co-workers support=12, supervisors support=12 and job insecurity=5).

Multivariate logistic regression was used to evaluate the association of potential correlates of burnout (i.e sex, age, marital status, place of work, level of depression, perceived social support, experience of stressful or threatening life events and work-related factors) with the

odds of reporting above median burnout. While using the standard cut-off for reporting prevalence of burnout, the median score was mainly used for the multivariate logistic regression of the sub domains. This provided sufficient numbers and good fitness of model for the regression analysis. Based on existing evidence, potential confounders were defined *a priori* and included in the multivariable logistic regression model.

For descriptive analysis of the individual burnout item responses, the seven response categories of each item were collapsed into three groups based on the frequency of experiences. Thus, those who did not have the experience were in the 'never' group; those with the experience of a few times a year or less were in the 'few times in a year' group; and the final group captured all those whose experience ranged from daily to a few times monthly. The regression model was fitted taking EE total score as the dependent variable; the included independent variables were demographic, psychosocial and work related factors. Multi-collinearity was assessed in model using a correlation matrix which led to one work related variable (i.e. Job decision making latitude) being excluded from the multivariable analysis.

To evaluate the experience of burnout among different HCW groups, participants were grouped into community-based (HEWs) and facility-based workers (nurses, health officers and midwifes). The rationale for this classification was that setting or the context of work (the range of tasks HCWs are assigned to, and their level of control over their job) may impact upon their wellbeing and professional satisfaction.

Study 2 research design B: Qualitative Study

Focus Group Discussion (FGD) were conducted. The rationale for conducting FGD was to explore the meaning of the quantitative study findings.

Participants

HCWs in Sodo district who participated in the cross sectional survey

Sample size

Four focus group discussions were conducted.

a. Two with community based HCWs

b. Two with facility based HCWs

Inclusion criteria

a. Participants who are not currently in leadership position
b. Participants who have participated in the quantitative study

Assessment

Semi structured FGD guide and FGD process observation (Appendix 4)

Setting

Sodo district was the study site (as described above)

Analysis

Study two: Qualitative data management and analysis

Translated interviews were entered in Nvivo software. Initially, independent coding was done by the researcher Medhin Selamu (MS) and first supervisor Abebaw Fekadu (AF) then checked for similarity of codes was made together. Difference was managed by having discussion and re reading the transcripts. Interpretation and summary was done by MS. The data were analysed using a thematic approach (200).

Study Three

Objective

1. To assess the short-term outcome in burnout symptoms and professional satisfaction over a six months period in the context of integration of mental health service
2. To evaluate factors associated with change in burnout and professional satisfaction level of HCWs between baseline and six months follow-up in the context of integration of mental health service

Research questions

1. What is the the short-term outcome in burnout symptoms and professional satisfaction over a six months period in the context of integration of mental health service?

2. What are the factors associated with change in burnout and professional satisfaction level of HCWs between baseline and six months follow-up in the context of integration of mental health service?

Method

Design

Prospective cohort study

Participants

Participants were HCWs working in the primary healthcare facilities (health posts and health centres) of Sodo district.

Inclusion criteria

1. HCW working in Sodo district
2. HCW who are engaged in direct patient care (nurses, health officers and health extension workers)
3. Willingness to participate in the study

Recruitment

Participants were asked to participate in the study by contacting district health office and the HCWs directly.

Assessment

At baseline

Self reported questionnaires (Appendix 3 A&B) was used to assess the magnitude of burnout, professional satisfaction and other relevant psychosocial as well as work related factors of burnout for HCWs in Sodo district.

At six months

All previously assessed domains of HCWs were assessed. The same instrument was used for the two time points(Appendix 3 A&B).

Participants

All HCW in Sodo district , as well as those who were in the district and when the cohort was started, but currently working in other place.

Inclusion criteria for HCW at six months

1. HCW who participated at the baseline study
2. Willingness to participate in the study

Tracing

Those who participated in the baseline but left were contacted by telephone or any other feasible means, for brief interview on their reason for leaving. Maximumm effort was made to contact all baseline participant see follow-up flow chart (Figure 6).

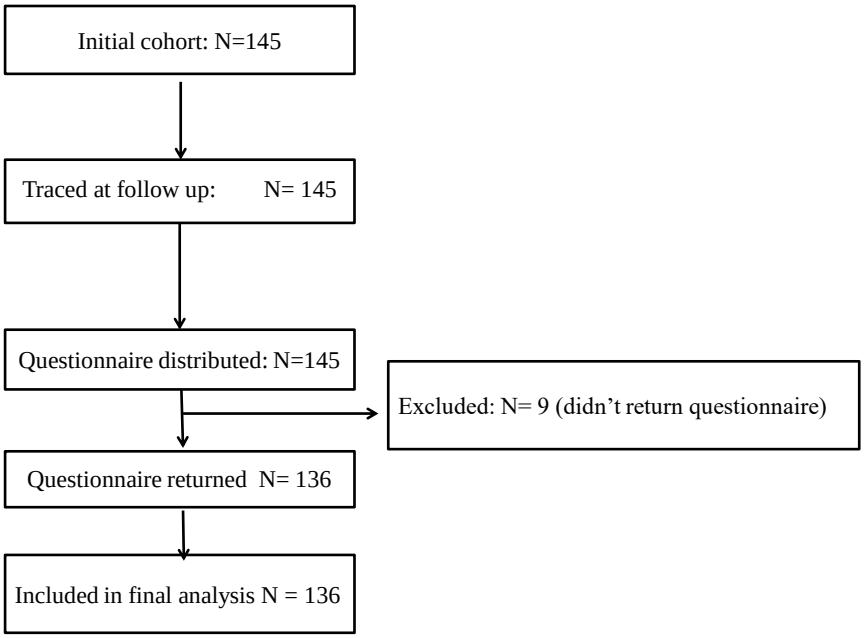


Figure 6: Cohort flow diagram

Sample size

All HCWs who participated at baseline were included in the study.

Measures

All data were collected using standardised questionnaire (Appendix 3 A & 3B) that was used for baseline assessment and the details of the measures was described in the previous section.

Outcome variables and measures

For this component of the study the primary outcome was change in level of burnout and secondary outcomes were change in the level of professional satisfaction. MBI (Maslach Burnout Inventory) human service survey version (213) was used as the primary outcome measure. Professional satisfaction was also assessed as a secondary outcome using the Job Satisfaction Questionnaire (JSQ) (169).

Exposure variables

The exposure variables for this component of the study were: socio-demographic characteristics, psychosocial factors and work related factors. These were assessed using: Patient Health Questionnare (PHQ-9) (25, 219, 229, 230), Oslo social support scale (OSS) (222), the list of threatening experiences (LTE) questionnare (223, 224), Alcohol Use Disorders Identification Test (AUDIT) (226) and Job Content Questionnaire (JCQ) (25).

Setting

This component of the study was conducted in the same setting, after six months from the baseline quantitative study. The study period was between July 2014 and December 2014, in the Sodo district of the Gurage zone, Ethiopia.

Assessment

Was through self reported standardised questionnaire

Procedures for data collection

Since the instruments were piloted at baseline (T1) at the six months follow up (T2) the self-reported instruments where shared with the cohort members. At both time points MS provided information about the study and how to fill the self-reported questionnaire and distributed the questionnaires to the participants. Participants returned the completed questionnaires in a sealed envelope.

Analysis

Data management and analysis

Epi Data version 3.1 (http://www.epidata.dk/) was used for double data entry and Stata version 13 (StataCorp, 1985-2013) was used for statistical analysis. Descriptive statistics were used to summarise both categorical and continuous variables. In the descriptive section burnout result was summarised by adding those who scored moderate to high EE and low PA. Those endorsing either one of the two or both domains of burnout were grouped as having burnout. In addition, to simple descriptive statistics, longitudinally collected data were analysed using generalised estimating equation (GEE). GEE was used to determine factors associated with outcome variables over the follow up period. The rationale for selecting this repeated measure analysis technique was its robust statistical efficiency(231). Change in EE was considered as the main outcome representing burnout and professional satisfaction as secondary outcome, whereas demographic, psychosocial and work related factors were treated as covariates. Factors associated with change in the major outcomes variables such as professional group were explored. In the descriptive section burnout result was summarised by adding those who scored moderate to high EE and low PA. Those endorsing either one of the two or both domains of burnout were grouped as having burnout.

4.4 Overall data processing and management

The audio recorded in-depth interviews and focus group discussions were, transcribed into written form in Amharic and then translated to English. The translated document was computerized using NVivo 9(205) software to facilitate the analysis of the collected qualitative information.

The quantitative data was computerized using EpiData 3.1 . Double data entry was done to ensure data quality and accuracy. The computerized data was exported to Stata version13 (232) for further data cleaning and analysis. All the audio records , interview transcripts and filled questionnaires were kept in a locked cabinet. Soft copies of all the data were kept in password protected computers.

For the quantitative data collection: different structured standardised questionnaires were used. All questionnaires except screening (eligibility) questions were self administered. However the researcher has provided an introduction about the aim and rationale of the study

before consenting. Then the researcher did the screening to check if they fulfil the inclusion criteria or not. Those who were eligible were asked to give a written informed consent if they are willing to take part in the study. Afterwards the questionnaires were distributed to the study participants. Finally all the filled questionnaires were checked and collected by the researcher.

4.5 Data quality assurance

During the data collection the candidate (MS) was in the field to facilitate the data collection and to assure data quality checks. The researcher was checking all the collected data for clarity, completeness, and consistency. All completed questionnaires were checked the same day of data collection. In case of any problem with the collected data effort was made to correct the data by re-interviewing that respondent. Double data entry technique was used in order to assure good quality of data.

In addition, in order to ensure data quality consistency and range checks of the computerized data were done by the PI every week. These ranges of checks were focused on detecting invalid values, unusual values, outliers as well as the nature of distribution. This consistency check was used to examine the missing and inapplicable values in the data.

4.6 Ethical considerations

This study is conducted under strict consideration of human subject research ethics such as delaration of Helsinki (233). The details of the ethical consideration was:

Potential risks and benefits

Maximum care was taken to minimize any type of harm to the participant (234). Study participants were asked to give written informed consent after providing appropriate explanation. Each study participant was told that they can withdraw from the study any time they want and they can ask any questions in relation to the study that needs clarification.

Any study participant with proved depression (in their PHQ9 score) or any one with demand of mental healthcare need were provided appropriate care. If any of the study participants experience psychological distress after IDIs or FGDs they were informed they can consult PRIME's psychiatric nurse. Each participant was getting time compensation payment of 100 Ethiopian birr which is around 4 USD.

Institutional Review Board (IRB)

This study was started after obtaining ethical clearance from IRB of AAU Collage of Health Sciences (protocol number 011/14/Psy). The data collection was commenced after obtaining permission from Silte zone and Sodo district health beuro. Telephone address of IRB as well as full address of the principal investigator was given to the study participants along with the information sheet and consent.

Informed Consent

Participation in this study was purely voluntary. Prior to giving informed consent, all participants were given adequate information about the purpose of the study, how interview was going to be conducted, and the duration of the interview. The potential risks and benefits of participating in the study to the individual participant and the society were made explicit. Participants were also told they have the right to withdraw from the study any time they want. A copy of Informed consent (Appendix 5 A & 5B) and information sheet (Appendix 6 A & 6B) were given to each participant.

Confidentiality

The information provided by the study participants were held in utmost confidence. Confidentiality of the information they gave was kept. Anonymity of the study participant was maintained by codifying all the questionnaires and interviews. In addition, all the name files or personal identifiers were kept separately from their response. It was kept in a locked closet (hard copy documents) and the soft copy documents were kept in a password protected computers.

4.7 Operational definitions

For the purpose of this study the following definitions were used accordingly:

Burnout: is a physical and psychological outcome that resulted from long term exposure to job related stress. Which is a mental state characterised by psychological weariness to provide human service, it is characterised by emotional exhaustion (EE), cynicism (CY) or depersonalisation and lack of personal accomplishment (PA). In this study burnout is conceptualised by high emotional exhaustion (EE) or reduced personal accomplishment (PA).

Healthcare facility: an institution that provides healthcare service to anyone who demands care

HealthCare Workers (**HCWs**): Staff or health service providers that are providing direct care of assessment, diagnosis, treatment and health promotion to patients or professionals with health background that are engaged in coordinating and supervising healthcare facilities and programmes.

Impact: Is the consequence or the effect of burnout and professional satisfaction.

Job related stress: It is a respone or a psychological state resulted from the imbalace between the job demands and their abilities to cope, which can have mental, physical and social consiquences

Professional satisfaction: the satisfaction and good feeling one gets because of his/her job.

Stress: a strain caused by personal or work factor which could affect the individuals wellbeing

Wellbeing: is an individual's optimal health and functionality in the physical, psychological/ mental domains of life. Have the physical, social and psychological/mental domains and it is directly linked with the ability to perform either a professional or personal tasks in a socially acceptable manner.

Chapter Five: Results

In this chapter the main results of the study are presented according to the study components as well as the study objectives. To summarise, the first component was the formative part, a qualitative study conducted to understand the HCWs conceptualisation of job related stress, burnout and wellbeing. The second component was a mixed method study aimed at estimating the magnitude of burnout and professional satisfaction among HCWs. The third or the last component of this chapter was a follow up or prospective cohort study of HCWs, the main focus of this component of the study was to assess the course of and the change of burnout level over six months' period and associated factors.

5.1 Study one: Conceptualisation of burnout

Participants

In this component of the study 52 HCWs have participated. This sample is comprised of five BSc degree nurses, 23 diploma nurses, seven health officers and 17 health extension workers (HEWs). There were 22 males and 30 females, with 17 community based and 35 facility based HCWs. Two participants were health centre heads and the rest were frontline staff. The IDIs took a minimum of 35 and maximum of 90 minutes. The FGDs took a minimum of 60 and maximum of 120 minutes. The size of the FGDs ranged from 7 to 10 participants. The detailed sociodemographic characteristics of the participants are presented in Table 3. Due to the consistency of information between IDIs and FGDs the results are presented together, but differences were also highlighted where and when present. The main results of this study are presented under the identified three themes.

Table 6: Socio demographic characteristics of study one participants

Characteristics		IDI		FGD	
		Male	Female	Male	Female
Total number of participants		11	7	12	22
Age (years)	**<25**	1	3	4	13
	25-34	8	4	7	9
	35-44	1	0	0	0
	>44	1	0	1	0
Marital status*	**Married**	4	3	0	16
	Single	7	4	0	6
Educational background	**Health officer**	3	2	1	1
	BSC nurse	3	1	1	0
	Diploma nurse	4	3	10	6
	HEW	0	2	0	15
Year of service	**<1 year**	1	2	2	1
	1-3 years	4	1	1	7
	>3 years	6	4	9	14

*12 missing data on marital status

Theme one: wellbeing and threats to wellbeing

Wellbeing was more often explained as the absence of negative things in one's life rather than being described in relation to its positive attributes. For example, wellbeing was equated with workplace safety from infection and security from violent caregivers or service users. However, some respondents had positive descriptions of well-being: being acceptable as having a good relationship with the community, being healthy and economically self-sufficient. The descriptions of wellbeing lacked depth and contrasted to the rich explanations given about the threats to wellbeing.

Emotional consequences of exposure to these threats or stressors ("being stressed") were related to the characteristics of the individual. Participants gave the impression that health

workers who displayed any type of emotional response to stressors were somehow weak or showing ‘instability’. For example:

“*If the person is thinking too much or if the person is worried about everything he can be stressed. ...it can also be caused by [mental] instability”*. [23, Female, Health Officer/ IDI code 06]

Stressors related to the job were not considered to be uniformly negative. Most participants agreed that some degree and type of stress was acceptable and unavoidable in healthcare. Working night shifts and on public holidays, treating patients who are in pain and sharing distressing moments of patients and caregivers were some of the acceptable stressors. Some said that HCWs are expected to be strong to handle those stressors, but others spoke of the profession as being too demanding. A participant described his experience as follows:

“We are sacrificing our life to give life to the patients. We have much contact with patients who are facing diverse problems…we are listening to their problems and watching when they [patients and families] are in pain. Eventually this will pressure us and create some stress and make us unhappy…there are situations that demands our immediate action but we can’t… which is quite stressful” [25 Male, Clinical Nurse/ FGD four code 07]

All of the participants shared the view that exposure to stressors is acceptable for a certain period of time. However, across the interviews and FGDs, it was indicated that prolonged exposure to stressors might progress to an unacceptable or negative stressor and lead to emotional disturbance. Participants also spoke about personal life stressors, such as competing family responsibilities like child care, as well as being unable to fulfil family demands due to low income or having physical illness. Most of the participants presented general life stressors and job-related stressors as overlapping and interconnected. For example the imbalance between the demands of the job and their income was presented as both a personal life and job-related stressor.

Workload and lack of clarity about the boundaries of their role were mentioned as stressors. Facility based participants said that outreach work, which involves walking long distances, was a cause of exhaustion. Community based workers spoke of the lack of definition to their roles and workload as the major sources of stress. A participant shared her experience:

"*We are responsible for most of the activities in the sub-district, be it health or agricultural issues. We are working under great pressure. When there is new fertilizer we are supposed to introduce it… when there is primary school registration we are the ones who will go house to house and register… I sometimes feel difficulty to see the boundary of my responsibilities*" [28, Female, HEW/ IDI code 05]

Most participants described how the relationship with patients and co-workers, including superiors, could either be a stressor or protector. The majority of participants reported a positive and harmonious workplace relationship with co-workers that had helped them to handle stressors. Some indicated that they were part of a close-knit team, with supportive and encouraging relationships that gave them joy in their workplace. Perspectives on relationships with superiors were more mixed, with most seeming to be indifferent. All facility based participants mentioned that their superiors or health centre leaders were distant because they are very busy, but most appeared reluctant to discuss the topic openly.

The relationship with the patients and caregivers was reported as difficult by most respondents, with only a few considering it to be good. Respondents reported being undervalued by the community, especially after the government's recent introduction of HCWs evaluation by patients, community members and government officials. All reflected that this monitoring and evaluation system had made their relationship with the community challenging and contributed to feelings of insecurity. Some reported being discouraged or frustrated, particularly as the community evaluation carried punitive consequences:

"*During a community forum, any community member can accuse you of anything… and you will be demoted to very remote place without getting a chance to explain ourselves, we are uncertain what will happen to us*" [26 Male HO/ FGD one code 02]

In contrast, one participant spoke positively about the community evaluation system:

"When they [patients] face a delay or any sort of inconvenience or mistreatment they know how to complain about it. They will raise some important issues in the forum that are helpful for the improvement of the health service. It is really helpful system; they can tell us what we cannot observe". [28 Male, Clinical Nurse/ IDI code 04]

The physical workplace conditions especially infrastructure such as tap water, phone signal, access to public transportation and availability of medical supplies were mentioned as

stressors by many participants. Many participants said that shortage of medical supplies was one of the worst stressors, mainly due to fear of acquiring infection. One participant described the situation with respect to shortage of gloves as follows:

"If you want to work properly and protect yourself…you are supposed to persuade the family to buy gloves…but sometimes we expose ourselves in order to save their money.... our work environment is not comfortable, it is not safe, it is stressful". [BSC nurse, male 23/ IDI code 01]

However, participants who were involved in management and leadership reported that there were adequate medical supplies.

Theme two: "the chronics"

According to the participants, long-term exposure to stressors had a critical impact on the HCW. They indicated that stagnating in one place without career progression can lead to long-term exposure to stressors. This was seen as a pathway to becoming a "chronic" member of staff, which was a label given to HCWs who have served for many years in the same post. This term carried a negative connotation for the bearer of the label. Although most respondents identified the effects of long-term exposure to stressors, most spoke of it as a problem of other HCWs. One participant shared her observation of a 'chronic' staff member as follows:

"There was a HCW 'who adapted to other person's pain' ... The incident was like this... There was a female patient who was being catheterized [urinary catheter]; the way he inserted the catheter was very inhuman. I was feeling the pain; my eyes were filled with tears ... but this person was a senior HCW. At that time he was treating the lady as something without sense... he was like a carpenter who is hammering a wood. The patient was shouting but he was not able to notice that... he was just doing his job without being disturbed". [22, Female Health Officer/ IDI code 02]

Another participant described this group as follows:

"*These are very bored HCW...those who are paid less, especially the 'chronic ones' are very bored and exhausted we [BSc level professionals] earn better than them. Most of them are supposed to support their families, the financial burden has dissatisfied them and they work carelessly*" [29, Male BSC Nurse/ FGD four code 06]

All except two respondents said that they had encountered the consequences of long-term exposure to stressors in other professionals. The terms "burnout" and "burnout syndrome" were not familiar to most of the participants; however, they described in detail how HCWs can become demotivated, insensitive to patients, lose interest in their job, feel exhausted when treating patients and lose hope. Most said that they have encountered someone in their workplace experiencing those problems. A participant described it as follows:

"*The consequence... is loss of hope. I have never experienced it but I can tell you about my friends. I used to have friends who were very courageous and enthusiastic when they joined the profession. But now become demotivated and insensitive to patients. I understand them totally.....it is the situation and what made them like this... they did not get upgrading chance [professional development opportunity] after serving many years"* [28 Male Clinical Nurse/ IDI code 15]

In addition, minimising contact time with patients was also mentioned as one of the consequences. Some also mentioned that workload was another factor in triggering these reactions in staff. One staff member recalled his personal experience as follows:

"*I experienced burnout once. At that time....there was a community based campaign task and all staff except two professionals went out for the task. I was with the group that was staying behind in the health centre to provide all the services… here adult, child outpatient service, family planning and antenatal care, delivery you name it... only two individuals were supposed to cover that. No lunch break we were seeing patients continuously ... it was exhausting and stressful. Seeing patient after patient was monotonous.... it makes you passive. ... I guess this was when I had the experience of burnout*". [28 Male Clinical Nurse/ IDI code 04]

Though exposure to stressors for a period of time was seen as inevitable, developing the consequences of stressors was thought to be avoidable by not staying in the same post. Most said that the HCWs should make an effort to improve their educational status or change the place of work. Few participants expressed sympathy towards the 'chronic' staff. Some tended to blame them for their predicament, on the grounds of personal weakness or laziness, and to feel proud that they themselves were resilient enough not to give way to such challenges and stressors.

Exhibiting the symptoms of job related stress was reported to be linked with the individual's character, discipline and socioeconomic status. A participant explained the phenomenon as follows:

"*Sometimes there are staffs who are not acting like HCWs… he acts carelessly even when he sees the worst cases. I always ask myself why staff are acting like this… become isolated and hostile. I think it is because he wasn't a good person or he lacked motivation. What I understand is that, he may not achieve his economic desire or he may not be satisfied regarding that….that is why he is so harsh to everyone. I think he is unhappy and he is not motivated in my opinion [because] his income is small… Due to this economic problem he is unhappy and dissatisfied on his job*". [27 Female BSC Nurse/ IDI code 11]

"...There are demotivated people who are not interested in the profession; I can understand those who experience burnout due to other economic problems. Apart from this I see it as being lazy. So far I have never experienced it. I hope I will not experience it in the future". [25 Male health officer/ IDI code 10]

Theme three: strategies to handle stressors and their consequences

To handle stressors and their consequences, participants reported using or planning to use various strategies. These ranged from enduring the situation to planning to quit the job. Apart from system level changes, participants mentioned inter- and intra-personal factors such as resilience, good peer relationships and social support as important factors for handling stressors or coping. Provision of good service and avoiding procrastination, especially in relation to paperwork, were some of the strategies used to enhance wellbeing. In one of the focus group discussions one participant mentioned that providing a good service had a key role in staying well in the workplace:

"*When I make my patients comfortable and treat them with respect we will communicate peacefully ... I will get peace of mind and satisfaction then I will be well. This is my experience*" [HO female 21/ FGD one code 06]

Family and having social support were mentioned as important factors to cope with the stressors in the work place. One participant described the advantage of family as follows:

"*When I don't attend some social events or get involved in social activities as I am expected, I have to explain my situation to my family and people around me. Otherwise I will be in*

trouble, if there is someone who can understand my day-to-day task and what is happening in my workplace that would be great. Because that person will have a positive attitude, he/she will support me. I will not be expected to explain what is going on every day. Having such kind [supportive] of family is useful to work in a place like us". [25, Female HEW/ FGD two code 01]

Experience sharing with senior staff and getting technical support from other co-workers were other strategies employed. Some participants said that spirituality and prayer helped them to cope with stressful situations. The over-riding coping strategy of health workers was, however, focused on upgrading their educational status, which would have a direct impact on their career progression, continuous professional development and economic security.

Other structural or system level factors that were identified by participants as useful to handle the threats to wellbeing were providing recognition for the healthcare professionals, ensuring adequate numbers of staff, workload reduction, fair career progression, improving the community awareness about their responsibilities as well as their rights, improving public transportation access, and also ensuring adequate remuneration through their salary and benefit packages. Improving communication skills, understanding the culture and norms of the community one is working with, explaining what one is doing and discussing plans with patients, preparing social events like coffee ceremonies to share experiences and to refresh themselves were all ways that the HCWs had used to cope with stress and remain mentally healthy.

5.2 Study two: level of burnout and professional satisfaction

Participants

In this component of the study all HCWs working in Sodo district during the time of data collection were screened (n=200) for the study. From 168 eligible HCWs who received the questionnaires, 145 returned completed questionnaires resulting in a response rate of 86.3%. The majority of the survey participants were female (62.10%, n=90) and young, with 93.8% falling within the 19-34 year age range. In terms of professional group composition, 53.3% (n=73) were nurses, 34.5% (n=50) were HEWs, 8.9% (n=13) were midwives, and 6.2% (n=9) were health officers. Except one nurse with a BSc degree qualification, all of the nurses had a qualification of diploma certificate. Participants had worked between three months and 17 years, with a median of 5.0 (25%, 75% percentiles: 0.4, 12) years (Table 4).

Table 7: Socio-demographic characteristics of study two participants

		Quantitative study	Qualitative study
	Characteristics	**Number (%)**	**Number (%)**
Gender	**Male**	55 (37.9)	13(40.0)
	Female	90 (62.1)	20 (60.0)
Age (years)	**<25**	78 (53.8)	-
	25-34	58 (40.0)	24(73.0)
	>35	9 (2.6)	9 (27.0)
Marital status	**Single**	96 (66.2)	12 (36.0)
	Married	49 (33.8)	21 (64.0)
Professional groups	**Nurse**	73 (50.3)	15 (45.4)
	Health officer	9 (6.2)	1 (3.0)
	Midwife	13 (8.9)	-
	Health Extension Worker	50 (34.5)	17 (51.5)
Place of work	**Urban**	64 (44.0)	21 (64.0)
	Rural	81 (56.0)	12 (36.0)
Year of service	**<1 year**	10 (6.9)	-
	1-3 years	44 (30.3)	-
	>3 years	91 (62.7)	33 (100)

Maslach Burnout Inventory (MBI) item response

The most endorsed item from EE domain was “I feel frustrated by my job” (34.3%) and the least endorsed was “working with people the whole day is really a strain for me” (5.5%). For the core item of EE domain, “I feel burned out from my job”, 9.0% endorsed having had the experience with a significant difference between the professional groups (18.0% in the community-based and 4.3% in facility-based HCWs) (Table 9).

Table 8: Baseline Maslach burnout inventory item response

	Never (%)	A few times a year (%)	Once or few times a month (%)	Once or a few times a week (%)	Every day (%)	At least once or few times a month (%)*
Emotional exhaustion domain items						
I feel emotionally drained from my work.	69.4	13.2	9.7	4.9	2.8	17.4
I feel used up at the end of the workday.	79.2	10.4	7.7	2.8	-	10.5
I feel fatigued when I get up in the morning and have to face another day on the job.	74.3	8.3	13.2	3.5	0.7	17.4
Working with people all day is really a strain for me.	85.5	8.9	4.8	-	0.7	5.5
I feel burned out from my work.	73.6	11.1	9.7	3.5	2.1	15.3
I feel frustrated by my job.	74.3	10.4	8.4	4.9	2.1	15.4
I feel I'm working too hard on my job.	55.2	10.5	18.2	8.4	7.7	34.3
Working with people directly puts too much stress on me.	86.2	7.6	4.8	1.4	-	6.2
I feel like I'm at the end of my rope.	84.8	6.2	2.8	2.1	4.1	9.0
Cynicism domain items						
I feel I treat some recipients as if they were impersonal objects.	88.9	2.8	2.8	0.7	4.9	8.4
I've become more callous toward people since I took this job.	67.4	3.5	4.2	5.7	19.1	29.0
I worry that this job is hardening me emotionally.	81.7	7.7	4.9	2.1	3.5	10.5
I don't really care what happens to some recipients.	80.9	6.3	2.1	0.7	9.9	12.7
I feel recipients blame me for some of their problems.	43.4	11	9.6	2.1	33.8	45.5
Personal accomplishment domain items						
I can easily understand how my recipients feel about things.	24.6	2.1	10.5	5.6	57	73.1
I deal very effectively with the problems of my recipients.	20.1	3.5	7.7	5.6	63.2	76.5
I feel I'm positively influencing other people's lives through my work.	20.1	3.5	4.9	7.7	63.6	76.2
I feel very energetic.	13.1	3.4	13.1	15.2	55.2	83.5

I can easily create a relaxed atmosphere with my recipients.	11.7	2.7	5.5	10.3	69.7	85.5
I feel exhilarated after working closely with my recipients.	81.9	2.8	3.5	3.5	8.3	15.3
I have accomplished many worthwhile things in this job.	16.9	3.5	5.6	14.7	59.1	79.4
In my work, I deal with emotional problems very calmly.	11.8	8.3	13.1	14.6	52.1	79.8
*proportion with presumed significant level of burden						

Overall burnout

Using the standard cut-off on the MBI (following exclusion of the CY domain because of poor reliability), only 3.8% (n=5) had burnout in both EE and PA domains, although the proportion with moderate to high level of burnout in at least one of the two domains was much higher 42.9% (n=57).

Emotional exhaustion (EE)

The median (25^{th} and 75^{th} percentiles) of EE domain was 3 (0, 8). Using the standard cut-off point, 7.7% (n=11; 95% CI: 0.04, 0.15) of the total participants had moderate to high EE. This constituted 18.0 % (n=9) of community based HCWs and 2.1% (n=2) of facility-based HCWs (Table 2). Female staff (11.2% n=10) experienced EE significantly more frequently than males (1.8% n=1). Being a community-based HCW was significantly associated with increased odds of experiencing higher EE (OR=2.0, 95% CI: 1.1, 3.6) (Table 3).

Personal Accomplishment (PA)

The median (25^{th} and 75^{th} percentiles) of PA domain was 34 (24, 40). A reduced sense of PA was reported by 43.7% (n=59) of the overall participants using the standard cut-off; non-significantly lower (Chi^2 (1) =2.56, p=0.110) among community-based HCWs (37.3%, n=22) compared with facility-based HCWs (62.7%, n=37) (Table 10).

Table 9: Comparison of burnout domain above or below median scores and psychosocial factors between health worker types

			Community based healthcare Workers Number (%)	Facility-based healthcare workers Number (%)	Chi-square (degree of freedom)	P value
Burnout domains (Categorised by median score)	**Emotional exhaustion**	**Low**	16 (32.0)	53 (55.8)	7.43 (1)	0.01
		high	34 (68.0)	42 (44.2)		
	Cynicism	**Low**	20 (40.0)	44 (46.3)	0.53 (1)	0.46
		High	30 (60.0)	51 (53.7)		
	Personal accomplishment	**Good**	24 (48.0)	52 (54.7)	0.59 (1)	0.44
		Poor	26 (52.0)	43 (45.3)		
Psychosocial factors	**Social support**	**Poor**	36 (73.5)	63 (66.3)	0.77 (1)	0.38
		Moderate/strong	13 (26.5)	32 (33.7)		
	List of threatening events	**None**	25 (51.0)	46 (48.4)	0.27 (2)	0.87
		1 or 2	17 (34.7)	37 (38.9)		
		3 and above	7 (14.3)	12 (12.6)		
	Patient Health Questionnaire score*	**< 5**	34 (70.8)	78 (83.9)	3.29 (1)	0.07
		5 or more	14 (29.2)	15 (16.1)		
	Year of service	**< 2 years**	13 (26.0)	16 (16.8)	2.85 (2)	0.24
		2-5 years	25 (50.0)	45 (37.4)		
		>5 years	12 (24.0)	34 (35.8)		

Work and psychosocial factors

Job satisfaction

From the total participants, almost half (49.2%; n=62) reported low overall job satisfaction. Low intrinsic and extrinsic job satisfaction was reported by 46.5% (n=60) and 45.4% (n=64) of participants respectively.

Job content and control

Low skill discretion was reported by 28.3% (n=13) of community-based and 21.4% (n=18) of facility-based HCWs. Low decision-making attribute was reported by 28.1% (n=39) of the participants, which was higher among community-based HCWs (34.0% n=16) compared to facility-based HCWs (25.0% n=23). High job demand was reported by 59.7% (n=83) of the participants, consisting of a comparable proportion of community-based (57.4%; n=27) and facility-based (60.9%; n=56) HCWs. Around half (48.0% n=61) of the participants had low decision making latitude, which was again comparable between community (50.0%; n=22) and facility based HCWs (46.9%; n=39). Most HCWs reported good co-workers support (76.3% n=100), with no significant difference between the facility-based (78.2%; n=68) and community-based (72.2%; n=32) HCWs.

Over two-thirds (68.7% n=99) reported having poor social support and the majority had experienced stressful or threatening life events in the preceding six months: 37.5% (n=54) had one or two and 13.2% (n=19) had three or more. Family member's or close friend's death was the most endorsed stressful life event (23.5% n=34). Possible depression was reported by 20.6% (n=29) of the HCWs. Although 29.0% (42/145) of the respondents consume alcohol, none of them had AUDIT scores suggestive of harmful use.

Evaluation of factors associated with burnout

In the multivariate model, age was the only demographic factor associated with higher EE (aOR=1.32; 95% CI: 1.05, 1.34) only in the fully adjusted model. From the psychosocial factors; PHQ score (aOR=1.25; 95% CI: 1.05, 1.50), and poor social support (aOR=1.58; 95% CI: 1.01, 2.46) were significantly associated with high levels of EE.

The work related factors such as; being a community-based HCW was significantly associated with higher EE compared to facility-based HCWs in the crude (OR=2.68; 95%CI: 1.30, 5.50) and adjusted model (aOR=13.55; 95% CI: 1.24, 147.36). Job insecurity was also significantly associated with increased EE, in both the crude and fully adjusted models (OR=1.55; 95% CI: 1.22, 1.97 and aOR=1.85; 95%CI: 1.07, 3.18). Supervisor's support was also associated with higher EE only in the fully adjusted model (aOR=1.46; 95% CI 1.02, 2.12) (Table 7). We have also run the multivariate analysis by excluding the item that doesn't load in the EE sub domain but the result has no difference with what is being reported.

Table 10: Regression model for factors associated with high* level of emotional exhaustion with socio-demographic, psychosocial and work related factors

Characteristics		Crude model			Fully adjusted model	
		N	**OR**	**95% CI**	**OR**	**95% CI**
Sex	**Male**	55	Ref			
	Female	90	1.39	0.71, 2.73	0.36	0.05, 2.41
Age (years)		145	1.04	0.97, 1.13	1.32	1.07, 1.64
Marital status	**Single**	145	Ref			
	Married		1.17	0.59, 2.34	0.66	0.14, 3.41
Place of work	**Urban**	145	Ref			
	Rural		1.06	0.55, 2.05	1.52	0.34, 6.80
Psychosocial factors	**Patient Health Questionnaire score****	141	1.20	1.06, 1.35	1.25	1.05, 1.50
	Perceived social support score**	144	1.28	1.04, 1.59	1.58	1.01, 2.46
	Stressful life events score**	144	1.52	1.14, 2.04	1.61	0.82, 3.15
Profession	**Facility based HCWs**	95	Ref			
	Community based HCWs	50	2.68	1.30, 5.50	13.55	1.24, 147.36
Year of service		145	1.01	0.90, 1.13	0.94	0.72, 1.22
Job satisfaction	**Intrinsic job satisfaction**	129	0.93	0.89, 0.97	1.10	0.90, 1.34
	Extrinsic job satisfaction	141	0.93	0.89, 0.97	0.86	0.72, 1.02
Job content and control	**Job skill discretion**	130	0.98	0.91, 1.05	0.94	0.77, 1.15
	Job decision making attribute	139	1.00	0.88, 1.15	1.02	0.96, 1.07
	Job demand	139	1.00	0.932, 1.07	0.97	0.83, 1.14
	Job decision making latitude*	127			-	-
	Co-workers support	131	0.77	0.62, 0.94	0.64	0.37, 1.10
	Supervisors support	137	0.96	0.85, 1.08	1.46	1.01, 2.12
	Job insecurity	137	1.55	1.22, 1.97	1.85	1.07, 3.18

MBI: Maslach Burnout Inventory * Defined as above median score on the MBI Emotional Exhaustion domain **Total score

Qualitative exploration of job related wellbeing

Most of the participants were female (60.0% n=20), married (64.0% n=21) and working in urban areas (64.0% n=21). Nevertheless, almost half (n=16) were facility-based, while the other half (n=17) were community-based. All participants have worked for at least three years (Table 2).

No participant reported any problems related to the clarity of the survey questions. Respondents indicated that there were high levels of job related stress and burnout. However, they also reported a high level of job satisfaction because they are serving their community as a HCW. The findings are summarised under the themes of: (i) Burnout and barriers to reporting, (ii) need for resilience.

Theme one: Burnout and barriers to reporting

All FGD participants except one indicated that there was a considerable level of job related stress and burnout among HCWs in the district. Participants gave multiple specific examples and singled out some of the common causes of job related stress and burnout in their workplace, including high work load, shortage of staff, and repeated unanticipated urgent tasks being given by managers.

"Though it is not easy to recall what I filled in that questionnaire. I can tell you how much I am dissatisfied with my job and feel burned out in my day to day work life. I do experience burnout. I am even planning to quit this job" [FGD two male participant / code01]

Another participant also shared her experience about the extent of burnout she is facing and why she refrains from sharing by saying:

"We do have workload …we have also told you about our burnout experience at that time though… we did not tell you by exaggerating it. We are working under great stress these days our work packages are increasing, the demand from the community is also increasing because of improved awareness…If you want to know we are having this problem to the extent we are unable to do our house hold chores. You know, I don't think sharing this thing has any use because there is no solution to it"

[FGD four, female participant /code 05]

One of the FGD participants from the facility noted as follows:

"Sometimes you don't know what will come... people from the district health office will come and tell you to do some community based work and report to them within 24 hours. We are the ones who will be walking long distance and mobilise the community in collaboration with the health extension workers. Such kind of unplanned tasks are very stressful for me...in addition to tight deadlines for report, which will lead us to be stressed and burnout" [FGD one male participant/ code 05]

In addition to the routine health service, participants reported having additional non-health related tasks and responsibilities. A participant shared her experience about the stress resulting from those non-health tasks.

"*If you are HEW, you are obliged to be a member of the sub-district administration committee. This means you are supposed to sit for a meeting with them at least weekly. The sub district officials usually conduct the meetings on Sundays ...so we can't take a break at least to wash our clothes. If we missed that meeting they will deduct money from our salary ...it is so annoying. It is like hell for me"* [FGD four, female participant/ code 07]

Lack or career progression opportunity was also mentioned as a factor that drains their motivation. Small salary was other key source of dissatisfaction. Most of the participants place themselves in the low socioeconomic strata. A participant said that even the community they are serving see them as needy. He shared his experience:

"*One day I was travelling to one rural health post ...I was using a public transport and a farmer lady who was sitting next to me ... whom I know in the health centre said to me that I will pay your [transport cost]. Then I said, "No it is okay I can pay mine". She smiled at me and said that "we all know that you are a government employee and paid less" [...] then she paid. You can't imagine how much irritated I was*" [FGD one, male participant /code 06]

Three main barriers emerged as reasons for underreporting: interpretation of experience, fear of reporting and anticipation that their situation would never change whether they talked about it or not.

Regarding the potential influence of a culture of keeping feelings to oneself and also the lack of awareness about burnout, one participant noted that:

"In my opinion this (underreporting) is related with our trend of opening up and sharing what we are feeling. As my colleagues have said already, there are very stressful times …when we were facing burnout …but we don't have the culture of this stress situation (burnout)…" [FGD one, male participant/ code 07].

Misinterpretation of the experience because of lack of knowledge was highlighted by another participant:

"For the question if there is burnout among us or not yes there is …but since we do have number of tasks and huge workload we tend to interpret it as exhaustion"

[FGD four, female participant / code 01].

Most of the participants said that they refrain from sharing their experience about burnout because they were afraid of reprimand and other consequences of sharing this information.

"*When we complain or talk about our job-related stress or burden we are worried ...they* [their superiors] *might immediately consider that we are spreading discontent to hinder the work. They might label us as reactionary ...so it would not be safe. We rather keep quiet*" [FGD two, male participant / code04]

In all the focus group discussions participants appeared cautious not to portray a negative image of either their facility or the district's health system. A participant said that:

"*I remember when I filled your survey questionnaire ...I was stressed and having difficult time with my job at that time. But I refrained from telling the truth because I wasn't sure about the consequences of sharing that information. I can't be sure if I am going to be labelled as resistant ....In short I was afraid of the consequences*" [FGD two, male participant/ code07]

Though most participants agreed that job related stress was a common occurrence, they did not think that it is something worth sharing with other people because of the sense that no one would be interested to help. They reported that many external visitors were asking about the

issue without later bringing any change. They felt it was better to pretend that it was all ok. A participant expressed her feelings by saying;

"*Prior to this group meeting we were discussing just to be quiet and say nothing about our job. Because we have seen many people, who came from the ministry of health, non-governmental organisations and universities ...were raising similar issue. Honestly we are tired of you people...we will tolerate our problem, sorry, I don't think you can change our situation [beka chegrachenen wat endadergewaln yekerta ene lewete limeta yemichil ayemeselegnim]*" [FGD three, female participant/ code 03]

A participant also shared her view and hopelessness about talking on issues related to their job related problem in general as follows;

"*There are many gaps in our work environment. When we gather for a meeting with various stakeholders including our superiors, they ask us about our problems and our needs....., neither our work nor working condition is changed and our problem is still here. People like you are just collecting and writing the information. I don't think there is anyone who can give us justice so we have decided to be quiet*" [FGD three female participant / code 02]

Theme two: Need for resilience

Though almost all FGD participants said that there is job related stress and burnout in their environment, they reported that HCWs need to be strong and resilient. Most said that HCWs need to be seen as a role model in the community. A participant said that:

"*HCWs are good at describing other people's situation not their own. We believe that we are supposed to be strong teachers and examples to our community*" [FGD two male participant/ code 07]

Another one shared her commitment to the health profession by saying:

"*...our job has lots of burden, but we are tolerating it. Whatever the stress and the pressure, we are accomplishing our mission...*" [FGD three female participant/ code 04].

Another participant highlighted also emphasised the view that tolerance is needed as part of their job as clinicians: *"As far as I recall there was pressure on us at that time this doesn't*

mean that were not experiencing burnout but I personally thought that I am supposed to tolerate it because it is my job and I joined this profession by my choice…"

[FGD three, participant five]

The majority of the FGD participants agree that HCWs need to tolerate the hardship in the work environment. Even some were considering themselves as weak when they spoke about job related stress and burnout.

"*At that time there was big workload...the work load was heavier than now. We were stressed and under lots of pressure, but we can't say it is totally job related; it may be our personal problem, it may be our weakness...*" [FGD two male participant / code 06]

Despite the job-related stress and burnout participants are facing, all agreed that there is a tremendous amount of satisfaction that they get from their job. All reported that they were proud of serving their community as a healthcare provider. The community-based workers emphasised that the good relationship and recognition they are getting from the community is the main source of the satisfaction in their job. However, for the facility-based HCWs, the increasing community demand for explanations about their illness and treatment and the involvement of the community in evaluating the HCWs, meant that the community was perceived as a cause of stress instead of satisfaction.

5.3 Study three: Short term outcome of burnout

Participants

From the 145 HCWs recruited at baseline, 136 (93.8%) completed the six months follow-up assessment. At baseline most participants were female (61.0%, n=80), under 35 years of age (93.0% n=110), single (63.0%, n=83) and nurses (51.0%, n=70). About a third of the participants were HEWs (33.0%, n=45) working in the community while two thirds were facility-based. Loss to follow up was not significantly associated with the outcome of interest or demographic factors (Table 12).

Table 11: Endline participant's socio demographic characteristics

	Characteristics	Baseline Number (%)	Endline Number (%)
Gender	**Male**	57 (39)	52 (39)
	Female	91 (61)	80 (61)
Age	**<25**	57 (39)	39 (33)
	25-34	79 (55)	71 (60)
	>35	9 (6)	8 (7)
Marital status	**Single**	96 (66)	82 (63)
	Married	49 (34)	49 (37)
Professional groups	**Nurse**	75 (51)	70 (51)
	Health officer	9 (6)	9 (7)
	Midwife	13 (9)	12 (9)
	Health Extension Worker	51 (34)	45 (33)
Place of work	**Urban**	64 (44)	66 (50)
	Rural	81 (56)	67 (50)

Overall burnout score

The proportion categorised as having moderate to high burnout in both domains, EE and reduced PA, was relatively low at both time points: 3.8% (n=5) at baseline and 4.6% (n=6) at the six months follow-up time-point (p-value =0.765) (Table 3). There was no statistically significant change in the proportion endorsing either of the sub domains (42.9%, n=57 versus 46.6%, n=61; p-value = 0.584) (Table3).

Domain specific burnout scores

Emotional Exhaustion (EE)

The median (25th and 75th percentiles) scores were 3 (0, 23) at baseline and 2 (0, 29) at six months follow up (Table 4). Proportion of participants with elevated EE score was almost identical at the two time points (T1=7.7% (n=11) and T2=7.5% (n=10)), with no statistically significant difference (p = 0.12). However, there was no statistically significant change in EE scores over time by professional group (Table 2). At both time points, women were more likely to report moderate to high EE: 11.2% (n=10) in women vs. 1.9% (n=1) in men at T1 and 10.1% (n=8) in women at T1 vs. 3.9% (n=2) in men at T2.

Personal Accomplishment (PA)

The median (25th and 75th percentiles) scores were 34 (0, 47) at baseline and 32 (0, 43) at six months follow up (Table 4). At T1, 43.7% (n=59) and at T2 48.5% (n= 64) participants reported reduced feeling of PA defined by the standard authors' cut-off. The baseline differences in PA were maintained at six months follow up in the various professional groups without a statistically significant change over time.

Table 12: Baseline and endline burnout scores of study participants using Emotional Exhaustion and Personal accomplishment domains

		Baseline			Endline		
Burnout domains	**Score**	**Overall N (%)**	**Community based HCWs N(%)**	**Facility based HCWs N(%)**	**Overall N(%)**	**Community based HCWs N(%)**	**Facility based HCWs N(%)**
Emotional exhaustion	**Moderate to high burnout***	11(7.7)	9 (18.0)	2 (2.2)	10 (7.5)	5 (11.4)	5 (5.6)
	Low burnout	131(92.2)	41 (82.0)	90 (97.8)	123 (92.5)	39 (88.6)	84 (94.4)
Personal accomplishment	**Moderate to high burnout**	59 (43.7)	22 (50.0)	37 (40.6)	64 (48.5)	21 (50.0)	43 (47.8)
	Low burnout	76 (56.3)	22 (50.0)	54 (59.3)	68 (61.9)	21 (50.0)	47 (52.2)
***Significant difference between community and facility based HCWs at baseline** **HCWs=Healthcare workers**							

Secondary outcomes

Job satisfaction: There was no significant change in intrinsic and extrinsic job satisfaction scores, and consequently of overall job satisfaction, between T1 and T2 (Table 14).

In addition, to JSQ participants were asked three questions about their satisfaction with the type of care they are providing. At both time points the results showed that almost all are satisfied with the type of care they are providing.

Table 13: Healthcare workers reported satisfaction with delivery of care

Questions	Not satisfied		Neutral		Satisfied	
	Baseline N (%)	Endline N (%)	Baseline N (%)	Endline N (%)	Baseline N (%)	Endline N (%)
how satisfied are you with the care you are providing to your patients?	1 (0.69)	4(3.0)	9 (6.2)	7 (5.2)	135 (93.1)	124 (92.0)
Do you think patients and attendants are satisfied with the care you are providing?	-	4 (3.0)	8 (5.5)	9 (6.7)	137 (94.5)	122 (90.3)
Do you think your colleagues are satisfied with the care you are providing ?	-	4 (3.0)	11 (7.8)	13 (9.7)	131 (92.2)	117 (87.3)

Explanatory variables

Job content: The results of job content measure have no marked change in any of the domains of job content and control between T1 and T2 (Table 4).

Depressive symptoms: Proportion with high score on the PHQ has reduced from 20.6% (n= 29) at T1 to 11.2% (n= 5) at T2 the change was statistically significant p=0.03.

Social support and experience of life threatening event: Poor perceived social support was reported by 68.7% (n= 99) of the participants at T1 and 74.6% (n=100) at T2. Participants who reported three and more life threatening event at T1 were 13.2% (n=19) and 11.9% (n=15) at T2. This was experienced more by facility based HCWs at both time points: 66.7 % (n=10) at T2 and 63.2% (n=12) at T1 the difference was statistically significant P=0.03.

Physical health: Was also evaluated the association of higher EE with baseline physical health. When association of physical illness and EE was investigated, acute illness has a significant association with moderate to high EE (p=0.04). However, chronic illness is not significantly associated with EE (p= 0.08). From those with physical condition 18.0 % (n=22) believe that their physical illness has an effect on their work.

Table 14: Median and 25th, 75th percentiles ranges of burnout, job content and satisfaction of study participants stratified by the time of survey

Burnout and job related factors	Baseline		Endline	
Burnout domain	Median	IQR (25th , 75th)	Median	IQR (25th , 75th)
Emotional exhaustion	3	(0, 23)	2	(0, 29)
Personal accomplishment	34	(0, 47)	32	(0, 43)
Job content domain				
Job skill discretion	34	(26, 44)	34	(32, 36)
Job decision-making authority	36	(24, 48)	36	(20, 48)
Job demands	34	(24, 46)	34	(26, 42)
Job decision latitude	72	(54, 90)	70	(44, 90)
Co-worker support	12	(8, 16)	12	(7, 16)
Supervisor support	12	(5, 17)	12	(5, 17)
Job insecurity	5	(3, 9)	5	(3, 8)
Job satisfaction				
Intrinsic job satisfaction	35	(15, 48)	35	(17, 46)
Extrinsic job satisfaction	35	(15, 54)	35	(18, 53)
Overall job satisfaction	72	(32, 99)	70	(38, 98)

None of the participant reported alcohol use related problem at both time points. There was no problem of prescription or non prescription drug or substance use among the study participants.

At both time points participants did not show any sort of prescription and non prescription substance or drug use issue.

Table 15: Summary of prescription and non prescription drug/substance use among healthcare workers

Pattern of use		Baseline		Endline	
		N	%	N	%
Use of any pain killer with healthcare professional prescription	Yes	61	43.0	53	39.3
	No	81	57.0	82	60.7
Use of any pain killer without other healthcare professional prescription	Yes	23	16.3	20	14.8
	No	118	83.7	115	85.2
Use of diazepam with other healthcare professional prescription (none took without prescription at baseline but all who were taking at the endline were taking it without prescription by other professional)	Yes	4	2.8	5	3.7
	No	138	97.2	130	96.3
Use of chat (for one or two days in a week)	Yes	5	3.5	2	1.5
	No	137	96.5	132	98.5

Generalised Estimating Equation (GEE) Model

A longitudinal higher average EE score was associated with female gender, lower co-workers support, lower supervisors support, low job skill discretion (which is the opportunity to use one's specific skill), lower intrinsic and extrinsic job satisfaction in the crude model only. High PHQ score or elevated depression symptoms (adjusted mean difference (aMD) = 0.56, 95% CI 0.29, 0.83 p<0.01), and having experience of a stressful life event (aMD = 1.37, 95% CI 0.60, 2.14 p<0.01), being community based HCWs (aMD = 5.80, 95% CI 3.21, 8.38 p<0.01) and high job insecurity (aMD = 0.73 95% CI 0.08, 1.38 p=0.03) were significantly associated with higher EE scores in both crude and fully adjusted models. Time was marginally non significant in fully adjusted model (p=0.07). Increase in age was significantly associated with higher EE in the fully adjusted model (aMD= 0.36, 95% CI 0.09, 0.63 p=0.01 (Table 17).

Table 16: Association of demographic, psychosocial and work related factors with emotional exhaustion using generalised estimating equations

		Crude Model			Fully adjusted model*		
Selected characteristics	Response categories	**Mean difference**	**95% CI**	**P-value**	**Mean difference**	**95% CI**	**P-value**
Time		-0.04	-0.27, 0.17	0.68	0.16	-0.09, 0.42	0.20
Sex	Male	Ref					
	Female	2.68	0.95, 4.41	<0.01	-1.28	-4.04, 1.48	0.36
Age		-0.003	-0.18, 0.17	0.97	0.40	0.12, 0.67	<0.01
Marital status	Single	Ref					
	Married	0.77	-1.02, 2.56	0.40	-1.07	-3.34, 1.19	0.35
Place of work	Urban	Ref					
	Rural	1.51	-0.18, 3.20	0.08	1.63	-0.73, 4.01	0.17
Psychosocial factors	PHQ score	0.70	0.53, 0.87	<0.01	0.58	0.31, 0.84	<0.01
	Social support	0.32	-0.19, 0.85	0.22	-0.02	-0.63, 0.59	0.95
	Stressful life events	1.43	0.83, 2.02	<0.01	1.37	0.65, 2.09	<0.01
Profession	Facility based Healthcare workers	Ref					
	Community based Healthcare workers	5.71	4.0, 7.39	<0.01	5.65	2.85, 8.44	<0.01
Year of service		-0.23	-0.52, 0.05	0.11	-0.18	-0.55, 0.18	0.32
Job satisfaction	Intrinsic job satisfaction	-0.32	-0.43, -0.21	<0.01	-0.02	-0.23, 0.20	0.84
	Extrinsic job satisfaction	-0.22	-0.31, -0.14	<0.01	-0.14	-0.36, 0.06	0.16
Job content and control	Job skill discretion	-0.25	-0.46, -0.03	0.02	-0.22	-0.51,0.05	0.12
	Job decision making attribute	-0.06	-0.19, 0.08	0.42	0.01	-0.18, 0.19	0.97
	Job demand	-0.02	-0.19, 0.16	0.84	0.06	-0.15, 0.27	0.57
	Co-workers support	-0.57	-1.05. -0.09	0.02	-0.50	-1.29, 0.29	0.21
	Supervisors support	-0.44	-0.75, -0.14	<0.01	0.22	-0.21, 0.67	0.32
	Job insecurity	0.91	0.40, 1.40	<0.01	0.86	0.15, 1.57	0.02

Chapter Six: Discussion

As to my knowledge this is the first study of its kind in Ethiopia and Sub-Saharan Africa. This study confirms that: (1) although burnout is not a term used by the participants the concept of wellbeing and stress related to being a healthcare worker is well understood. (2) The level of burnout was lower than anticipated but further qualitative exploration suggested that burnout might have been underreported by the participants. (3) The impact of being engaged in mental healthcare provision or introducing mental health service to their work environment does not appear to have an impact on burnout at least in the short-term. An extensive range of threats to wellbeing were identified, spanning the personal and work domains.

Core features of burnout were described and portrayed as a consequence of long-term exposure to stressors. Burnout was acknowledged as a wellbeing problem or compromised wellbeing but presented as "a problem of others". In other words burnout was externalised and viewed as something experienced by those who have not been able to progress in their career. In the same qualitative study only few participants were comfortable enough to disclose the consequences of long-term exposure to stressors or burnout as a personal experience (228). The existence of job related stress and burnout as well as the validity of the concept among the study participants' was indicated in the formative study and second qualitative study. On the contrary, in the baseline cross sectional survey of this study the level of burnout was found to be deceptively lower than anticipated based on previous studies from LMIC (27, 73, 79, 80) and high income countries (33, 35). The longitudinal component of the study showed that there is no significant change in burnout level and professional satisfaction in the six months follow up.

Wellbeing is an improtant factor of one's ablity to function properly(88) and effectively. Physical, social and mental or psychological wellbeing are interconnected and impact one another (235) , as it is posited in numerous disciplines including sociology, psychology and health (91). The wellbeing model views the individual in an holistic manner and focuses on the interface between an individual's physical, social, psychological and spiritual life (94). The study participants' description in this study is congruent with this interactional view that position HCW wellbeing on the interface between the HCW and their social and work environment. Nevertheless, participants in this study give prominence of threats to wellbeing.

Participants identified a range of threats to their wellbeing and emphasized the interconnectedness of general life and job-related stressors (118, 236). Exposure to stressors as part of their job was viewed as unavoidable, which is in line with previous work from both high income countries (35, 237) and LMICs (3, 12, 79). Nonetheless, participants distinguished between stressors that were acceptable (related to patient care) and those which were unacceptable (e.g. unable to become economically self-sufficient). According to the participants, the physical demands of the work environment played a significant role in their wellbeing. Availability of medical supplies, tap water, a phone signal and access to public transportation were raised as important factors for doing the job well, protecting their safety and facilitating communication with other HCWs and their family members. Other studies have found that the physical work environment has an influence on HCWs communication with patients and the retention of HCWs, as well as in the promotion of positive outcomes, such as employees' wellbeing (161), productivity (162) and morale (237).

While current focus in scaling up care and universal health coverage, commonly there is little interest in considering the physical work environment which is considered as a major threat to the wellbeing of HCWs. The effects of long-term exposure to stressors, including features of burnout, were viewed negatively and considered as socially unacceptable and threat to their wellbeing among the participants. Although burnout is one of the common job related wellbeing problems, most of the participants were not familiar with the terms 'burnout' or 'burnout syndrome'. Instead, they recognised undesirable consequences for HCWs when they stagnate in one position without educational improvement and career progression (228).

The three-dimensional description of burnout was not fully shared by the participants. Although they gave descriptions approximating to all of the dimensions, the personal accomplishment component dominated their discourse. Study participants stressed that the feeling of personal accomplishment, status and recognition were more important than the experience of emotional exhaustion and cynicism. Though cynicism sub domain was not included in the main analysis, participants were mentioning distancing themselves from the patient by reducing contact as one of their coping mechanism to deal with job-related stress or burnout. Thus the concept has some relevance. Further exploration of the concept of cynicism and adaptation of the MBI accordingly appears relevant.

All components of the study showed that community-based HCW's have a significant association with high burnout. This may have resulted from their educational background as it has a direct link with the job title(27) , salary, job characteristics (8) and socio-economic status. This also corroborates with the findings of an Iranian health workers study which reported that a low level of education has a significant relationship with burnout (144).

There is also a difference in the job demand as well as control over community based job compared with the facility-based HCWs. For example the work of community-based HCWs is physically very demanding. They are expected to walk long distance and go, house to house to provide service. This may be one of the predisposing factors to burnout particularly, an increase in emotional and physical exhaustion. This can be explained well in light of job demand and control theory (238). Burnout is associated with various physical and emotional symptoms (129), such as sleep disturbance, headaches, hypertension, lower back pain and gastric disturbance among others (239). However, none of the physical signs and symptoms was identified by most of our participants; only one participant described experiencing frequent headaches. The participants extensively discussed the emotional and psychological symptoms such as a sense of hopelessness; irritability and overall dissatisfaction in their professional life.

Both the physical and social aspects of the environment were identified as important contributors to wellbeing. This included workplace relationships with peers, superiors, patients and community members. Studies have also shown that social support is associated with job related wellbeing in general and job-related stress (240) as well as burnout (241) in particular. Studies on Jordanian mental health nurses (241), and hospital nurses in China indicated that there is negative association between social support and domains of burnout (242). On the contrary, the present study did not show social support as being associated with burnout particularly higher emotional exhaustion (EE) score in both crude and fully adjusted model.

In the longitudinal component of the study an increase in age was also associated with higher level of burnout in the fully adjusted model. This finding was reflected on the formative study finding which suggested that staying or "stagnating in work place" for a long time without career progression may lead to a job-related wellbeing problem. However, another study found that burnout and age were inversely related (33, 74). This is likely to be related

to lack of experience, job insecurity and financial stability. In some studies, females were identified as a vulnerable group for burnout and job related stress (33, 243, 244). This was corroborating only in the crude model association female gender with higher emotional exhaustion. However, the findings of this study as well as prior studies need to be interpreted with caution because most of the study participants were female.

The concept of burnout may overlap with depression. Some studies have reported depression as a predictor of burnout (40) while other studies indicated that it is not (245). Depressive symptoms were associated with experiencing burnout (EE). This may partly be due to some overlap of the symptoms in both conditions (27, 246). Specifically reference to fatigue, hopelessness and frustration are relevant to both burnout and depression.

There was a significant reduction between the two time points from 20.6% (n=29) at T1 to 11.2 % (n=15) at T2. The reduction in the level of depression among the study participants is likely to reflect the natural course of depression. However, reduction due to improved awareness and self care following the training in mental health care cannot be excluded. However, most of the study participants were not willing to share their own experiences and were more comfortable discussing the experiences of other professionals. This may be due to fear of stigma or risk of being seen as weak. Many of the participants admitted to the inevitability of exposure to the threats of work related stress and burnout, if the contributing factors were not addressed.

In a recent study from Northwest Ethiopia, HCWs facing dissatisfaction in their income expressed the intention to leave their workplace (79). A study on PHC workers in Ghana has also indicated there is a strong association between motivation, job dissatisfaction and intention to leave the workplace (12). A similar finding was reported in a study of rural health workers in Zambia (247). In our study, most participants reported that the potential for upward career progression and/or change of work place helped them cope with the day-to-day stress of their profession. In the formative study FGD there was one participant who openly spoke about his plan to leave his/her job and even to change profession.

In the formative and the second qualitative study, participants indicated that: being tolerant, strong and resilient or ‘keeping an appearance of strength’ in the face of challenges was considered a necessary attribute of HCWs. HCWs in this setting consider themselves to be role models for the community. Therefore, the researcher believes that there is a clear

tendency of underreporting of burnout; however, it was difficult to estimate the extent of underreporting and how it might have impacted the findings of the quantitative study.

The longitudinal component of the study showed that there is no significant change in burnout level and professional satisfaction in the six months follow up. This finding is in line with the findings of a longitudinal study on teachers burnout (248). Another pre-deployment and follow-up longitudinal study on humanitarian aid workers has also indicated that, burnout and anxiety level will rise at the initial stage and then it will be in a steady level in three to six month follow ups (249). This study was conducted during the introduction integrating mental health service into primary care, lack of change in the burnout level may show that, the additional new service has no negative impact on the HCWs in short term. On the other hand a longitudinal study of Chinese mental healthcare workers indicated their vulnerability to burnout (41).

The level of burnout and job satisfaction differed between community-based and facility-based HCWs. In both qualitative and quantitative components of the study, community based workers reported higher burnout (high EE and low PA scores) as compared to the facility based HCWs. This may be due to a difference in the level of control over their job or the work environment (217) as proposed by the Job Demand Control (JDC) model. JDC is an interactional theory of work that, assumes control over one's job is an important factor that determines the experience of job related stress (102). Community based HCWs have a peculiar labour dynamic that obliges them to live and work with the community they serve. This can put pressure in their personal life because of difficulty to have boundary between personal and work life. This is consistent with the results of a study on Brazilian community health workers (250). In contrast to a previous study from Ethiopia (251) community and facility based workers in the current study have high levels of job satisfaction. Having good perceived social support was also associated with reduced chances of experiencing EE, which is also shared by the assertion of Job-demand-control-support(JDCS) theory. This theory states that reduced social support can increase the risk of reaction to stress (102).

In the formative qualitative study they have indicated their dissatisfaction with the introduction of the new policies to allow patients to express dissatisfaction or other feelings about the quality of health service in a public forum. This initiative was viewed by most as a potent threat to wellbeing. The experience of being questioned by patients and community

members was perceived as being disrespectful to HCWs and undermining of their status. For many of the participants in our study, the traditional status bestowed on HCWs was identified as a motivating factor for pursuing this line of profession despite the stressful environment and limited financial remuneration. However, with the perceived loss of standing in the eyes of the community, many of the HCWs in the study expressed demoralisation.

Contrary to many African studies (52-54) as well as an Ethiopian studies (181, 182), in the cross sectional and longitudinal components of the study, overall participants reported a good level of job or professional satisfaction. Community based HCWs had better job satisfaction as compared to the facility based group. Participants were proud to serve their community as health provider. Participants' satisfaction of serving their community is the main source of job satisfaction. This is a promising and favourable situation for the integration of mental health service and future transformation of the healthcare system.

There was a significant variation among different HCW groups in the experience of feeling of reduced personal accomplishment (PA); midwifes had better feeling of PA followed by nurses, health officers (HO's) and health extension workers (HEWs). This may result from the type of health service they are providing. The results also indicated that qualification or belonging to a professional group has an explicit contribution to the experience of job-related stress and burnout. Diploma level nurses seemed to be particularly vulnerable. Level of income, position, workload, control over the job and lack of career progression opportunities are directly linked to a strong sense of identification with one's profession. Level of educational progression in the profession also directly impacts the professional's sense of job security and potential for growth. In contrast, in a quantitative study from a high income country, job characteristics, as well as belonging to different HCW groups, had no significant influence on the experience of job-related emotional strain (35).

The results suggest that participants' burnout level is changed minimally in the study period. This is likely to be due to the short duration of follow up. Other potential factors include lack of sensitivity of the measure of burnout (MBI) in this setting. Although unlikely, the improved level of mental health awareness due to the mhGAP (mental health Gap Action Programme) training provided by PRIME project. The other reason may be that the number of HCWs who were engaged in the mental health service provision was small. Besides most people receiving treatment had Severe Mental disorder (SMD) and so may not have led to

much emotional burden, compared to if they had been providing care for people with depression. Indeed, it is also possible that their concern about emotional burden is what led to the low detection/treatment rates for depression(252). In general, there is evidence that mhGAP training has a tremendous contribution in providing basic knowledge of healthcare providers on mental health and how to treat mental health problems (253). This can help them to have more confidence and skill in their work, especially while handling patients who need mental health services.

Since HCWs are the key players in the health service delivery and achieving health related development goals, ensuring their wellbeing is essential (22). Ensuring HCWs wellbeing is also important to efficiently use the small number of HCWs in the region (6). Therefore, interventions to promote the wellbeing of HCWs and reduce burnout need to be prioritised considering the work context and setting.

A multi-faceted and contextually adapted intervention is required to promote HCW wellbeing. Such interventions should enhance HCW resilience, address the identified threats to wellbeing and support the HCWs who develop burnout or mental health problems. Respondents in this study indicated that strengthening resilience may be achieved through providing opportunities for experience-sharing and shared social activities, such as participation in the Ethiopian coffee ceremony. This result echoes reported benefits of psychosocial support on resilience building (254). Greater awareness of actions that can be taken to prevent mental illness and promote mental health and wellbeing (e.g. positive coping skills) may also be of benefit (254).

In terms of addressing threats to well-being, our findings indicate that the Ethiopian primary care system requires interventions which target both the health management structure and the work environment. In particular, ways to promote more constructive criticism of health workers during the public evaluation fora may be helpful. The ‘learning health system’ approach, whereby service users are proactively engaged to work with healthcare providers to improve care, has the potential to lead to more productive collaboration and awareness between service providers and service users(255). Alongside this, necessary environmental interventions include the provision of basic infrastructure such as tap water, electricity and transportation, and ensuring an environment that allows safe practice of care. Interventions outside of the healthcare system also have the potential to benefit HCW wellbeing, in

particular those ensuring that HCWs receive adequate remuneration and opportunities for career development. In a systematic review of interventions to retain HCWs in rural and remote areas of LMICs, to address high turnover and poor quality of the health service (7), financial incentives were important for retention. A programme of continuous professional development is needed for all staff in order to ensure fair career progression, as well as to improve the knowledge and skill of the staff.

Interventions are also needed to address burnout and other mental health problems in HCWs. Accepting or admitting vulnerability and manifesting emotional consequences of exposure to stressors was seen by almost all respondents as a sign of weakness or defeat, reflecting the stigma associated with mental health problems in Ethiopia (256). Such attitudes may hinder health providers from sharing their experiences and getting support from their peers or usual social support networks. Therefore, countering stigmatising attitudes towards burnout and mental health problems is needed. The integration of mental health services in PHC settings in Ethiopia and other LMIC provides an opportunity to raise awareness in HCWs of their own vulnerability to burnout and mental health problems (depression, anxiety, substance use and stress-related conditions) and the availability of treatments. In particular, provision of contextually adapted psychosocial interventions through primary healthcare facilities may be of benefit to service users and HCWs alike.

Strengths and Limitations of the study

This study is the first of its kind in Ethiopia and Sub-Saharan Africa. It provides evidence on the extent of burnout among PHC workers in Ethiopia, which may be informative to the evidence base of SSA and LMIC healthcare systems. The study was conducted in rural primary care environment facilities are the main health service providing organisations for most Ethiopians. Within the context of integration of mental healthcare into primary care, it brings to light an important topic of discussion for the strengthening of overall healthcare structure in the country and region. In this regards, the study provides on the potential impact of adding a new service on HCWs wellbeing. This study has included the whole members of primary healthcare team which includes community based and facility based HCWs. In addition, this study could be one of the first Ethiopian study to focus on the job related wellbeing of community based healthcare workers or health extension workers.

Nonetheless, there are some limitations to be considered. The formative study included only two HCWs in a managerial or leadership position and may not have captured adequately the perspectives of this group of HCWs. Participants from the same health centre were grouped together for FGDs which meant that some participants might not have felt free to speak about relationships with colleagues and issues that might jeopardise their promotion or standing within the facility. However maximum effort was made to encourage participants to openly share their ideas.

Though it was a total ascertainment of the HCWs in the Sodo district, the sample size was relatively small because of the limited number of staff available within the study district. The primary outcome measure, MBI, was not validated adequately in our context and only two of the domains, emotional exhaustion (EE) and reduced personal accomplishment (PA), had good psychometric properties. Exclusion of cynicism (CY) domain due to the small or unacceptable reliability coefficient (chronbah's alpha) has hindered this study from reporting on all the three domains of burnout; this is likely to have an impact on the prevalence of burnout. The standard or the authors' cut-off was used to analyse the burnout score and this score was not validated. We have therefore included analysis using the median score as a threshold for categorising burnout experience into high and low status. Though confirmatory factor analysis was the best way to evaluate the psychometric property of MBI, we were unable to do that because of the small sample size. The potential to have a social desirability bias and stigma to mental health problems may also be another limitation that may have affected the response of participants. Although confidentiality was assured and the nature of the study was explained, some HCWs may have been cautious about their response. Short duration of follow up (i.e six months) was also another limitation of this study.

Chapter Seven: Conclusion and Recommendations

The present findings indicate that threats to healthcare worker wellbeing are commonplace and that burnout is a well understood and experienced state among Ethiopian rural primary healthcare workers. Given the dearth of data on burnout in this region, which also has a high disease burden and critical shortage of healthcare workers, the existence and experience of burnout is of major concern. However, the magnitude of burnout was lower as compared to other studies, though this might be an under-report caused by the expectation of HCWs to be strong. Future studies are needed to improve the understanding of the expression and impact of burnout in this setting and to address barriers to detection. Improving detection of burnout and developing appropriate intervention, particularly considering those potentially at increased risk, such as community health workers, are important next steps.

There is a need for further studies to understand the impact of burnout in relation to staff mental health, job turnover and the quality of care provided as well as to develop and evaluate contextually appropriate interventions to improve staff wellbeing. Recent initiatives to integrate mental healthcare into primary care may provide an opportunity to promote the wellbeing of healthcare workers and address burnout and emotional problems by creating a better understanding of mental health and opportunities to access care.

In the short-term, there was no significant change in the level of burnout and there was no apparent negative effect among primary HCWs resulting from adding mental healthcare to their work. Providing mental health services did not appear to have a significant short term negative effect on the level of burnout and professional satisfaction of primary HCWs. There was also no change in professional satisfaction over the six months of follow up. However, longer term and larger scale studies are required to substantiate these findings.

The results of this study can inform an intervention aimed at improving level of burnout and professional satisfaction of primary HCWs in Ethiopia. It will also enlighten policy makers to prioritise the issue of HCWs burnout and optimise the performance of the small number of HCWs. Further studies are needed to holistically assess the wellbeing of HCWs and its impact on the health service, patient's satisfaction and outcome. Intervention to enhance wellbeing should give priority to community-based HCWs, who appear to be most vulnerable to burnout.

Recommendations

Based on the findings of this study the following recommendations are made by the researcher. In order to make it simple and applicable the recommendations are grouped into three areas:

Recommendations for Policy makers

1. Health policy makers must give adequate attention to HCWs wellbeing. Preventive efforts such as routine screening of HCWs for job related stress might help to prevent burnout. Improving awareness about mental health and self care may have importance to prevent burnout.

2. Lack of fair career progression and job insecurity are some of the key factors reported to be relevant triggers for burnout and HCWs dissatisfaction. Measures that are considered in order to promote HCWs wellbeing should take these facts into account.

3. The findings of this study can be used to devise strategies to promote HCWs wellbeing such as healthcare work environment.

4. Intervention to enhance wellbeing and reduce burnout should give priority to community-based healthcare workers as compared to facility based workers because they have a higher chance of experiencing burnout.

Recommendations for practice

Employers have the responsibility to make the workplace safe from physical and mental hazards. As part of this initiative:

a. Conduct routine assessment of HCWs level of job related stress and burnout and manage it early.

b. Create awareness about burnout, self care and mental health in general at the individual and organisational level.

c. Ensure the required inputs to provide safe care are available.

These will be useful to promote HCWs wellbeing.

Recommendation **for further research**

1. A more comprehensive validation and adaptation study of a burnout measure such as the MBI is essential.
2. A study to estimate the cost of absenteeism and reduced productivity due to burnout will show the economic and organisational impact of burnout.
3. Assessing potential impact on intention to leave as well as patients' level of satisfaction with the service is needed to determine how burnout negatively impacts the overall healthcare industry.
4. Longer term follow up and larger scale studies are required to substantiate these findings and understand the issue in depth.
5. Developing contextually appropriate interventions, particularly targeting community healthcare workers are crucial.

Recommendation for education

1. Creating pre deployment awareness about job related wellbeing in general and burnout in particular may benefit HCWs to have better self care and promote their job related wellbeing..

Acknowledgments

I thank God for keeping me healthy and allowing me to reach to the end of my PhD. I thank God for enabling me to successfully complete my dissertation. This journey has been one of the most challenging learning and career development phases of my life, and has required an immense endurance, commitment and patience.

Special thanks and appreciation goes to my supervisors that included Dr. Abebaw Fekadu, Prof. Sir Graham Thornicroft and Dr Charlotte Hanlon for their unreserved support, mentorship and encouragement. I am extremely grateful for their time, support expertise, guidance, and patience. They were not only PhD supervisors but they were supporting me emotionally and in many ways.

I am grateful to the AAU CHS as well as the department of psychiatry for their support and collaboration throughout the PhD process. I am grateful to be part of PRIME project that supported me throughout my study. Though he was not my named supervisor, Dr.Girmay Medhin was a great help for my completion of this PhD.

To my mother, W/ro Almaz Woldemariam, whose patience, love, support, prayers, and encouragement supported me every step of the way. Almaz, may God bless you for the many sacrifices you paid for me since my birth, and encouraging me to accomplish this goal. Teshome Woldemariam and Lidya Teshome: I am grateful to have you and thank you for the support and encouragements.

My thanks and gratitude also is for my family, friends and staff- thank you for being by my side on the challenging days of my life and supporting me throughout this daunting and exhausting time. Finally my special thanks will go to the study participants, Sodo district health office and PRIME project field staffs. Financial support for my research work was provided by the PRIME project.

References

1. Alarcon GM. A meta-analysis of burnout with job demands, resources, and attitudes. Journal of Vocational Behavior. 2011;79(2):549-62.

2. Kabir MJ, Heidari A, Etemad K, Gashti AB, Jafari N, Honarvar MR, et al. Job burnout, job satisfaction, and related factors among health care workers in Golestan Province, Iran. Electronic physician. 2016;8(9):2924.

3. Jackson ER, Shanafelt TD, Hasan O, Satele DV, Dyrbye LN. Burnout and Alcohol Abuse/Dependence Among U.S. Medical Students. Academic Medicine. 2016;91(9):1251-6. PubMed PMID: 00001888-201609000-00025.

4. WHO. The Kampala Declaration and Agenda for Global Action. Geneva: 2008.

5. Chen L, Evans T, Anand S, Boufford J, Brown H, Chowdhury M, et al. Human resources for health: overcoming the crisis. Lancet 2004;364:1984-90.

6. Belita A, Mbindyo P., English M. Absenteeism amongst health workers – developing a typology to support empiric work in low-income countries and characterizing reported associations. BMC Human Resources for Health 2013;11.

7. Fieno VJ, Dambisya MY, George G, Benson K. A political economy analysis of human resources for health (HRH) in Africa. Human Resources for Health. 2016;14(44).

8. Kinfu Y, Dal Poz RM, Mercerb H, Evans BD. The health worker shortage in Africa: are enough physicians and nurses being trained? Bull World Health Organ. 2009 (87):225–30.

9. Dal Poz M, Kinfu Y, Dräger S, Kunjumen T. Counting health workers: definitions, data, methods and global results. World Health Organization: Department of Human Resources for Health. 2007.

10. Buykx P, Humphreys J, Wakerman J, Pashen D. Systematic review of effective retention incentives for health workers in rural and remote areas: Towards evidence-based policy. Aust J Rural Health. 2010;18:102-9.

11. Haq Z, Iqbal Z, A. R. Job stress among community health workers: a multi-method study from Pakistan. International journal of mental health systems. 2008;2(15):1-6.

12. Lasebikan VO, Oyetunde MO. Burnout among nurses in a Nigerian general hospital: Prevalence and associated factors. ISRN nursing. 2012;2012.

13. Aloulou J, Damak R, Masmoudi F, Sidhom O, Amami O. Burn out in health care providers: a Tunisian study about 142 nurses. La Tunisie Medicale. 2013;91(1):44-9.

15. Bonenberger M, Aikins M, Akweongo P, Wyss K. The effects of health worker motivation and job satisfaction on turnover intention in Ghana: a cross-sectional study. Human Resources for Health 2014;12:43.

16. Graveling R, Crawford J, Cowie H, Amati C, Vohra S. A Review of Workplace Interventions that Promote Mental Wellbeing in the Workplace IOM. 2008.

17. Mateen F, Dorji C. Health-care worker burnout and the mental health imperative. wwwthelancetcom. 2009;374

18. Alhassan RK, Spieker N, van Ostenberg P, Ogink A, Nketiah-Amponsah E, de Wit TFR. Association between health worker motivation and healthcare quality efforts in Ghana. Human resources for health. 2013;11(1):37.

19. Wickramasinghe V. The mediating effect of job stress in the relationship between work-related dimensions and career commitment. J Health Organ Manag. 2016 May 16;30(3):408-20. PubMed PMID: 27119394.

20. Dovlo D. Wastage in the health workforce: some perspectives from African countries. Human resources for health. 2005 Aug 10;3:6. PubMed PMID: 16092964. Pubmed Central PMCID: 1198245.

21. Jensen N. The Health Worker Crisis: an analysis of the issues and main international responses. UK: Health poverty action 2013.

22. (WHO) WHO. Working Together for health Geneva: WHO, 2006.
23. Hall HL, Johnson J, Watt I, Tsipa A, O'Connor BD. Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review. PLoS ONE. 2016.
24. UNDP. SUSTAINABLE DEVELOPMENT GOALS 2016 [accessed on 1 April 2017]. Available from: http://www.undp.org/content/undp/en/home/sustainable-development-goals.html.
25. WHO. Global Strategy on human resources for health: workforce 2030. Draft resolution World Health Organisation 2016 Contract No.: EB138/CONF./5.
26. WHO. WHO Global Code of Practice on the International Recruitment of Health Personnel. World Health Organisation 2010 Contract No.: WHA63.16.
27. Leka S, Jain A, Organization WH. Health impact of psychosocial hazards at work: an overview. 2010.
28. Jaafarpour M, Khani A. Evaluation of the nurses' job satisfaction, and its association with their moral sensitivities and well-being. Journal of clinical and diagnostic research: JCDR. 2012;6(10):1761.
29. Boran A, Shawaheen M, Khader Y, Amarin Z, Hill Rice V. Work-related stress among health professionals in northern Jordan. Occupational Medicine 2012;62:145-7.
30. Organization WH. Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies: World Health Organization; 2010.
32. Freudenberger HJ. Staff burn-out. Journal of social issues. 1974;30(1):159-65.
33. Worley JA, Vassar M, Wheeler DL, Barnes LL. Factor structure of scores from the Maslach Burnout Inventory: A review and meta-analysis of 45 exploratory and confirmatory factor-analytic studies. Educational and Psychological Measurement. 2008;68(5):797-823.
34. Maslach C. Burned-out. Can J Psychiatr Nurs. 1979 Nov-Dec;20(6):5-9. PubMed PMID: 260904.
35. Maslach C, Schaufeli WB, Leiter MP. Job burnout. Annual review of psychology. 2001;52(1):397-422.
36. Abdulla L, Al-Qahtani D, Al-Kuwari M. Prevalence and determinants of burnout sydnrome among primary health care physicans in Quatar. South African Family Practice. 2011;53(4):380-3.
37. Abdulghafour Y, Bo-hamra A, Al-Randi M, Kamel M, El-Shazly M. Burnout syndrome among physicians working in primary health care centers in Kuwait. Alexandria Journal of Medicine 2011;47:351-7.
38. Johnson S, Osborn DP, Araya R, Wearn E, Paul M, Stafford M, et al. Morale in the English mental health workforce: questionnaire survey. The British journal of psychiatry : the journal of mental science. 2012 Sep;201(3):239-46. PubMed PMID: 22790677. Epub 2012/07/14. eng.
39. Asrat. B, Girma. E, Soboka. M, K T. Mental Distress and Associated Factors among Health Professionals Working In Tertiary Teaching Hospital, South West Ethiopia. . J Depress Anxiety 2015;4(192).
40. Kazmi R, Amjad S, Khan D. Occupational stress and its effect on job performance a case study of medical house officers of district Abbottabad. J Ayub Med Coll Abbottabad 2008;20(3).
41. Dewa CS, Loong D, Bonato S, Trojanowski L, Rea M. The relationship between resident burnout and safety-related and acceptability-related quality of healthcare: a systematic literature review. BMC Medical Education. 2017 November 09;17(1):195.
42. Dyrbye LN, Shanafelt TD, Sinsky CA, Cipriano PF, Bhatt J, Ommaya A, et al. Burnout among health care professionals: A call to explore and address this underrecognized threat to safe, high-quality care. NAM (National Academy of Medicine) Perspective. 2017.
43. Rose D, Seidler A, Nübling M, Latza U, Brähler E, Klein E, et al. Associations of fatigue to work-related stress, mental and physical health in an employed community sample. BMC psychiatry. 2017;17(1):167.
44. Boran A, Shawaheen M, Khader Y, Amarin Z, Hill Rice V. Work-related stress among health professionals in northern Jordan. Occupational Medicine. 2011;62(2):145-7.

45. Melamed S, Kushnir T, Shirom A. Burnout and risk factors for cardiovascular diseases. Behavioral medicine. 1992;18(2):53-60.
46. Bianchi R, Schonfeld IS, Laurent E. Is burnout separable from depression in cluster analysis? A longitudinal study. Social psychiatry and psychiatric epidemiology. 2015;50(6):1005-11.
47. Fong TC, Ho RT, Au-Yeung FS, Sing C, Law K, Lee L, et al. The relationships of change in work climate with changes in burnout and depression: a 2-year longitudinal study of Chinese mental health care workers. Psychology, health & medicine. 2016;21(4):401-12.
48. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. The milbank quarterly. 2005;83(3):457-502.
49. Frenk J. Leading the way towards universal health coverage: a call to action. The Lancet. 2015;385(9975):1352-8.
50. Frenk J. Reinventing primary health care: the need for systems integration. The Lancet. 2009;374(9684):170-3.
51. Aluttis C, Bishaw T, Frank MW. The workforce for health in a globalized context–global shortages and international migration. Global health action. 2014;7(1):23611.
52. Dussault G, Franceschini MC. Not enough there, too many here: understanding geographical imbalances in the distribution of the health workforce. Human resources for health. 2006;4(1):12.
53. Mills A. Health care systems in low-and middle-income countries. New England Journal of Medicine. 2014;370(6):552-7.
54. Organization WH. Working together for health: the World health report 2006: policy briefs. 2006.
55. WHO/AFRO. African Health Workforce Observatory website 2012. Available from: http://www.hrh-observatory.afro.who.int/en/home.html. .
56. FMOH. Health Policy of the Transitional Government of Ethiopia. Policy 1993.
57. Girma S, G/Yohannes A, Kitaw Y, Ye-Ebiyo Y, Seyoum A, Desta H, et al. Human Resource Development for Health in Ethiopia: Challenges of Achieving the Millennium development Goals. Ethiopian Journal of Health Development 2007;21(3):216-31.
58. FMOH. Health Sector Development Program IV 2010/11 – 2014/15 FINAL DRAFT. Policy. 2010.
59. El-Saharty S, Kebede S, Olango P, Siadat B. Health, Nutrition and Population (HNP) Discussion Paper Ethiopia: Improving Health Service Delivery. World Bank. 2009.
60. FMOH. National Health Sector Transformation Plan. In: Health Mo, editor. Addis Ababa2015.
61. Demyttenaere K, Bruffaerts R, Posada-Villa J, Gasquet I, Kovess V, Lepine J, et al. Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. Jama. 2004;291(21):2581-90.
62. Keynejad RC, Dua T, Barbui C, Thornicroft G. WHO Mental Health Gap Action Programme (mhGAP) Intervention Guide: a systematic review of evidence from low and middle-income countries. Evid Based Ment Health. 2017.
63. Organization WH. The World Health Report 2001: Mental health: new understanding, new hope: World Health Organization; 2001.
64. Joshi R, Alim M, Kengne AP, Jan S, Maulik PK, Peiris D, et al. Task shifting for non-communicable disease management in low and middle income countries–a systematic review. PloS one. 2014;9(8):e103754.
65. Organization WH. Integrating mental health into primary care: a global perspective. 2008.
66. National Mental Health Strategy 2012/13-2015/16, (2012).
67. Abdulla L, Al-Qahtani D, Al-Kuwari M. Prevalence and determinants of burnout syndrome among primary healthcare physicians in Qatar. South Africa Family Practice 2011;53(4):380-3.
68. Kabir MJ, Heidari A, Etemad K, Gashti AB, Jafari N, Honarvar MR, et al. Job Burnout, Job Satisfaction, and Related Factors among Health Care Workers in Golestan Province, Iran. Stress and

health : journal of the International Society for the Investigation of Stress. 2016 Sep;8(9):2924-30. PubMed PMID: 27790345. Pubmed Central PMCID: Pmc5074751. Epub 2016/10/30. eng.
69. Bakker AB, Schaufeli WB, Demerouti E, Janssen PP, Van Der Hulst R, Brouwer J. Using equity theory to examine the difference between burnout and depression. 2000.
70. Dall'Ora C, Griffiths P, Ball J, Simon M, Aiken LH. Association of 12 h shifts and nurses' job satisfaction, burnout and intention to leave: findings from a cross-sectional study of 12 European countries. BMJ open. 2015;5(9):e008331.
71. Engelbrecht S. Motivation and burnout in human service work: The case of midwifery in Denmark: Roskilde University, Faculty of Psychology, Philosophy and Science Studies; 2005.
72. Arslan Yurumezoglu H, Kocaman G. Predictors of nurses' intentions to leave the organisation and the profession in Turkey. Journal of nursing management. 2016 Mar;24(2):235-43. PubMed PMID: 25900394. Epub 2015/04/23. eng.
73. Mitchel JA, Antoniak S, Lee JH, Kim SH, McGill M, Kasahara DI, et al. IL-13 Augments Compressive Stress-induced Tissue Factor Expression in Human Airway Epithelial Cells. Am J Respir Cell Mol Biol. 2015 Sep 25. PubMed PMID: 26407210.
74. Ratanawongsa N, Roter D, Beach MC, Laird SL, Larson SM, Carson KA, et al. Physician burnout and patient-physician communication during primary care encounters. Journal of general internal medicine. 2008;23(10):1581.
75. Chao M, Shih CT, Hsu SF. Nurse occupational burnout and patient-rated quality of care: The boundary conditions of emotional intelligence and demographic profiles. Japan journal of nursing science : JJNS. 2016 Jan;13(1):156-65. PubMed PMID: 26542752. Epub 2015/11/07. eng.
76. Nantsupawat A, Nantsupawat R, Kunaviktikul W, Turale S, Poghosyan L. Nurse Burnout, Nurse-Reported Quality of Care, and Patient Outcomes in Thai Hospitals. Journal of nursing scholarship : an official publication of Sigma Theta Tau International Honor Society of Nursing. 2016 Jan;48(1):83-90. PubMed PMID: 26650339. Epub 2015/12/10. eng.
77. van der Doef M, Mbazzi FB, Verhoeven C. Job conditions, job satisfaction, somatic complaints and burnout among East African nurses. Journal of Clinical Nursing. 2012;21(11-12):1763-75.
78. Delobelle P, Rawlinson JL, Ntuli S, Malatsi I, Decock R, Depoorter AM. Job satisfaction and turnover intent of primary healthcare nurses in rural South Africa: a questionnaire survey. Journal of advanced nursing. 2011;67(2):371-83.
79. Blaauw D, Ditlopo P, Maseko F, Chirwa M, Mwisongo A, Bidwell P, et al. Comparing the job satisfaction and intention to leave of different categories of health workers in Tanzania, Malawi, and South Africa. Global health action. 2013;6(1):19287.
80. Dugani S, Afari H, Hirschhorn LR, Ratcliffe H, Veillard J, Martin G, et al. Prevalence and factors associated with burnout among frontline primary health care providers in low-and middle-income countries: A systematic review. Gates Open Research. 2018;2.
81. Karsavuran S, Kaya S. The relationship between burnout and mobbing among hospital managers. Nurs Ethics. 2015 Sep 8. PubMed PMID: 26350707.
82. Ashtari Z, Farhady Y, Khodaee M. Relationship between job burnout and work performance among Iranian mental health professionals. African Journal of Psychiatry 2009.
83. Broussard L, Myers R. School nurse resilience: experiences after multiple natural disasters. The Journal of school nursing : the official publication of the National Association of School Nurses. 2010 Jun;26(3):203-11. PubMed PMID: 20065101.
84. Faye A, Fournier P, Diop I, Philibert A, Morestin F, Dumont A. Developing a tool to measure satisfaction among health professionals in sub-Saharan Africa. Human Resources for Health 2013. 2013;11:30.
85. Halbesleben J, Buckleu M. Burnout in Organisational Life. Journal of Management. 2004;30(6):859-79.
86. Niu S. ILO list of occupational diseases and health care workers. Afr Newslett on Occup Health and Safety 2010;20(3):4-9.

87. Abera E, Yitayal M, Gebreslassie M. Turnover Intention and Associated Factors Among Health Professionals in University of Gondar Referral Hospital, Northwest Ethiopia. International Journal of Economics & Management Sciences. 2014.
88. Alhassan KR, Spieker N, Ostenberg P, Ogink A, Nketiah-Amponsah E, Rinke de Wit FT. Association between health worker motivation and healthcare quality efforts in Ghana. Human Resources for Health. 2013;11.
89. Altaras R, Nuwa A, Agaba B, Streat E, Tibenderana KJ, Martin S, et al. How Do Patients and Health Workers Interact around Malaria Rapid Diagnostic Testing, and How Are the Tests Experienced by Patients in Practice? A Qualitative Study in Western Uganda. PLoS ONE. 2016;11(8).
90. Maslach C, Jackson ES, Leiter PM. Maslach Burnout Inventory Manual Mind Garden 1996.
91. Cranwell-Ward J, Abbey A. Organisational Stress. Great Britain: Palgrave Macmillan; 2005.
92. Maslach C. Burnout and engagement in the workplace: new perspective. The European Health Psychologist 2011;13(3):44-7.
93. Backe E, Latza U. Comment on "Relationship between components of the metabolic syndrome and job strain using a brief job stress questionnaire (BJSQ)" by Kawada. International archives of occupational and environmental health. 2013 Apr 14. PubMed PMID: 23584234.
94. Selamu M, Thornicroft G, Fekadu A, Hanlon C. Conceptualisation of job-related wellbeing, stress and burnout among healthcare workers in rural Ethiopia: a qualitative study. BMC health services research. 2017;17(1):412.
95. Selamu M, Hanlon C, Medhin G, Thornicroft G, Fekadu A. Burnout and professional satisfaction of primary healthcare workers in rural Ethiopia (In press). BMC Public Health. 2018.
96. Lyubomirsky S, King L, Diener E. The benefits of frequent positive affect: Does happiness lead to success? Psychological bulletin. 2005;131(6):803.
97. Soutter AK, O'Steen B, Gilmore A. The student well-being model: A conceptual framework for the development of student well-being indicators. International Journal of Adolescence and Youth. 2014;19(4):496-520.
98. Diener E, Lucas R, Helliwell JF, Helliwell J, Schimmack U. Well-being for public policy: Series in Positive Psychology; 2009.
99. Schaufeli W, Enzmann D. The burnout companion to study and practice: A critical analysis: CRC press; 1998.
100. James G. Well-Being Its Meaning, Measurement and Moral Importance. book. 1988:299.
101. Andrews G. A Glossary of Terms for community health care and Services for older persons WHO Document. 2004.
102. Organization WH. Constitution of the world health organization. 1995.
103. Manderscheid R, Ryff C, Freeman E, McKnight-Eily L, Dhingra S, Strine T. Evolving definitions of mental illness and wellness. Preventing chronic disease. 2010;7(1):A19.
104. Control CfD, Prevention. Well-being concepts. Health-Related Quality of Life (HRQOL). 2013.
105. FMOH. NATIONAL MENTAL HEALTH STRATEGY 2012/13 - 2015/16. 2012.
106. Puig A, Baggs A, Mixon K, Park Y, Kim B, Lee S. Relationship between Job burnout and Personal Wellness in Mental Health Professionals. Journal of Employment Counseling. 2012;49:98-109.
107. Maben J, Peccei R, Adams M, Robert G, Richardson A, Murrells T, et al. Exploring the relationship between patients experiances of care and the influence of staff motivation, affect and wellbeing. NIHR service delivery and organisation programme. 2012;Final Report.
108. Tinubu BM, Mbada CE, Oyeyemi AL, Fabunmi AA. Work-related musculoskeletal disorders among nurses in Ibadan, South-west Nigeria: a cross-sectional survey. BMC musculoskeletal disorders. 2010 Jan 20;11:12. PubMed PMID: 20089139. Pubmed Central PMCID: PMC2823665. Epub 2010/01/22. eng.

109. Bernal D, Campos-Serna J, Tobias A, Vargas-Prada S, Benavides FG, Serra C. Work-related psychosocial risk factors and musculoskeletal disorders in hospital nurses and nursing aides: a systematic review and meta-analysis. International journal of nursing studies. 2015;52(2):635-48.
110. Keyes C. Social Well-Being. Social Psychology Quarterly. 1998;61(2):121-40.
111. Wells I. PSYCHOLOGICAL WELL-BEING:PSYCHOLOGY OF EMOTIONS, MOTIVATIONS AND ACTIONS. 2010. Nova Science Publishers, Inc. New York.
112. Cooper C. From stress to wellbeing volume 1: the theory and research on occupational stress and wellbeing: Springer; 2013.
113. Lloyd C, King R, Chenoweth L. Social work, stress and burnout: A review. Journal of mental health. 2002;11(3):255-65.
114. COMMISSION NOHAS. The NOHSC Symposium on the OHS Implications of Stress. 2001.
115. Rout U, Rout J. Stress Management for Primary Health Care Professionals. Book. 2002. KLUWER ACADEMIC PUBLISHERS.
116. Maslach C, Leiter M. Early Predictors of Job Burnout and Engagement. Journal of Applied Psychology. 2008;93(3):498-512.
117. health Cws. EXPOSURE TO STRESS Occupational Hazards in Hospitals. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

National Institute for Occupational Safety and Health. 2008
118. Stranks J. Stress at Work Management and Prevention. Book. 2005.
119. Atanes AC, Andreoni S, Hirayama MS, Montero-Marin J, Barros VV, Ronzani TM, et al. Mindfulness, perceived stress, and subjective well-being: a correlational study in primary care health professionals. BMC complementary and alternative medicine. 2015;15(1):303.
120. Lasebikan V, Oyetunde M. Burnout among Nurses in a Nigerian General Hospital: Prevalence and Associated Factors. International Scholarly Research Network ISRN Nursing. 2012:6
121. Maslach C, Schaufeli W, Leiter P. Job Burnout. Annual Review of Psychology. 2001;52:397-422.
122. Schaufeli W, Bakker A. Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. Published online in Wiley InterScience (wwwintersciencewileycom). 2004;25:293-315.
123. Felton J. Burnout as a clinical entity its importance for health care workers. occupMed. 1998;48(4):237-50.
124. Association AP. Diagnostic and statistical manual of mental disorders (DSM-5®): American Psychiatric Pub; 2013.
125. Van Der Klink JJ, Van Dijk FJ. Dutch practice guidelines for managing adjustment disorders in occupational and primary health care. Scandinavian journal of work, environment & health. 2003:478-87.
126. Houkes I, Winants Y, Twellaar M, Verdonk P. Development of burnout over time and the causal order of the three dimensions of burnout among male and female GPs. A three-wave panel study. BMC Public health. 2011;11(1):240.
127. Ushiro R, Nakayama K. Gender role attitudes of hospital nurses in Japan: Their relation to burnout, perceptions of physician–nurse collaboration, evaluation of care, and intent to continue working. Japan Journal of Nursing Science 2010; 7:55-64
128. Aloulou J, Damak R, Masmoudi F, Sidhom O, Amami O. Burn out in health care providers: A Tunisian study about 142 nurses. La Tunisie medicale. 2013;91(01):44-9.
129. Khamisa N, Oldenburg B, Peltzer K, Ilic D. Work related stress, burnout, job satisfaction and general health of nurses. International journal of environmental research and public health. 2015 Jan 12;12(1):652-66. PubMed PMID: 25588157. Pubmed Central PMCID: PMC4306884. Epub 2015/01/15. eng.

130. Guo YF, Luo YH, Lam L, Cross W, Plummer V, Zhang JP. Burnout and its association with resilience in nurses: A cross-sectional study. Journal of clinical nursing. 2018 Jan;27(1-2):441-9. PubMed PMID: 28677270. Epub 2017/07/06. eng.
131. Abdo S, El-Sallamy R, El-Sherbiny A, Kabbash I. Burnout among physicians and nursing staff working in the emergency hospital of Tanta University, Egypt. Eastern Mediterranean Health Journal. 2015;21(12).
132. Park S-A, Ahn S-H. Relation of compassionate competence to burnout, job stress, turnover intention, job satisfaction and organizational commitment for oncology nurses in Korea. Asian Pacific journal of cancer prevention : APJCP. 2015;16(13):5463-9.
133. Abdo SA, El-Sallamy RM, El-Sherbiny AA, Kabbash IA. Burnout among physicians and nursing staff working in the emergency hospital of Tanta University, Egypt. Eastern Mediterranean health journal = La revue de sante de la Mediterranee orientale = al-Majallah al-sihhiyah li-sharq al-mutawassit. 2016 Mar 15;21(12):906-15. PubMed PMID: 26996364. Epub 2016/03/22. eng.
134. Karsavuran S, Kaya S. The relationship between burnout and mobbing among hospital managers. Nursing ethics. 2017 May;24(3):337-48. PubMed PMID: 26350707. Epub 2015/09/10. eng.
135. Poghosyan L, Clarke SP, Finlayson M, Aiken LH. Nurse burnout and quality of care: Cross-national investigation in six countries. Research in nursing & health. 2010;33(4):288-98.
136. Stride C, Wall T, Catley N. MEASURES OF JOB SATISFACTION, ORGANISATIONAL COMMITMENT, MENTAL HEALTH AND JOB-RELATED WELL-BEING: A Benchmarking Manual. England: John Wiley & Sons Ltd; 2007.
137. Heritage B, Pollock C, Roberts LD. Confirmatory Factor Analysis of Warr, Cook, and Wall's (1979) Job Satisfaction Scale. Australian Psychologist. 2015;50(2):122-9.
138. Li L, Hu H, Zhou H, He C, Fan L, Liu X, et al. Work stress, work motivation and their effects on job satisfaction in community health workers: a cross-sectional survey in China. BMJ open. 2014 Jun 5;4(6):e004897. PubMed PMID: 24902730. Pubmed Central PMCID: PMC4054641. Epub 2014/06/07. eng.
139. Alharbi J, Wilson R, Woods C, Usher K. The factors influencing burnout and job satisfaction among critical care nurses: a study of Saudi critical care nurses. Journal of nursing management. 2016;24(6):708-17.
140. Cheng CY, Liou SR, Tsai HM, Chang CH. Job stress and job satisfaction among new graduate nurses during the first year of employment in Taiwan. International journal of nursing practice. 2015 Aug;21(4):410-8. PubMed PMID: 24666722. Epub 2014/03/29. eng.
141. Alsaqabi BF, Aldousari A, Ismail EA, El-Shazly M. JOB SATISFACTION AMONG PHYSICIANS IN AL-SABAH HOSPITAL, KUWAIT.

. Alexanderia bulletin 2010;2(46):83-90.
142. Folkman S, Lazarus R, Dunkel-Schetter C, De-Longeis A, Gruen R. Dynamics of Stressful Encounter: Cognitive Appraisal, Coping and Encounter Outcomes. Journal of personality and social psychology. 1986;50(5):992-1003.
143. McCann C, Beddoe E, McCormick K, Kedge P, Adamson C, Huggard J. Resilience in the health professions: A review of recent literature. International Journal of Wellbeing, . 2013;3(1):60-81
144. Schuster R, Hammitt W, Moore D. Stress Appraisal and Coping Response to Hassles Experienced in Outdoor Recreation Settings. Copyright C Taylor & Francis Group, LLC. 2006;28:97-113.
145. Adriaenssens J, De Gucht V, Maes S. Determinants and prevalence of burnout in emergency nurses: A systematic review of 25 years of research. International journal of nursing studies. 2015;52(2):649-61.
146. International Conference on Primary Health Care and Health Systems in Africa: Towards the Achievement of the Health Millennium Development Goals. WHO report. 2008.

147. De Oliveira G, Ahmad S, Stock C, Harter R, Almeida M, Fitzgerald P, et al. High Incidence of Burnout in Academic Chairpersons of Anesthesiology Should We Be Taking Better Care of Our Leaders? Anesthesiology. 2011;114:181-93.
148. Johnson S, Osborn D, Araya R, Wearn E, Paul M, Stafford M, et al. Morale in the English mental health workforce: questionnaire survey British Journal of Psyciatry 2012 (201):239-46.
149. Biksegn A, Kenfe T, Matiwos S, Eshetu G. Burnout Status at Work among Health Care Professionals in aTertiary Hospital. Ethiopian journal of health sciences. 2016;26(2):101-8.
150. Kim MH, Mazenga AC, Simon K, Yu X, Ahmed S, Nyasulu P, et al. Burnout and self-reported suboptimal patient care amongst health care workers providing HIV care in Malawi. PloS one. 2018;13(2):e0192983. PubMed PMID: 29466443. Pubmed Central PMCID: PMC5821338. Epub 2018/02/22. eng.
151. Abdulghafour YA, Bo-Hamra AM, Al-Randi MS, Kamel MI, El-Shazly MK. Burnout syndrome among physicians working in primary health care centers in Kuwait. Alexandria Journal of Medicine. 2011;47(4).
152. Abdulla L, Al-Qahtani DM, Al-Kuwari MG. Prevalence and determinants of burnout syndrome among primary healthcare physicians in Qatar. South African Family Practice. 2011;53(4):380-3.
153. Johnson S, Osborn DP, Araya R, Wearn E, Paul M, Stafford M, et al. Morale in the English mental health workforce: questionnaire survey. The British Journal of Psychiatry. 2012;201(3):239-46.
154. Cañadas-De la Fuente GA, Vargas C, San Luis C, García I, Cañadas GR, Emilia I. Risk factors and prevalence of burnout syndrome in the nursing profession. International journal of nursing studies. 2015;52(1):240-9.
155. Kitaoka K, Masuda S. Academic report on burnout among Japanese nurses. Jpn J Nurs Sci. 2013 Dec;10(2):273-9. PubMed PMID: 24373450.
156. Choi S, Park Y, Yoo J, Kim G. Occupational Stress and Physical Symptoms among Family Medicine Residents. Journal of Koran Family Medicine 2013;34:49-57.
157. Bahrami-Ahmadi A, Mortazavi SA, Soleimani R, Nassiri-Kashani MH. The effect of work-related stress on development of neck and shoulder complaints among nurses in one tertiary hospital in Iran. Medical journal of the Islamic Republic of Iran. 2016;30:471. PubMed PMID: 28491846. Pubmed Central PMCID: PMC5419226. Epub 2017/05/12. eng.
158. Cares A, Pace E, Denious J, Crane LA. Substance use and mental illness among nurses: workplace warning signs and barriers to seeking assistance. Substance abuse. 2015;36(1):59-66.
159. Ashtari Z, Farhady Y, Khodaee M. Relationship between job burnout and work performance in a sample of Iranian mental health staff. African journal of psychiatry. 2009;2:71-4.
160. Weldegebriel Z, Ejigu Y, Weldegebreal F, Woldie M. Motivation of health workers and associated factors in public hospitals of West Amhara, Northwest Ethiopia. Patient preference and adherence. 2016;10:159.
161. Welp A, Meier LL, Manser T. The interplay between teamwork, clinicians' emotional exhaustion, and clinician-rated patient safety: a longitudinal study. Critical Care. 2016;20(1):110.
162. Hall LH, Johnson J, Watt I, Tsipa A, O'Connor DB. Healthcare staff wellbeing, burnout, and patient safety: a systematic review. PloS one. 2016;11(7):e0159015.
163. Alhassan R, Spieker N, Ostenberg P, Ogink A, Nketiah-Amponsah E, F de Wit T. Association between health worker motivation and healthcare quality efforts in Ghana. Human Resources for Health BMC. 2013;11(37).
164. Oh H, Uhm DC, Yoon YJ. Workplace Bullying, Job Stress, Intent to Leave, and Nurses' Perceptions of Patient Safety in South Korean Hospitals. Nursing research. 2016 Sep-Oct;65(5):380-8. PubMed PMID: 27579505. Epub 2016/09/01. eng.
165. Chao MC, Jou RC, Liao CC, Kuo CW. Workplace stress, job satisfaction, job performance, and turnover intention of health care workers in rural Taiwan. Asia-Pacific journal of public health. 2015 Mar;27(2):NP1827-36. PubMed PMID: 24174390. Epub 2013/11/01. eng.

166. Rodriguez I, Bravo J, Peiro J, Schaufeli W. The Demands-Control-Support model, locus of control and job satsfaction: a longitudnal study Department of Management, University of Missouri-Columbia, Columbia, Missouri 65211–6100, USA. 2001;15(2):97-114.
167. Demerouti E, Bakker A, Nachreiner F, Schaufeli W. The Job Demands-Resources Model of Burnout. Journal of Applied Psychology. 2001;86(3):499-512. Cupyright 2001 by the American Psychological Association, Inc. 002I-9010/01/S5.QG.
168. Jonge J, Bomsa H, Peter R, Siegrist J. Job strain, effort-reward imbalance and employee well-being: a large-scale cross-sectional study. Social Science & Medicine. 2000;50:1317-27.
169. Karasek R. Low social control and physiological deregulation—the stress–disequilibrium theory, towards a new demand–control model. SJWEH Suppl 2008;6:117-35.
170. Dollard M, Winefield H, Winefield AH, Jong J. Psychosocial job strain and productivity in human service workers: A test of the demand-control-support model journal of organizational psychology. 2000;73:501-10.
171. Organization WH. Gender and health workforce statistics. World Health Organization Accessed April. 2008;5:2016.
172. Go¨ rgens-Ekermans G, Brand T. Emotional intelligence as a moderator in the stress–burnout relationship: a questionnaire study on nurses. Journal of clinical nursing. 2012;21:2275–85.
173. Wang Y, Chang Y, Fu J, Wang L. Work-family conflict and burnout among Chinese female nurses: the mediating effect of psychological capital. BMC public health. 2012;12:915.
174. Jaafarpour M, Khanilt A. Evaluation of the Nurses' Job Satisfaction, and Its Association with Their Moral Sensitivities and Well-being. Journal of Clinical and Diagnostic Research. 2012;6(10):1761-4.
175. French H, Du Plessis E, Scrooby B. The emotional well-being of the nurse within the multi-skill setting. Health SA Gesondheld. 2011;16(1): 9.
176. Leiter M. A Two Process Model of Burnout and Work Engagement: Distinct Implications of Demands and Values. Supplemento A, Psicologica. 2008;30(A52-A58).
177. Lasalvia A, Bonetto C, Bertani M, Bissoli S, Cristofalo D, Marrella G, et al. Influence of perceived organisational factors on job burnout: survey of community mental health staff. The British Journal of Psychiatry 2009;195:537-44.
179. Yu J, Ren X, Wang Q, He L, Wang J, Jin Y, et al. The role of social support on occupational stress among hospital nurses. International journal of clinical and experimental medicine. 2014;7(9):3000-4. PubMed PMID: 25356174. Pubmed Central PMCID: PMC4211824. Epub 2014/10/31. eng.
180. Ratanawongsa N, Roter D, Beach M, Laird S, Larson S, Carson K, et al. Physician Burnout and Patient -Physician Communication During Primary Care Encounter. Journal of general internal medicine. 2008;23(10):1581-8.
181. Michie S, Williams S. Reducing work related psychological ill health and sickness absence: a systematic literature review. Occup Environ Med 2003;60:3-9.
182. Toppinen-Tanner S. Process of burnout: structure, antecedents, and consequences. People and WorkResearch Reports 93. 2011;Research report.
183. Alma-Ata Do. Declaration of Alma-Ata International Conference on Primary Health Care, Alma-Ata, USSR, 6-12

WHO report. 1978.
184. Workie NW, Ramana GN. The health extension program in Ethiopia. 2013.
185. Patrick K, Lavery J. Burnout in Nursing. Australian Journal of Advanced Nursing. 2006;24(3):43-7.
186. Agency CS. Population size and characterstics. 2015.
187. Fekadu A, Hanlon C, Medhin G, Alem A, Selamu M, W. Giorgis T, et al. Development of a scalable mental healthcare plan for a rural district in Ethiopia. The British Journal of Psychiatry. 2015;s1-s9.

188. Lund C, Tomlinson M, De Silva M, Fekadu A, Shidhaye R, Jordans M, et al. PRIME: A Programme to Reduce the Treatment Gap for Mental Disorders in Five Low- and Middle-Income Countries. PLoS Med 2012;9(12): e1001359.
189. Hanlon C., Luitel NP, Kathree T, Murhar V, Shrivasta S, Medhin G, et al. Challenges and Opportunities for Implementing Integrated Mental Health Care: A District Level Situation Analysis from Five Low- and Middle-Income Countries. PLoS ONE 2014;9(2).
190. Organization WH. mhGAP intervention guide. Geneva: World Health Organization. 2010.
191. Lund C, De Silva M, Plagerson S, Cooper S, Chisholm D, Das J, et al. Poverty and mental disorders: breaking the cycle in low-income and middle income countries. The Lancet, . 2011.
192. Petersen I. Comprehensive integrated primary mental health care for South Africa. Pipedream or Possibility. Social Science & Medicine. 2000; 51(3):321-34
193. Fekadu A, Hanlon C, Medhin G, Alem A, Selamu M, Giorgis TW, et al. Development of a scalable mental healthcare plan for a rural district in Ethiopia. The British journal of psychiatry. 2016;208(s56):s4-s12.
194. Selamu M, Asher L, Hanlon C, Medhin G, Hailemariam M, Patel V, et al. Beyond the biomedical: community resources for mental health care in rural Ethiopia. PloS one. 2015;10(5):e0126666.
195. Cresswell J. Qualitative inquiry and research design: Choosing among five approaches. Book. 2007;second edition Sage publication.
196. Battling AIDS through home care in Uganda and Zambia. Caring : National Association for Home Care magazine. 1992 Oct;11(10):56-70. PubMed PMID: 10121240.
197. Creswell JW, Creswell JD. Research design: Qualitative, quantitative, and mixed methods approaches: Sage publications; 2017.
198. Boyce C, Neale P. Conducting in-depth interviews: A guide for designing and conducting in-depth interviews for evaluation input. 2006.
199. Darlington Y, scott D. Qualitative Research in Practice Stories from the Field. Australia: Allen and Unwin; 2002.
200. Mack N, Woodsong C, MacQueen K, Guest G, Namey E. Qualitative Research Methods: A Data Collectors Field Guide. Family Health International 2005.
201. Sandelowski M. Focus on Qualitative Methods Sample Size in Qualitative Research. Research in Nursing & Health. 1995; 18:179-1 83.
202. Vaismoradi M, Turunen H, Bondas T. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. Nursing and Health Sciences 2013;15:398-405.
203. Berg B. QUALITATIVE RESEARCH METHODS FOR THE SOCIAL SCIENCES. Printed in the United States of America2001.
204. Bordens K, Abbott B. Research Design and Methods A Process Approach. Americas, New York: The McGraw-Hill Companies,; 2011.
205. Cohen L, Manion L, Morrison K. Research Methods in Education. USA: Taylor & Francis 2007.
206. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Education Today. 2004;24:105-12.
207. NVivo. NVivo qualitative data analysis software. Version 9. QSR International Pty Ltd. 2010.
208. Rolfe G. Validity, trustworthiness and rigour: quality and the idea of qualitative research. Journal of Advanced Nursing 2004;53(3):304-10.
209. Sharts-Hopko CN. Assessing Rigor in Qualitative Research. JOURNAL OF THE ASSOCIATION OF NURSES IN AIDS CARE. 2002;13(4):84-6.
210. Knudsen H, Vazquez-Barquero J, Welcher B, Gaite L, Becker T, Chisholm D, et al. Translation and cross-cultural adaptation of outcome measurements for schizophrenia: EPSILON Study 2. British Journal of Psychiatry. 2000.
211. WHO. WHO Process of translation and adaptation of instrument: WHO; 2013 [cited 2013 October 25]. Available from: http://www.who.int/substance_abuse/research_tools/translation/en/.

212. Prince M. Measurement Validity in Cross-cultural Comparative Research Epidemiologia e Psichiatria Sociale, . 2008;17(3).
213. Chávez LM, Canino G. Toolkit on translating and adapting instruments. Availiable at: http://www hsri org/files/uploads/publications/PN54_Translating_and_Adapting pdf. 2005.
214. Poghosyan L, Aiken LH, Sloane DM. Factor structure of the Maslach Burnout Inventory: An analysis of data from large scale cross-sectional surveys of nurses from eight countries. Int J Nurs Stud 2009;46(7):894-902.
215. SCHAUFELI W, GREENGLASS E. INTRODUCTION TO SPECIAL ISSUE ON BURNOUT AND HEALTH. Psychology and Health. 2001;16:501-10. © 2001 OPA (Overseas Publishers Association) N.V.
216. Kalliath T, O'Driscoll M, Gillespie D, Bluedorn A. A test of the Maslach Burnout Inventory in three samples of healthcare professionals. work & stress. 2000;14(1):35-50.
217. NAUDÉ J, ROTHMANN S. THE VALIDATION OF THE MASLACH BURNOUT INVENTORY – HUMAN SERVICES SURVEY FOR EMERGENCY MEDICAL TECHNICIANS IN GAUTENG. SA Journal of Industrial Psychology. 2004;30(3):21-8.
218. Leka S, Jain A. Health Impact of Psychosocial Hazards at Work: An Overview

WHO document: Institute of Work, Health & Organisations, University of Nottingham. 2010.
219. Theorell T, Hammarström A, Aronsson G, Träskman Bendz L, Grape T, Hogstedt C, et al. A systematic review including meta-analysis of work environment and depressive symptoms. BMC Public Health. 2015 August 01;15(1):738.
220. Kroenke K, Spitzer R, JBW. W. The PHQ-15: validity of a new measure for evaluating the severity of somatic symptoms. . Psychosomatic Medicine 2002;64:258-66.
221. Hanlon C, Medhin G, Selamu M, Breuer E, Worku B, Hailemariam M, et al. Validity of brief screening questionnaires to detect depression in primary care in Ethiopia. Journal of affective disorders. 2015 (186):32-9.
222. Abiola T, Udofia O, M. Z. Psychometric properties of the 3-item Oslo Social Support Scale among Clinical students of Bayero University, Kano, Nigeria. . MJP Online. 2013;22(2):23-7.
223. Fekadu A, Rane LJ, Wooderson SC, Markopoulou K, Poon L, Cleare AJ. Prediction of longer-term outcome of treatment-resistant depression in tertiary care. The British Journal of Psychiatry. 2012;201(5):369-75.
224. Kroll L, Lampert T. Unemployment, Social Support and Health Problems. Dtsch Arztebl Int: Medicine. 2011;108(4):47-52.
225. Brugha T, Bebbington P, Tennant C, Hurry J. The List of Threatening Experiences: a subset of 12 life event categories with considerable long-term contextual threat. Psychological Medicine. 1985;15:189-94.
226. Motrico E, Moreno-Kustner B, de Dios Luna J, Torres-Gonzalez F, King M, Nazareth I, et al. Psychometric properties of the List of Threatening Experiences--LTE and its association with psychosocial factors and mental disorders according to different scoring methods. Journal of affective disorders. 2013 Sep 25;150(3):931-40. PubMed PMID: 23726778. Epub 2013/06/04. eng.
227. Rosmalen J, Bos E, De Jonge P. Validation of the Long-term Difficulties Inventory (LDI) and the List of Threatening Experiences (LTE) as measures of stress in epidemiological population-based cohort studies. Psychological Medicine. 2012;42(12):2599-608.
228. Babor T, Higgins-Biddle J, Saunders J, Monteiro M. A U D I T: The Alcohol Use Disorders Identification Test Guidelines for Use in Primary Care: World Health Organization; 2001.
229. Center A. Advancing integrated mental health solutions. University of Washington. 2014.
230. Worley AJ, Vassar M, Wheeler LD, Barnes LBL. Factor Structure of Scores From the Maslach Burnout Inventory A Review and Meta-Analysis of 45 Exploratory and Confirmatory Factor-Analytic Studies. Educational and psychological measurement 2008;68(5):797-823.
231. Selamu M, Thornicroft G, Fekadu A, Hanlon C. Conceptualisation of job-related wellbeing, stress and burnout among healthcare workers in rural Ethiopia: a qualitative study. BMC Health Services Research. 2017;17, 412.

232. Gelaye B, Williams MA, Lemma S, Deyessa N, Bahretibeb Y, Shibre T, et al. Validity of the patient health questionnaire-9 for depression screening and diagnosis in East Africa. Psychiatry research. 2013;210(2):653-61.
233. Kroenke K, Spitzer RL, Williams JB, Löwe B. The patient health questionnaire somatic, anxiety, and depressive symptom scales: a systematic review. General hospital psychiatry. 2010;32(4):345-59.
234. Fekadu A, Medhin G, Selamu M, Hailemariam M, Alem A, Giorgis T, et al. Population level mental distress in rural Ethiopia BMC Psychiatry 2014;14(194).
235. Organization WH. mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings. Cancer. 2017.
236. Liang K-Y, Zeger SL. Longitudinal data analysis using generalized linear models. Biometrika. 1986;73(1):13-22.
237. StataCorp. Statistics/Data Analysis 4905 Lakeway Drive Special Edition College Station, Texas 77845 USA. 1984-2009.
238. Association WM. World Medical Association Declaration of Helsinki: ethical principles for medical research involving human subjects. http://www wma net/e/policy/b3 htm. 2008.
239. Polit D, Beck C. Nursing Research Principles and Methods 2003.
240. Ashtari. Z, Farhady. Y, Khodaee. MR. Relationship between burnout and work performance in a sample of Iranian mental health professionals. African Journal of Psychiary 2009.
241. Johnson S, Osborn D, Araya R, Wearn E, Paul M, Stafford M ea. Morale in the English mental health workforce: questionnaire survey British Journal of Psyciatry 2012;201:239-46.
242. Diener E. Assessing well-being: The collected works of Ed Diener: Springer Science & Business Media; 2009.
243. Kazmi R, Amjad S, Khan D. OCCUPATIONAL STRESS AND ITS EFFECT ON JOB PERFORMANCE A CASE STUDY OF MEDICAL HOUSE OFFICERS OF DISTRICT ABBOTTABAD. Journal of Ayub Medical College, Abbottabad : JAMC. 2008;20(3):135-9.
244. Totman J, Hundt LG, Wearn E, Paul M, Johnson S. Factors affecting staff morale on inpatient mental health wards in England: a qualitative investigation. BMC Psychiatry 2011;11(68).
245. Rodríguez I, Bravo MJ, Peiró JM, Schaufeli W. The Demands-Control-Support model, locus of control and job dissatisfaction: a longitudinal study. Work & stress. 2001;15(2):97-114.
246. Burch. J, Tom. J, Zahi. Y, Criswell. L, Leo. E, K. O. Shiftwork impacts and adaptation among health care workers. Occupational medicine. 2009;59:159-66.
247. Shin YS, Lee GS. Effects of Hospital Workers' Friendship Networks on Job Stress. PLoS ONE. 2016.
248. Hamaideh SH. Burnout, social support, and job satisfaction among Jordanian mental health nurses. Issues in Mental Health Nursing. 2011;32(4):234-42.
249. Nie Z, Jin Y, He L, Chen Y, Ren X, Yu J, et al. Correlation of burnout with social support in hospital nurses. International journal of clinical and experimental medicine. 2015;8(10):19144.
250. Lasebikan VO, Oyetunde MO. Burnout among Nurses in a Nigerian General Hospital: Prevalence and Associated Factors. ISRN Nurs. 2012;2012:402157. PubMed PMID: 22619733. Pubmed Central PMCID: 3350958.
251. Győrffy Z, Dweik D, Girasek E. Workload, mental health and burnout indicators among female physicians. Human Resources for Health. 2016;14(12).
252. Bianchi R, Schonfeld IS, Laurent E. Burnout-depression overlap: a review. Clinical psychology review. 2015 Mar;36:28-41. PubMed PMID: 25638755. Epub 2015/02/02. eng.
253. Bianchi R, Schonfeld IS, Schonfled S, Laurent E. Burnout does not help predict depression among French school teachers. Scandinavian journal of work, environment & health. 2015:565-8.
254. Mutale W, Ayles H, Bond V, Mwanamwenge TM, Balabanova D. Measuring health workers' motivation in rural health facilities: baseline results from three study districts in Zambia. Human Resources for Health. 2013.

255. Hultell D, Bo Melin J, Gustavsson P. Getting personal with teacher burnout: A longitudinal study on the development of burnout using a person-based approach. Teaching and Teacher Education. 2013;32:75-86.
256. Cardozo BL, Crawford CG, Eriksson C, Zhu J, Sabin M, Ager A, et al. Psychological distress, depression, anxiety, and burnout among international humanitarian aid workers: a longitudinal study. PloS one. 2012;7(9):e44948.
257. Correia da Silva AT, Menezes PR. Burnout syndrome and common mental disorders among community-based health agents. Rev Saúde Pública 2008;42(5):1-8.
258. Deriba BK, Sinke SO, Ereso BM, Badacho AS. Health professionals' job satisfaction and associated factors at public health centers in West Ethiopia. Human resources for health. 2017 May 30;15(1):36. PubMed PMID: 28558840. Pubmed Central PMCID: PMC5450336. Epub 2017/06/01. eng.
259. Semachew A, Belachew T, Tesfaye T, Adinew YM. Predictors of job satisfaction among nurses working in Ethiopian public hospitals, 2014: institution-based cross-sectional study. Human resources for health. 2017;15(1):31.
260. Manyazewal T, Matlakala MC. Beyond patient care: the impact of healthcare reform on job satisfaction in the Ethiopian public healthcare sector. Human resources for health. 2017;15(1):10.
261. Dall'Ora C, Griffiths P, Ball J, Simon M, Aiken HL. Association of 12 h shifts and nurses' job satisfaction, burnout and intention to leave: findings from a cross-sectional study of 12 European countries. BMJ Open. 2015.
262. Keynejad RC, Dua T, Barbui C, Thornicroft G. WHO Mental Health Gap Action Programme (mhGAP) Intervention Guide: a systematic review of evidence from low and middle-income countries. Evidence-Based Mental Health. 2017:ebmental-2017-102750.
263. Vesel L, Waller K, Dowden J, Fotso CJ. Psychosocial support and resilience building among health workers in Sierra Leone: interrelations between coping skills, stress levels, and interpersonal relationships. BMC Health Services Research. 2015;15.
264. English M, Irimu G, Agweyu A, Gathara D, Oliwa J, Ayieko P, et al. Building Learning Health Systems to Accelerate Research and Improve Outcomes of Clinical Care in Low- and Middle-Income Countries. PLoS Medicine 2016;13(4).
266. Shibre T, Negash A, Kullgren G, Kebede D, Alem A, Fekadu A, et al. Perception of stigma among family members of individuals with schizophrenia and major affective disorders in rural Ethiopia. Social Psychiatry and Psychiatric Epidemiology. 2001;36(6):299-303.
267. Tadese T, Mohamed A, Mengistie A. Assessment of factors influencing job satisfaction among health care providers, federal police referral hospital, Addis Ababa, Ethiopia. The Ethiopian Journal of Health Development (EJHD). 2016;29(2).
269. Ahmed SM, Tolera M, Angamo MT. Assessment of job satisfaction among pharmacy professionals in south-west Ethiopia. International Journal of Pharmaceutical Sciences and Research. 2013;4(6):2351.
270. Asegid A, Belachew T, Yimam E. Factors influencing job satisfaction and anticipated turnover among nurses in Sidama zone public health facilities, South Ethiopia. Nursing research and practice. 2014;2014.

Appendixes

Appendix 1 A Study One: Healthcare Workers In-depth Interview Guide English Version

This study is going to be conducted in order to assess the primary healthcare workers wellbeing in Ethiopia. The study site is primary healthcare facilities in Silte zone and Sodo district HCWs in the Silte zone will be participants of this component of the study.

Since you are healthcare worker with experience in the healthcare service, I would like to know your point of view about your understanding of job related stress, burnout and wellbeing (physical, social and psychological).

Thank you for your time

When I say healthcare worker it refers to those who are either providing direct care to patients or engaged in planning/supervision of health service.

1	Basic Socio-demographic information	Note
	a. Age b. Sex c. Marital status d. Number of children e. Monthly income f. Religion g. Educational level h. Year of service	
2	Working condition	
	a. How do you express your working condition • The work environment (physical) • Your relationship with coworkers • Your relationship with superiors • In terms monitoring and evaluation • In terms of availability of medical supplies • Your relationship with patients and attendants	

	• In terms of work load	
	Probes : Ask for examples Elaboration of the idea or further explanation if the idea is not clear	
3	How do you understand wellbeing a. Physical wellbeing b. Social wellbeing c. Psychological/ mental wellbeing	
	Probes : Ask for examples Elaboration of the idea or further explanation if the idea is not clear	
4	**What do you think about**:	
	a. Stress in general What are the common causes or what causes stress	
	How do you explain the experience of being under stress (how was your feeling, both physically and psychologically)	
	How you acted when you are stressed	
	What you did to make yourself better	
	b. Job related stress,	
	have you ever experienced it in your professional endeavour	
	how did you manage it	
	who supported you to overcome it	
	what is your advice for those who are facing job related stress	
	c. Burnout ,	
	have you ever experienced it in your professional endeavour	
	how did you manage it	
	who supported you to overcome it	

	what is your advice for those who are facing burnout	
	Probes: Ask for examples Elaboration of the idea or further explanation if the idea is not clear	
5	In your opinion what are the factors that affect Healthcare Worker's	
	a. Physical wellbeing	
	b. Social wellbeing	
	c. Psychological/ mental wellbeing	
	Probes: Ask for examples Elaboration of the idea or further explanation if the idea is not clear	
6	Do you think you are getting enough support from your superiors	
	a. In relation to mentorship	
	b. Learning new things	
	Probes: Ask for examples Elaboration of the idea or further explanation if the idea is not clear	
7	How do you express your support system	
	a. Family b. Supervisors c. Co-workers d. Others	
8	Do you think Healthcare Worker wellbeing an important issue	
	How Why	
9	Do you think Healthcare Workers wellbeing has an impact on the service they are providing	

	How Why	
	Probes: Ask for examples Elaboration of the idea or further explanation if the idea is not clear	
10	Is there anything you want add?	
I will be analyzing the information you and your colleagues gave me report the impact of Healthcare Workers wellbeing on the care delivery. Then I will also share the report of the study with you if you are interested. Thank you for your time.		

Appendix 1 B Study one: Healthcare Worker In-depth Interview Guide Amharic Version

የጤና ባለሙያዎች ኣይነታዊ ቃለመጠይቅ ጥያቄዎች

ይህ ጥናት በሃገራችን በኢትዮጲያ የጤና ባለሙያዎች ደህንነት በሚሰጡት የጤና ግልጋሎት/ ህክምና ላይ ያለውን ተፅእኖ ለመረዳት ነው፡፡ ይህ ጥናት በዋነኛነት በጉራጌ ዞን በሶዶ ወረዳ ይካሄዳል ፡፡ በወረዳው ባሉ የጤና ተቋማት ያሉ የጤና ባለሙያዎች የጥናቱ ተሳታፊ ይሆናሉ፡፡

የጤና ባለሙያ እንደ መሆንዎ በህክምና አገልግሎት ዘመንዎ ሰለ እርሶ አካላዊ፤ ስነልቦናዊ እና ማህበራዊ ደህንነት እንዲሁም ከስራ ጋር ስለተያያዘ መታከት ያለዎትን ልምድ ያካፍሉናል

ጊዜዎን ሰውተው በዚህ ጥናት ለመሳተፍ ፈቃደኛ ስለሆኑ እናመሰግናለን

የጤና ባለሙያ በምልበት ወቅት ሰዎችን የሚያክሙ ወይም የጤና አገልግሎትን/ ተቋምን የሚቆጣጠሩ ሰዎችን ያካትታል፡፡

1	የግለሰቡ ጠቅላላ መረጃ	ማስታወሻ
	ሀ. እድሜ ለ. ፆታ ሐ. የጋብቻ ሁኔታ መ. የልጆች ብዛት (ካሉ) ሰ. ወርሃዊ ገቢ ረ. ሀይማኖት ሠ. የትምህርት ደረጃ ቀ. የአገልግሎት ዘመን በ. የስራ ሁኔታ / ደረጃ ሸ. የሚሰሩበት ክፍል	
2	የስራ ሁኔታ	
	ሀ. የስራ ሁኔታዎን እንዴት ይገልፁታል የስራ ቦታዎ እንዴት ነው/ ምን ይመስላል ከስራ ባልደረቦቾ ጋር ያሎት ግንኙነት እንዴት ነው/ ምን ይመስላል ከአለቆች/ ከበላዮች ጋር ያሎት ግንኙነት እንዴት ነው/ ምን ይመስላል በስራ ቦታዎ ያለውን ቁጥጥር እና ክትትል እንዴት ይገልፁታል በስራ ቦታዎ ላይ ለስራው አስፈላጊ የሆኑ ግብአቶች (የህክምና እቃዎች) አቅርቦት ምን ይመስላል ከተገልጋዮች/ ከታካሚዎች እና ከቤተሰባቸው ጋር ያሎት ግንኙነት እንዴት ነው/ ምን ይመስላል በስራ ቦታዎ ያለ ጫና እንዴት ነው/ ምን ይመስላል	
	የማብራሪያ ጥያቄ፡ ለምሳሌ በሳምነት ስንት ቀን ይሰራሉ፤ በቀን ስንት ሰው ያክማሉ ወዘተ	
3	ደህንነትን (wellbeing) እንዴት ይረዱታል ሀ. አካላዊ ደህንነት (Physical wellbeing) ለ. ማህበራዊ ደህንነት (Social wellbeing) ሐ. ስነልቦናዊ/ አእምሮአዊ ደህንነት (Psychological/ mental wellbeing)	
	የማብራሪያ፡ ሃሳቡ ግልፅ ካልሆነ ተጠያቂው እያንዳንዱን	

	ሃሳብ በምሳሌ እንዲያብራሩ አበረታቷቸው	
4	በመቀጠልም በሚከተሉት ሃሳቦች ላይ የእርሰን አመለካከት ይገልፁልናል:	
	ሀ. ውጥረት(Stress) ምንድነው ወይም እንዴት ይረዱታል በእርሶ አመለካከት የተለመዱት ውጥረት የሚያመጡ ነገሮች ምንድናቸው	
	በውጥረት ውስጥ መሆንን እነዴት ይገልፀታል (አንድ ሰው በውጥረት ውስጥ ሲሆን ምን አይነት አካላዊ እና ስነልቦናዊ ሁኔታ ውስጥ ይሆናል)	
	ህይወቶ ውጥረት ገጥሞት ያውቃል	
	እስኪ ሁኔታውን በደንብ ያብራሩልኝ፡ በወቅቱ ምን አደረጉ ከሁኔታው እንዲወጡ ምን አደረጉ ማን ረዳዎት	
	ለ. ከስራ ጋር የተያያዘ ውጥረት	
	በህይወት ዘመንዎ ከስራ ጋር የተያያዘ ውጥረት ገጥሞት ያውቃል	
	እስኪ ሁኔታውን በደንብ ያብራሩልኝ፡ በወቅቱ ምን አደረጉ	
	ከሁኔታው እንዲወጡ ምን አደረጉ፡ እንዴት ተወጡት ከሁኔታው እነድዲወጡ ማን ረዳዎት	
	በአሁኑ ሰአት በእንዲህ አይነት ሁኔታ ውስጥ ላሉ ለሌሎች ሰዎች (የጤና ባለሙያዎች) ምን ይመክራሉ	
	ሐ. በስራ ምክንያት የሚመጣ መታከት (Burnout)	
	በህይወት ዘመንዎ በስራ ምክንያት የሚመጣ መታከት (Burnout) ገጥሞት ያውቃል	
	እስኪ ሁኔታውን በደንብ ያብራሩልኝ፡ በወቅቱ ምን አደረጉ	
	ከሁኔታው እንዲወጡ ምን አደረጉ፡ እንዴት ተወጡት ከሁኔታው እነድዲወጡ ማን ረዳዎት	
	በአሁኑ ሰአት በእንዲህ አይነት ሁኔታ ውስጥ ላሉ ለሌሎች ሰዎች (የጤና ባለሙያዎች) ምን ይመክራሉ	
	ማብራሪያ፡ ሃሳቡ ግልፅ ካልሆነ ተጠያቂው እያንዳንዱን ሃሳብ በምሳሌ እንዲያብራሩ አበረታቷቸው	
5	በእርሶ አማለካከት የጤና ባለሙያዎችን ደህንነት የሚያውኩ ነገሮች ምንድናቸው	
	ሀ. አካላዊ ደህንነት (Physical wellbeing)	
	ለ. ማህበራዊ ደህንነት (Social wellbeing)	
	ሐ. ስነልቦናዊ/ አእምሮአዊ ደህንነት (Psychological/ mental wellbeing)	
	ማብራሪያ፡ ሃሳቡ ግልፅ ካልሆነ ተጠያቂው እያንዳንዱን ሃሳብ በምሳሌ እንዲያብራሩ አበረታቷቸው	
6	ከበላዮች/ከአለቆች በቂ ድጋፍ የሚያገኙ ይመስልዎታል	
	ሀ. ለእርሶ ምሳሌ በመሆን በማበረታታት	

	ለ. አዲሰ ነገሮችን በማስተማር	
	ማብራሪያ፡ ሃሳቡ ግልፅ ካልሆነ ተጠያቂው እያንዳንዱን ሃሳብ በምሳሌ እንዲያብራሩ አበረታቷቸው	
7	ያሎትን ድጋፍ እንዴት ይገልፁታል	
	ሀ. ከቤተሰብ ለ. ከአለቆች ሐ. ከስራ ባልደረቦች መ. ከሌሎች ሰዎች	
8	የጤና ባለሙያዎች ደህንነት አስፈላጊ ወይም ጠቃሚ ነው ብለው ያስባሉ	
	እንዴት ለምን	
	ማብራሪያ፡ ሃሳቡ ግልፅ ካልሆነ ተጠያቂው እያንዳንዱን ሃሳብ በምሳሌ እንዲያብራሩ አበረታቷቸው	
9	የጤና ባለሙያዎች አካላዊ፡ ማህበራዊ እና ስነልቦናዊ ደህንነት በሚሰጡት የጤና አገልግሎት ላይ ተፅእኖ ሊኖረው ይችላል እንዴት ለምን	
	ማብራሪያ፡ ሃሳቡ ግልፅ ካልሆነ ተጠያቂው እያንዳንዱን ሃሳብ በምሳሌ እንዲያብራሩ አበረታቷቸው	
10	በመጨረሻም መጨመር የሚፈልጉት ነገር ካለ?	
እርሶ እና ሌሎች የጤና ባለሙያዎች የሰጡንን መረጃ አሰባስበን ከተነተንን በኋላ የጤና ባለሙያዎች ደህንነት በሚሰጡት የጤና አገልግሎት ላይ ያለውን ተፅእኖ ሪፖረት እናቀርባለን፡፡ ለእርሶም የጥናቱን ውጤቱን እንገልፃለን፡፡ስለጊዜዎ በጣም እናመሰግናለን		

Appendix 2 A Study One: Healthcare Workers Focus Group Discussion Guide English Version

This study is conducted in order to assess the impact of Healthcare Workers wellbeing on the health care delivery in Ethiopia. The study site is primary health care facilities in Sodo district and Healthcare Workers in the district will be participants of the study.

Since you are Healthcare Worker with experience in the health care service, I would like to know your point of view about your understanding of wellbeing (physical, social and psychological) and its impact on the health care service.

Thank you for your time

When I say Healthcare Worker it refers to those who are either providing direct care to patients or engaged in planning/supervision of health service.

1. How do you understand wellbeing?
    - Physical
    - Psychological
    - Psychological
2. How do you understand job related stress?
3. How do you understand burnout?
4. What aspects of Healthcare Workers wellbeing is important
    - To Healthcare Workers themselves
    - To service users/ service users
5. How do you explain it/ understand it when you or other fellow health worker behave differently (for example became irritable or impatient)towards staff and / or service users?
    - What is the cause?
    - What is the best way to handle this situation?
6. Did you have any stressful experience or encounter in your professional encounter?
7. What are the common techniques you employ when you encounter a threatening or stressful incident?
8. What need to be done to enhance Healthcare Workers wellbeing?

Appendix 2 B Study One: Healthcare Workers Focus Group Discussion Guide Amharic Version

የጤና ባለሙያዎች የቡድን ውይይት መመሪያ

ይህ ጥናት በሃገራችን በኢትዮጲያ የጤና ባለሙያዎች ደህንነት በሚሰጡት የጤና ግልጋሎት/ ህክምና ላይ ያለውን ተፅእኖ ለመረዳት ነው፡፡ ይህ ጥናት በዋነኛነት በጉራጌ ዞን በሶዶ ወረዳ ይካሄዳል ፡፡ በወረዳው ባሉ የጤና ተቋማት ያሉ የጤና ባለሙያዎች የጥናቱ ተሳታፊ ይሆናሉ፡፡

የጤና ባለሙያ በመሆንዎ በህክምና አገልግሎት ዘመንዎ ስለ እርሶ አካላዊ፤ ስነልቦናዊ እና ማህበራዊ ደህንነት እንዲሁም ከስራ ጋር ስለተያያዘ መታከት ያለዎትን ልምድ ብሎም አመለካከትዎን ያካፍሉናል፡፡ በቡድን ውይይቱ ወቅት ስለ አካላዊ፡ ስነልቦናዊ እና ማህበራዊ ደህንነት ያሎትን መረዳት እና በጤና ግልጋሎት ላይ ምን አይነት ተፅእኖ ሊኖረው እንደሚችል ይሆናል፡፡

ጊዜዎን ሰውተው በዚህ ጥናት ለመሳተፍ ፈቃደኛ ስለሆኑ እናመሰግናለን

የጤና ባለሙያ በምልበት ወቅት የህክምና አገልግሎት የሚሰጡ እንዲሁም ባለሙያዎችን በጤናው ዘርፍ በመቆጣጠር እና መማቀድ የተሰማሩ የጤና ባለሙያዎችን ያካትታል ፡፡

1. ደህንነትን(wellbeing) እንዴት ይረዱታል/ ይገልፁታል?
    - አካላዊ ደህንነት (Physical wellbeing)
    - ስነልቦናዊ ደህንነት (Psychological wellbeing)
    - ማህበራዊ ደህንነት (Social wellbeing)
2. ከስራ ጋር የተያያዘን ውጥረት(job related stress) እንዴት ይረዱታል/ ይገልፁታል?
3. በስራ ምክንያት የሚመጣ መታከትን (burnout) እንዴት ይረዱታል/ ይገልፁታል?
4. ከላይ ከጠቀስናቸው የደህንነት አይነቶች ለጤና ባለሙያዎች የትኛው ጠቃሚ ነው?
    - ለጤና ባለሙያዎች
    - ለተገልጋዮች ወይም ለታካሚዎች
5. እርሶ ወይም የስራ ባልደረባዎ ስራ ላይ ወይም ከስራ ባልደረቦች እና ከተገልጋዮች ጋር ባሎት ግንኙነት ባህሪ መቀየር ሲጋጥም ሁኔታውን እንዴት ይግልፁታል/ ይረዱታል (ለምሳሌ በሽተኞችን መታገስ ሲያቅቶ ወይም ቁጡ ሲሆኑ)?
    - ምክንያቱ ምን ይመስሎታል?
    - የዚህን አይነት ሁኔታ ለመወጣት እንዴት ይቻላል?
6. እንደ ጤና ባለሙያ ባገለገሉበት የስራ ዘመንዎ ውጥረት (stressful experience) ገጥሞት ያውቃል? ልምዳችሁን አካፍሉ
7. እንዲህ ያለ ሁኔታ በገጠማችሁ ጊዜ ምን አደረጋችሁ/ ምን ተጠቀማቹህ?
8. የጤና ባለሙያዎችን ደህንነት ለማሻሻል ምን ቢደረግ ጥሩ ነው ይላሉ?

Appendix 3 A Healthcare Workers Survey Questionnaire English version

Notice: This pages contains personal identifiers and confidential information. Separate this page immediately after data collection.	
Date of the interview	[ ][ ]/[ ][ ]/[ ][ ][ ][ ]
Interviewee's ID	[ ][ ][ ][ ]
Facilitator's ID	[ ][ ][ ]
Name of the health centre	
Name of the participant	
Telephone	
E mail	

Date of the interview	[ ][ ]/[ ][ ]/[ ][ ][ ][ ]
Interviewee's ID	[ ][ ][ ][ ]
Facilitator's ID	[ ][ ][ ]
Name of the health centre	

1. General Information **Now You will give us general information about yourself. Our main interest is your current condition.**				
101	**Age (how old are you?)**	[ ] [ ]		**AGE**
102	**Gender**	Male	0	SEX
		Female	1	
103	**Marital status** (what is your marital status currently?)	Single	1	MARIT
		Married	2	
		Divorced	3	
		Widowed	4	
		Married but not living together	5	
104	**Place of residence** (where is your kebele is it rural or urban?)	Urban	0	RES
		Rural	1	
105	**Educational level** (How many years did you spend in formal education?)	[ ] [ ] Years		EDU
106	**Occupation** (What is your income generating job/ occupation?)		1	EMP
			2	
			3	
			4	
			5	
			6	
			7	
		other _____	8	

	2. Physical health Questions **Please tell as any physical illness (acute or chronic)**			
201	Over the past four weeks, have you experienced any acute illness (including common cold)?	Yes	1	PHA
		No	0	
202	If your answer to question no 201 is yes, please specify what the illness was in the space provided below. 1._____ 2. _____ 3.			PHPT
203	Do you ever have any chronic illness ?	Yes	1	PHC
		No	0	
204	If your answer to question no 203 is yes, please specify what the illness was in the space provided below. 1._____ 2. _____ 3.			PHCT
205	Do you think your physical illness has caused difficulty on your professional service	Yes	1	PHDI
		No	0	

1. Patient Health Questionnaire (PHQ 9) **Your answers will help in understanding problems that you may have. Please answer every question to the best of your ability unless you are requested to skip over a question.**				
Over the last 2 weeks, how often have you been bothered by any of the following problems?				
301	Little interest or pleasure in doing things	Not at all	0	PHP
		Several days	1	
		More than half the days	2	
		Nearly every day	3	
302	Feeling down, depressed, or hopeless	Not at all	0	PHHO
		Several days	1	
		More than half the days	2	
		Nearly every day	3	
303	Trouble falling or staying asleep, or sleeping too much	Not at all	0	PHIS
		Several days	1	
		More than half the days	2	
		Nearly every day	3	
304	Feeling tired or having little energy	Not at all	0	PHFT
		Several days	1	
		More than half the days	2	
		Nearly every day	3	
305	Poor appetite or overeating	Not at all	0	PHPA
		Several days	1	
		More than half the days	2	
		Nearly every day	3	
306	Feeling bad about yourself — or that you are a failure or have let yourself or your family down	Not at all	0	PHFB
		Several days	1	
		More than half the days	2	
		Nearly every day	3	
307	Trouble concentrating on things, such as reading the newspaper or watching television	Not at all	0	PHTC
		Several days	1	
		More than half the days	2	
		Nearly every day	3	
308	Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	Not at all	0	PHMS
		Several days	1	
		More than half the days	2	
		Nearly every day	3	
309	Thoughts that you would be better off dead or of hurting yourself in some way	Not at all	0	PHTD
		Several days	1	
		More than half the days	2	
		Nearly every day	3	
		Total score		

2. Maslach Burnout Inventory

Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, circle the number that best describes your answer. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way.

	HOW OFTEN			
401	I feel emotionally drained from my work.	Never	0	MBED
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
402	I feel used up at the end of the workday.	Never	0	MBUP
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
403	I feel fatigued when I get up in the morning and have to face another day on the job.	Never	0	MBFA
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
404	I can easily understand how my recipients feel about things.	Never	0	MBEA
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
405	I feel I treat some recipients as if they were impersonal objects.	Never	0	MBIO
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	

406	Working with people all day is really a strain for me.	Never	0	MBWS
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
407	I deal very effectively with the problems of my recipients.	Never	0	MBDE
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
408	I feel burned out from my work.	Never	0	MBBO
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
409	I feel I'm positively influencing other people's lives through my work.	Never	0	MBPI
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
410	I've become more callous toward people since I took this job.	Never	0	MBCP
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
411	I worry that this job is hardening me emotionally.	Never	0	MBWJ
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	

412	I feel very energetic.	Never	0	MBFE
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
413	I feel frustrated by my job.	Never	0	MBFF
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
414	I feel I'm working too hard on my job.	Never	0	MBWTH
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
415	I don't really care what happens to some recipients.	Never	0	MBDCW
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
416	Working with people directly puts too much stress on me.	Never	0	MBWPS
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
417	I can easily create a relaxed atmosphere with my recipients.	Never	0	MBRA
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	

418	I feel exhilarated after working closely with my recipients.	Never	0	MBEF
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
419	I have accomplished many worthwhile things in this job.	Never	0	MBAM
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
420	I feel like I'm at the end of my rope.	Never	0	MBAR
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
421	In my work, I deal with emotional problems very calmly.	Never	0	MBIEE
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	
422	I feel recipients blame me for some of their problems.	Never	0	MBRBP
		A few times a year or less	1	
		Once a month or less	2	
		A few times a month	3	
		Once a week	4	
		A few times a week	5	
		Every day	6	

The Oslo 3-items social support scale **Circle or underline the correct answer that applies for you**				
501	How easy can you get help from neighbours if you should need it?	Very easy	1	OSS1
		Easy	2	
		Possible	3	
		Difficult	4	
		Very difficult	5	
502	How many people are so close to you that you can count on them if you have serious problems?	None	1	OSS2
		1-2	2	
		3-5	3	
		5+	4	
503	How much concern do people show in what you are doing?	A lot	1	OSS3
		Some	2	
		Uncertain	3	
		Little	4	
		No	5	

3. List of Threatening Events revised version (LTE)				
601	In the last 6 months, have you yourself suffered a serious illness, injury or an assault?	Yes	1	LEILL9
		No	2	
		Don't Know	8	
		Refused	9	
602	In the last 6 months has a serious illness, injury or assault happened to a close relative?	Yes	1	LEILR9
		No	2	
		Don't Know	8	
		Refused	9	
603	In the last 6 months has your spouse, parent or child died?	Yes	1	LEBE9
		No	2	
		Don't Know	8	
		Refused	9	
604	In the last 6 months has a close family friend or another relative died?	Yes	1	LEBEF9
		No	2	
		Don't Know	8	
		Refused	9	
605	In the last 6 months have you had a separation due to marital difficulties?	Yes	1	LEMAR9
		No	2	
		Don't Know	8	
		Refused	9	
606	In the last 6 months have you broken off a steady friendship or relationship?	Yes	1	LEREL9
		No	2	
		Don't Know	8	
		Refused	9	

607	In the last 6 months have you had a serious problem with a close friend, neighbour or relative?	Yes	1	LEFR9
		No	2	
		Don't Know	8	
		Refused	9	
608	In the last 6 months have you had a major financial crisis (serious money worries)?	Yes	1	LEFIN9
		No	2	
		Don't Know	8	
		Refused	9	
609	In the last 6 months have you lost or had anything stolen which mattered a lot to you?	Yes	1	LETHF9
		No	2	
		Don't Know	8	
		Refused	9	
610	In the last 6 months have you had any problems with the police or courts?	Yes	1	LEPOL9
		No	2	
		Don't Know	8	
		Refused	9	
611	In the last 6 months has your husband been unemployed? not been able to work	Yes	1	LEUNH9
		No	2	
		Don't Know	8	
		Refused	9	
		Not applicable		
612	In the last 6 months, has anyone been violent towards you? (for example beating, hitting, kicking)	Yes	1	VIOL9
		No	2	
		Don't Know	8	
		Refused	9	
613	In the last 6 months has anything else seriously upset you?	Yes	1	LEOT9
		No	2	
		Don't Know	8	
		Refused	9	

4. Job Satisfaction Questionnaire (JSQ 15)

Please indicate how satisfied or dissatisfied you feel with each of these features of your present job by placing a tick or circle in the appropriate number

How satisfied or dissatisfied are you with:				**CODE**
701	The physical working conditions?	I'm extremely dissatisfied	1	JSPWC
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	

702	The freedom to choose your own method of working?	I'm extremely dissatisfied	1	JSFW
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	
703	Your fellow workers?	I'm extremely dissatisfied	1	JSWFW
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	
704	The recognition you get for good work?	I'm extremely dissatisfied	1	JSRGW
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	
705	Your immediate boss?	I'm extremely dissatisfied	1	JSWIB
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	
706	The amount of responsibility you are given?	I'm extremely dissatisfied	1	JSRG
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	
707	Your rate of pay?	I'm extremely dissatisfied	1	JSRP
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	

708	Your opportunity to use your abilities?	I'm extremely dissatisfied	1	JSOUA
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	
709	Industrial relations between management and workers in your firm?	I'm extremely dissatisfied	1	JSPRS
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	
710	Your chance of promotion?	I'm extremely dissatisfied	1	JSCP
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	
711	The way the organisation is managed?	I'm extremely dissatisfied	1	JSOM
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	
712	The attention paid to suggestions you make?	I'm extremely dissatisfied	1	JSAYS
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	
713	Your hours of work?	I'm extremely dissatisfied	1	JSHO
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	

714	The amount of variety in your job?	I'm extremely dissatisfied	1	JSTJ
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	
715	Your job security?	I'm extremely dissatisfied	1	JSJS
		I'm very dissatisfied	2	
		I'm moderately dissatisfied	3	
		I'm not sure	4	
		I'm moderately satisfied	5	
		I'm very satisfied	6	
		I'm extremely satisfied	7	

5. Job Content Questionnaire				
				CODE
801	My job requires that I learn new things	Strongly disagree	1	JCLN
		Disagree	2	
		Agree	3	
		Strongly agree	4	
802	My job involves a lot of repetitive work	Strongly disagree	1	JCRW
		Disagree	2	
		Agree	3	
		Strongly agree	4	
803	My job requires me to be creative	Strongly disagree	1	JCBC
		Disagree	2	
		Agree	3	
		Strongly agree	4	
804	My job allows me to make a lot of decisions on my own	Strongly disagree	1	JCLD
		Disagree	2	
		Agree	3	
		Strongly agree	4	
805	My job requires a high level of skill	Strongly disagree	1	JCHS
		Disagree	2	
		Agree	3	
		Strongly agree	4	
806	On my job, I am given a lot of freedom to decide how I do my work	Strongly disagree	1	JCFD
		Disagree	2	
		Agree	3	
		Strongly agree	4	
807	I get to do a variety of things on my job	Strongly disagree	1	JCVT
		Disagree	2	
		Agree	3	
		Strongly agree	4	

808	I have a lot to say about what happens on my job	Strongly disagree	1	JCLT
		Disagree	2	
		Agree	3	
		Strongly agree	4	
809	I have an opportunity to develop my own special abilities	Strongly disagree	1	JCOD
		Disagree	2	
		Agree	3	
		Strongly agree	4	
810	My job requires working very fast	Strongly disagree	1	JCWF
		Disagree	2	
		Agree	3	
		Strongly agree	4	
811	My job requires working very hard	Strongly disagree	1	JCWVH
		Disagree	2	
		Agree	3	
		Strongly agree	4	
812	My job requires lots of physical effort	Strongly disagree	1	JCRLP
		Disagree	2	
		Agree	3	
		Strongly agree	4	
813	I am not asked to do an excessive amount of work	Strongly disagree	1	JCNAEW
		Disagree	2	
		Agree	3	
		Strongly agree	4	
814	I have enough time to get the job done	Strongly disagree	1	JCETW
		Disagree	2	
		Agree	3	
		Strongly agree	4	
815	I am free from conflicting demands others make	Strongly disagree	1	JCFCD
		Disagree	2	
		Agree	3	
		Strongly agree	4	
816	My job security is good	Strongly disagree	1	JCSJ
		Disagree	2	
		Agree	3	
		Strongly agree	4	
817	People I work with are competent in doing their jobs	Strongly disagree	1	JCCCO
		Disagree	2	
		Agree	3	
		Strongly agree	4	
818	People I work with take a personal interest in me	Strongly disagree	1	JCTPE
		Disagree	2	
		Agree	3	
		Strongly agree	4	

819	People I work with are friendly	Strongly disagree	1	JCCOF
		Disagree	2	
		Agree	3	
		Strongly agree	4	
820	People I work with are helpful in getting the job done	Strongly disagree	1	JCOHEL
		Disagree	2	
		Agree	3	
		Strongly agree	4	
821	My supervisor is concerned about the welfare of those under him	Strongly disagree	1	JCSCW
		Disagree	2	
		Agree	3	
		Strongly agree	4	
822	My supervisor pays attention to what you are saying	Strongly disagree	1	JCSPA
		Disagree	2	
		Agree	3	
		Strongly agree	4	
823	My supervisor is helpful in getting the job done	Strongly disagree	1	JCSHJ
		Disagree	2	
		Agree	3	
		Strongly agree	4	
824	My supervisor is successful in getting people to work together	Regular and steady	1	JCSSGP
		Seasonal	2	
		Frequent layoffs	3	
		both seasonal & frequent layoffs	4	
		Other	5	
825	How steady is your work?	Never	1	JCSWO
		Faced possibility once	2	
		faced possibility more than once	3	
		Constantly	4	
		Actually laid off	5	
826	During the past year, how often were you in a situation where you faced job loss or layoff?	Never	1	JCPYJL
		Faced possibility once	2	
		faced possibility more than once	3	
		constantly	4	
		Actually laid off	5	
827	Sometimes people permanently lose jobs they want to keep. How likely is it that during the next couple of years you will lose your present job with your employer?	not at all likely	1	JCPLJ
		not too likely	2	
		Somewhat likely	3	
		Very likely	4	

6. Alcohol Use Disorders Identification Test (AUDIT): Self-Report Version

Dear participant: Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain confidential so please be honest.

				CODE
901	How often do you have a drink containing alcohol?	Never	0	AUHO
		Monthly or less	1	
		2-4 times a month	2	
		2-3 times a week	3	
		4 or more times a week	4	
902	How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	0	AUHM
		3 or 4	1	
		5 or 6	2	
		7 to 9	3	
		10 or more	4	
903	How often do you have six or more drinks on one occasion?	Never	1	AUHS
		Less than Monthly	2	
		Monthly	3	
		Weekly	4	
		Daily or almost daily	5	
904	How often during the last year have you found that you were not able to stop drinking once you had started?	Never	1	AUDS
		Less than Monthly	2	
		Monthly	3	
		Weekly	4	
		Daily or almost daily	5	
905	How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	1	AULD
		Less than monthly	2	
		Monthly	3	
		Weekly	4	
		Daily or almost daily	5	
906	How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	1	AUEO
		Less than monthly	2	
		Monthly	3	
		Weekly	4	
		Daily or almost daily	5	
907	How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	1	AUFG
		Less than monthly	2	
		Monthly	3	
		Weekly	4	
		Daily or almost daily	5	

908	How often during the last year have you been unable to remember what happened the night before because of your drinking?	Never	1	AUUR
		Less than monthly	2	
		Monthly	3	
		Weekly	4	
		Daily or almost daily	5	
909	Have you or someone else been injured because of the your drinking?	No	1	AUID
		Yes, but not in last year	2	
		Yes, during the last year	3	
910	Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	No	1	AUAR
		Yes, but not in the last year	2	
		Yes, during the last year	3	
	Total			

7. Prescription and non prescription drug and/or substance use questions				
The following questions will assess habits of prescription and non prescription drugs as well as substance use. Please note that all the information you give us will be kept anonymous and with utmost care.				
1001	In the past six months did you use any pain killer with healthcare professional prescription?	Yes	1	
		No	0	
1002	In the past six months did you use any pain killer without other healthcare professional prescription?	Yes	1	
		No	0	
1003	If your answer to question 2 is yes would you tell me the frequency of your use	Every day	1	
		3 or 4 days per week	2	
		2 or 1 days per week	3	
		1 up to 3 days per month	4	
		once or less per month	5	
1004	In the past six months did you use diazepam with other healthcare professional prescription?	Yes	1	
		No	0	
1005	In the past six months did you use diazepam without other healthcare professional prescription?	Yes	1	
		No	0	

1006	If your answer to question 5 is yes would you tell me the frequency of your use	Every day	1	
		3 or 4 days per week	2	
		2 or 1 days per week	3	
		1 up to 3 days per month	4	
		once or less per month	5	
1007	In the past six months did you use phenobarbitone with other healthcare professional prescription?	Yes	1	
		No	0	
1008	In the past six months did you use phenobarbitone without other healthcare professional prescription?	Yes	1	
		No	0	
1009	If your answer to question 8 is yes would you tell me the frequency of your use	Every day	1	
		3 or 4 days per week	2	
		2 or 1 days per week	3	
		1 up to 3 days per month	4	
		once or less per month	5	
1010	Do you smoke?	Yes	1	
		No	0	
1011	If your answer to question 7 is yes how much per day			
1012	Do you chew chat?	Yes	1	
		No	0	
1013	If your answer to question 9 is yes would you tell me the frequency of your use	Every day	1	
		3 or 4 days per week	2	
		2 or 1 days per week	3	
		1 up to 3 days per month	4	
		once or less per month	5	

Healthcare Workers reported satisfaction with delivery of care				
	The following questions attempt to understand how satisfied you are with the care you are providing. There is no right and wrong answer. Just circle the option that you feel expresses your view. Your responses will only be used to understand the best way to support you and your colleagues. Only put the unique identifying number you are given and not your name or where you are working.			Code
1101	Overall, how satisfied are you with the care you are providing to your patients?	Not satisfied	0	
		Somewhat satisfied	1	
		Neutral	2	
		Satisfied	3	
		Very satisfied	4	
1102	Overall, how much do you think patients and attendants you provide care for are satisfied with the care you are providing them?	Not satisfied	0	
		Somewhat satisfied	1	
		Neutral	2	
		Satisfied	3	
		Very satisfied	4	
1103	Overall, how much do you think your colleagues are satisfied with the care you are providing to your patients?	Not satisfied	0	
		Somewhat satisfied	1	
		Neutral	2	
		Satisfied	3	
		Very satisfied	4	

8. Integrated Care Tasks				
	Identify and Engage Patients			
1	Identify people who may need help			
1.1	Is This Your Role Now?	Yes	1	ICEPRO
		No	2	
		I don’t know	3	
1.2	If No, whose Role?			ICEPWR

1.3	Your Organization's Capacity with This Tasks?	High	4	ICEPOC
		Medium	5	
		Low	6	
1.4	Your Level of Comfort with This Task	High	4	ICEPLC
		Medium	5	
		Low	6	
1.5	Would You Like Training to Perform This Task?	Yes	1	ICEPWT
		No	2	
		I don't know	3	
2	Screen for behavioural health problems using valid measures			
2.1	Is This Your Role Now?	Yes	1	ICSBR
		No	2	
		I don't know	3	
2.2	If No, whose Role?			ICSBWR
2.3	Your Organization's Capacity with This Tasks?	High	4	ICSBOC
		Medium	5	
		Low	6	
2.4	Your Level of Comfort with This Task	High	4	ICSBLC
		Medium	5	
		Low	6	
2.5	Would You Like Training to Perform This Task?	Yes	1	ICSBWT
		No	2	
		I don't know	3	
3	Diagnose behavioural health disorders			
3.1	Is This Your Role Now?	Yes	1	ICDBR
		No	2	
		I don't know	3	
3.2	If No, whose Role?			ICDBWR
3.3	Your Organization's Capacity with This Tasks?	High	4	ICDBOC
		Medium	5	
		Low	6	
3.4	Your Level of Comfort with This Task	High	4	ICDBLC
		Medium	5	
		Low	6	
3.5	Would You Like Training to Perform This Task?	Yes	1	ICDBWT
		No	2	
		I don't know	3	
4	Engage patients in integrated care programme			

4.1	Is This Your Role Now?	Yes	1	ICEPIR
		No	2	
		I don't know	3	
4.2	If No, whose Role?			ICEPIWR
4.3	Your Organization's Capacity with This Tasks?	High	4	ICEPIOC
		Medium	5	
		Low	6	
4.4	Your Level of Comfort with This Task	High	4	ICEPILC
		Medium	5	
		Low	6	
4.5	Would You Like Training to Perform This Task?	Yes	1	ICEPIWT
		No	2	
		I don't know	3	
	Initiate and Provide Treatment			
5	Perform behavioural health assessment			
5.1	Is This Your Role Now?	Yes	1	ICPBHR
		No	2	
		I don't know	3	
5.2	If No, whose Role?			ICBHWR
5.3	Your Organization's Capacity with This Tasks?	High	4	ICBHOC
		Medium	5	
		Low	6	
5.4	Your Level of Comfort with This Task	High	4	ICBHLC
		Medium	5	
		Low	6	
5.5	Would You Like Training to Perform This Task?	Yes	1	ICBHWT
		No	2	
		I don't know	3	
6	Develop & update behavioural health treatment plan			
6.1	Is This Your Role Now?	Yes	1	ICDRXPR
		No	2	
		I don't know	3	
6.2	If No, whose Role?			ICDRXPW

6.3	Your Organization's Capacity with This Tasks?	High	4	ICDRXOOC
		Medium	5	
		Low	6	
6.4	Your Level of Comfort with This Task	High	4	ICDRXPLC
		Medium	5	
		Low	6	
6.5	Would You Like Training to Perform This Task?	Yes	1	ICDRXPWT
		No	2	
		I don't know	3	
7	Patient education about symptoms & treatment options			
7.1	Is This Your Role Now?	Yes	1	ICPEWR
		No	2	
		I don't know	3	
7.2	If No, whose Role?			ICPEW
7.3	Your Organization's Capacity with This Tasks?	High	4	ICPEOC
		Medium	5	
		Low	6	
7.4	Your Level of Comfort with This Task	High	4	ICPELC
		Medium	5	
		Low	6	
7.5	Would You Like Training to Perform This Task?	Yes	1	ICPEWT
		No	2	
		I don't know	3	
8	Prescribe psychotropic medications			
8.1	Is This Your Role Now?	Yes	1	ICPPR
		No	2	
		I don't know	3	
8.2	If No, whose Role?			ICPPW
8.3	Your Organization's Capacity with This Tasks?	High	4	ICPPOC
		Medium	5	
		Low	6	
8.4	Your Level of Comfort with This Task	High	4	ICPPLC
		Medium	5	
		Low	6	
8.5	Would You Like Training to Perform This Task?	Yes	1	ICPPWT
		No	2	
		I don't know	3	

9	Patient education about medications & side effects			
9.1	Is This Your Role Now?	Yes	1	ICPEMSR
		No	2	
		I don't know	3	
9.2	If No, whose Role?			ICPEMSW
9.3	Your Organization's Capacity with This Tasks?	High	4	ICPEMSOC
		Medium	5	
		Low	6	
9.4	Your Level of Comfort with This Task	High	4	ICPEMSLC
		Medium	5	
		Low	6	
9.5	Would You Like Training to Perform This Task?	Yes	1	ICPEMSWT
		No	2	
		I don't know	3	
10	Brief counselling, activity scheduling, behavioural activation			
10.1	Is This Your Role Now?	Yes	1	ICINTR
		No	2	
		I don't know	3	
10.2	If No, whose Role?			ICINTW
10.3	Your Organization's Capacity with This Tasks?	High	4	ICINTOC
		Medium	5	
		Low	6	
10.4	Your Level of Comfort with This Task	High	4	ICINTLC
		Medium	5	
		Low	6	
10.5	Would You Like Training to Perform This Task?	Yes	1	ICINTWT
		No	2	
		I don't know	3	
11	Evidence- based psychotherapy (e.g. PST, CBT, IPT)			
11.1	Is This Your Role Now?	Yes	1	ICEBPR
		No	2	
		I don't know	3	
11.2	If No, whose Role?			ICEBPW
11.3	Your Organization's Capacity with This Tasks?	High	4	ICEBPOC
		Medium	5	
		Low	6	

11.4	Your Level of Comfort with This Task	High	4	ICEBPLC
		Medium	5	
		Low	6	
11.5	Would You Like Training to Perform This Task?	Yes	1	ICEBPWT
		No	2	
		I don't know	3	
12	Identify & treat coexisting medical conditions			
12.1	Is This Your Role Now?	Yes	1	ICITCMR
		No	2	
		I don't know	3	
12.2	If No, whose Role?			ICITCMW
12.3	Your Organization's Capacity with This Tasks?	High	4	ICITCMOC
		Medium	5	
		Low	6	
12.4	Your Level of Comfort with This Task	High	4	ICITCMLC
		Medium	5	
		Low	6	
12.5	Would You Like Training to Perform This Task?	Yes	1	ICITCMWT
		No	2	
		I don't know	3	
13	Facilitate referral to specify care or social services			
13.1	Is This Your Role Now?	Yes	1	ICFRR
		No	2	
		I don't know	3	
13.2	If No, whose Role?			ICFRW
13.3	Your Organization's Capacity with This Tasks?	High	4	ICFROC
		Medium	5	
		Low	6	
13.4	Your Level of Comfort with This Task	High	4	ICFRLC
		Medium	5	
		Low	6	
13.5	Would You Like Training to Perform This Task?	Yes	1	ICFRWT
		No	2	
		I don't know	3	
14	Create & support relapse prevention plan			

14.1	Is This Your Role Now?	Yes	1	ICCSRR
		No	2	
		I don't know	3	
14.2	If No, whose Role?			ICCSRW
14.3	Your Organization's Capacity with This Tasks?	High	4	ICCSROT
		Medium	5	
		Low	6	
14.4	Your Level of Comfort with This Task	High	4	ICCSRLC
		Medium	5	
		Low	6	
14.5	Would You Like Training to Perform This Task?	Yes	1	ICCSRWT
		No	2	
		I don't know	3	
	Track Treatment Outcomes			
15	Track treatment engagement and adherence using registry			
15.1	Is This Your Role Now?	Yes	1	ICTRR
		No	2	
		I don't know	3	
15.2	If No, whose Role?			ICTRW
15.3	Your Organization's Capacity with This Tasks?	High	4	ICTROC
		Medium	5	
		Low	6	
15.4	Your Level of Comfort with This Task	High	4	ICTRLC
		Medium	5	
		Low	6	
15.6	Would You Like Training to Perform This Task?	Yes	1	ICTRWT
		No	2	
		I don't know	3	
16	Reach out to patients who are non-adherent or disengaged			
16.1	Is This Your Role Now?	Yes	1	ICROPR
		No	2	
		I don't know	3	
16.2	If No, whose Role?			ICROPW

16.3	Your Organization's Capacity with This Tasks?	High	4	ICROPOC
		Medium	5	
		Low	6	
16.4	Your Level of Comfort with This Task	High	4	ICROPLC
		Medium	5	
		Low	6	
16.5	Would You Like Training to Perform This Task?	Yes	1	ICROPWT
		No	2	
		I don't know	3	
17	Track patients' symptoms with measurement tool (e.g. PHQ-9)			
17.1	Is This Your Role Now?	Yes	1	ICTPR
		No	2	
		I don't know	3	
17.2	If No, whose Role?			ICTPW
17.3	Your Organization's Capacity with This Tasks?	High	4	ICTPOC
		Medium	5	
		Low	6	
17.4	Your Level of Comfort with This Task	High	4	ICTPLC
		Medium	5	
		Low	6	
17.5	Would You Like Training to Perform This Task?	Yes	1	ICTPWT
		No	2	
		I don't know	3	
18	Track medication side effects & concerns			
18.1	Is This Your Role Now?	Yes	1	ICMSR
		No	2	
		I don't know	3	
18.2	If No, whose Role?			ICMSW
18.3	Your Organization's Capacity with This Tasks?	High	4	ICMSOC
		Medium	5	
		Low	6	
18.4	Your Level of Comfort with This Task	High	4	ICMSLC
		Medium	5	
		Low	6	
18.5	Would You Like Training to Perform This Task?	Yes	1	ICMSWT
		No	2	
		I don't know	3	

19	Track outcome of referrals & other treatments			
	Proactively Adjust Treatment if Patients are Not Responding			
20	Assess need for changes in treatment			
20.1	Is This Your Role Now?	Yes	1	ICANR
		No	2	
		I don't know	3	
20.2	If No, whose Role?			ICANW
20.3	Your Organization's Capacity with This Tasks?	High	4	ICANOC
		Medium	5	
		Low	6	
20.4	Your Level of Comfort with This Task	High	4	ICANLC
		Medium	5	
		Low	6	
20.5	Would You Like Training to Perform This Task?	Yes	1	ICANWT
		No	2	
		I don't know	3	
21	Facilitate changes in treatment / treatment plan			
21.1	Is This Your Role Now?	Yes	1	ICFCR
		No	2	
		I don't know	3	
21.2	If No, whose Role?			ICFCW
21.3	Your Organization's Capacity with This Tasks?	High	4	ICFCOC
		Medium	5	
		Low	6	
21.4	Your Level of Comfort with This Task	High	4	ICFCLC
		Medium	5	
		Low	6	
21.5	Would You Like Training to Perform This Task?	Yes	1	ICFCWT
		No	2	
		I don't know	3	
22	Provide caseload-focused psychiatric consultation			
22.1	Is This Your Role Now?	Yes	1	ICCPCR
		No	2	
		I don't know	3	
22.2	If No, whose Role?			ICCPSW
22.3	Your Organization's Capacity with This Tasks?	High	4	ICCPCOT
		Medium	5	
		Low	6	
22.4	Your Level of Comfort with This Task	High	4	ICCPCLC
		Medium	5	
		Low	6	

22.5	Would You Like Training to Perform This Task?	Yes	1	ICCPCWT
		No	2	
		I don't know	3	
23	Provide in-person psychiatric assessment of challenging patients			
23.1	Is This Your Role Now?	Yes	1	ICPAR
		No	2	
		I don't know	3	
23.2	If No, whose Role?			ICPAW
23.3	Your Organization's Capacity with This Tasks?	High	4	ICPAOC
		Medium	5	
		Low	6	
23.4	Your Level of Comfort with This Task	High	4	ICPALC
		Medium	5	
		Low	6	
23.5	Would You Like Training to Perform This Task?	Yes	1	ICPA
		No	2	
		I don't know	3	
	Other Tasks Important for Our Programme (add tasks as needed)			
24	Coordinate communication among team members/ providers			
24.1	Is This Your Role Now?	Yes	1	ICCCTR
		No	2	
		I don't know	3	
24.2	If No, whose Role?			ICCCTW
24.3	Your Organization's Capacity with This Tasks?	High	4	ICCCOC
		Medium	5	
		Low	6	
24.4	Your Level of Comfort with This Task	High	4	ICCCLC
		Medium	5	
		Low	6	
24.5	Would You Like Training to Perform This Task?	Yes	1	ICCCWT
		No	2	
		I don't know	3	
25	Administrative support for programme (e.g. scheduling, resources)			
25.1	Is This Your Role Now?	Yes	1	ICASR
		No	2	
		I don't know	3	
25.2	If No, whose Role?			ICASW
25.3	Your Organization's Capacity with This Tasks?	High	4	ICASOC
		Medium	5	
		Low	6	

25.4	Your Level of Comfort with This Task	High	4	ICASLC
		Medium	5	
		Low	6	
25.5	Would You Like Training to Perform This Task?	Yes	1	ICASWT
		No	2	
		I don't know	3	
26	Clinical supervision for programme			
26.1	Is This Your Role Now?	Yes	1	ICCSPR
		No	2	
		I don't know	3	
26.2	If No, whose Role?			ICSSPW
26.3	Your Organization's Capacity with This Tasks?	High	4	ICSOCT
		Medium	5	
		Low	6	
26.4	Your Level of Comfort with This Task	High	4	ICCSLCA
		Medium	5	
		Low	6	
26.5	Would You Like Training to Perform This Task?	Yes	1	ICCSWT
		No	2	
		I don't know	3	
27	Training of team members in behavioural health			
27.1	Is This Your Role Now?	Yes	1	ICTTMR
		No	2	
		I don't know	3	
27.2	If No, whose Role?			ICTTMW
27.3	Your Organization's Capacity with This Tasks?	High	4	ICTTMOC
		Medium	5	
		Low	6	
27.4	Your Level of Comfort with This Task	High	4	ICTTMLC
		Medium	5	
		Low	6	
27.5	Would You Like Training to Perform This Task?	Yes	1	ICTTMWT
		No	2	
		I don't know	3	

Appendix3 B:Healthcare Workers Survey Questionnaire Amharic version

የጤና ባለሙያዎች ደህንነት ዳሰሳ መጠይቅ

ማስታወሻ፡ ይህ ገፅ የተጠያቂውን የግል መረጃ ስለያዘ ይህንን ገፅ ከሞሉ በኋላ ከዋናው መጠይቅ ይለዩት	
ቃለ መጠይቁ የተካሄደበት ቀን	[ ][ ]/[ ][ ]/[ ][ ][ ][ ]
የተጠያቂው በስራ ላይ የአገልግሎት ዘመን	[ ][ ]
የጤና ጣቢያው ኮድ	
የጤና ጣቢያው ስም	
የአስተባባሪው ተራ ቁጥር	[ ][ ][ ]
የተጠያቂው አገልግሎት ከሶስት ወር በታች ከሆነ ተጠያቂውን አመስግነው በዚህ ላይ ያቁሙ	
የተጠያቂው ተራ ቁጥር	[ ][ ][ ][ ]
የተጠያቂው ስም	
ስልክ ቁጥር	ሞባይል፡[ ][ ][ ][ ] [ ][ ][ ][ ] ሌላ፡[ ][ ][ ][ ] [ ][ ][ ][ ]
ኢሜይል	

ቃለ መጠይቁ የተካሄደበት ቀን	[ ][ ]/[ ][ ]/[ ][ ][ ][ ]
የተጠያቂው ተራ ቁጥር	[ ][ ][ ][ ]
የአስተባባሪው ተራ ቁጥር	[ ][ ][ ]
የጤና ጣቢያው ስም	
የጤና ጣቢያው ኮድ	

1. የግለሰቡ መረጃ

በቅድሚያ ስለእርስዎ አጠቃላይ መረጃ እጠይቃለሁ::በአብዛኛው መወቅ የምፈልገው አሁን ስላሉበት ሁኔታ ነው::

101	**እድሜ** (እድሜዎት ስንት ነው?)	[ ] [ ] አመት		AGE
102	**ፆታ**	ወንድ	0	SEX
		ሴት	1	
103	**የጋብቻ ሁኔታ** (በአሁኑ ወቅት የትዳር ሁኔታ እንዴት ነው?)	ያላገባ	1	MARIT
		ባለትዳር	2	
		በፍቺ የተለያየ	3	
		በሞት የተለየ	4	
		ያገባ ግን በስራ ወይም በሌላ ምክንያት አብሮ የማይኖር	5	
104	**የመኖሪያ ቦታ** (የሚኖሩት ቀበሌ ከተማ ነው ወይስ ገጠር?)	ከተማ	0	RES
		ገጠር	1	
105	**የትምህርት ደረጃ**	ዲፕሎማ	1	EDU
		ዲግሪ	2	
		ማስተርስ	3	
		ሌላ (ይገለፅ)	7	
106	**ስራ** (በአሁኑ ጊዜ የስራ መደብዎ ምንድነዉ?)	ሐላፊ	1	EMP
		ተቆጣጣሪ	2	
		ባለሙያ	3	
		ሌላ_____	7	

2. ጤና ሁኔታ መጠይቅ

በመቀጠልም ስለእርስዎ አጠቃላይ የጤና ሁኔታ መረጃ እጠይቃለሁ::በአብዛኛው መወቅ የምፈልገው የቆየ ወይንም በቅርቡ የገጠመዎት የጤና እክል መኖር አለመኖሩን ነው::

201	**ባለፉት አራት ሳምንታት** ማንኛውም አይነት የጤና እክል ገጥሞት ወይንም ህመም ይዞት ነበር (ለምሳሌ፡ ጉንፋን)	አዎ	1	PHA
		አይ	0	
202	ለጥያቄ ቁጥር 201 ምላሾ አዎ ከሆነ ባለፉት አራት ሳምንታት ያመሞት ነገር ወይም የገጠሞት የጤና እክል ምን እንደነበር ይግለፁ 1._____ 2. _____ 3. _____			PHPT
203	**በህይወት ዘመንዎ** ያጋጠሞት የቆየ የጤና እክል ወይንም ህመም አለ ?	አዎ	1	PHC
		አይ	0	

204	ለጥያቄ ቁጥር 203 ምላሽ አዎ ከሆነ ያመሞት ነገር ወይም የገጠሞት የጤና እክል ምን እንደነበር ይግለፁ 1._____ 2. _____ 3.			PHCT
205	ያመሞት ነገር ወይም የገጠሞት የጤና እክል በስራዎ ላይ ተፅእኖ አሳድሯል ?	አዎ	1	PHDI
		አይ	0	

3. ፒኤች ኪው የአእምሮ ውጥረት መጠይቅ (PHQ-9)				
ላለፉት ሁለት ሳምንታት ከነዚህ ከምዘረዝራቸው ችግሮች ውስጥ፤ የትኞቹ ደርሰውቦት (በየትኞቹ ተጨግረው) እንደነበር ይገልፀልናል፡፡ **<u>ማስታወሻ</u>፡** አልፎ አልፎ ብቻ (2-6 ቀናት)፤ በዛ ላለ ጊዜ (7-11 ቀናት)፤ ከሞላ ጎደል በየቀኑ (12-14 ቀናት) መሆኑን ልብ ይበሉ፡፡				
301	የእለት ተእለት ተግባርዎን ለማከናወን (ለመስራት) ያለዎት ተነሳሺነት ወይም ፍላጎት በጣም ቀንሶ ነበር?	አዎ	1	PHLI
		የለም	0	
	መልሱ አዎ ከሆነ በሁለቱ ሳምንታት ውስጥ ለምን ያህል ጊዜ ተሰማዎት?	አዎ አልፎ አልፎ ብቻ	1	
		በዛ ላለ ጊዜ	2	
		ከሞላ ጎደል በየቀኑ	3	
302	የመከፋት፤ የመደበት ወይም ተስፋ የመቁረጥ ስሜት ይሰማዎት ነበር?	አዎ	1	PHFS
		የለም	0	
	መልሱ አዎ ከሆነ በሁለቱ ሳምንታት ውስጥ ለምን ያህል ጊዜ ተሰማዎት?	አዎ አልፎ አልፎ ብቻ	1	
		በዛ ላለ ጊዜ	2	
		ከሞላ ጎደል በየቀኑ	3	
303.1	እንቅልፍ አልወስድ ብሎት፤ ወይም በደንብ መተኛት አቅቶት ይቸገሩ ነበር?	አዎ	1	PHIS
		የለም	0	
	መልሱ አዎ ከሆነ በሁለቱ ሳምንታት ውስጥ ለምን ያህል ጊዜ ነበር የተቸገሩት?	አዎ አልፎ አልፎ ብቻ	1	
		በዛ ላለ ጊዜ	2	
		ከሞላ ጎደል በየቀኑ	3	
303.2	እንቅልፍ በዝቶቦት ይቸገሩ ነበር?	አዎ	1	PHOS
		የለም	0	
	መልሱ አዎ ከሆነ በሁለቱ ሳምንታት ውስጥ ለምን ያህል ጊዜ ነበር የተቸገሩት?	አዎ አልፎ አልፎ ብቻ	1	
		በዛ ላለ ጊዜ	2	
		ከሞላ ጎደል በየቀኑ	3	
304.	የድካም ወይም የአቅም ማነስ ስሜት ይሰማዎት ነበር?	አዎ	1	PHLE
		የለም	0	
	መልሱ አዎ ከሆነ በሁለቱ ሳምንታት ውስጥ ለምን ያህል ጊዜ ተሰማዎት?	አዎ አልፎ አልፎ ብቻ	1	
		በዛ ላለ ጊዜ	2	
		ከሞላ ጎደል በየቀኑ	3	
305.1	የምግብ ፍላጎትዎ ቀንሶ ነበር?	አዎ	1	PHLR
		የለም	0	
	መልሱ አዎ ከሆነ በሁለቱ ሳምንታት ውስጥ ለምን ያህል ጊዜ ተሰማዎት?	አዎ አልፎ አልፎ ብቻ	1	
		በዛ ላለ ጊዜ	2	
		ከሞላ ጎደል በየቀኑ	3	
305.2	የምግብ ፍላጎትዎ ከተለመደው በላይ ጨምሮ ነበር?	አዎ	1	PHLA
		የለም	0	
	መልሱ አዎ ከሆነ በሁለቱ ሳምንታት ውስጥ ለምን ያህል ጊዜ ተሰማዎት?	አዎ አልፎ አልፎ ብቻ	1	
		በዛ ላለ ጊዜ	2	
		ከሞላ ጎደል በየቀኑ	3	
306	ራስዎን የመጥላት ወይም ዋጋ የለኝም የማለት ወይም ራሴንም ሆነ ቤተሰቤን አሳዝኛለሁ የሚል ስሜት ተሰምቶት ነበር?	አዎ	1	PHFH
		የለም	0	
	መልሱ አዎ ከሆነ በሁለቱ ሳምንታት ውስጥ ለምን ያህል ጊዜ ተሰማዎት?	አዎ አልፎ አልፎ ብቻ	1	
		በዛ ላለ ጊዜ	2	
		ከሞላ ጎደል በየቀኑ	3	
307	በሚሰሩት ስራ ላይ ሃሳቦን መሰብሰብ/ ትኩረት መስጠት አስቸግሮት ነበር ? (ለምሳሌ ፤ ከሰዎች ጋር ሲጨዋወቱ ትኩረት ሰጥቶ ማዳመጥ?)	አዎ	1	PHDC
		የለም	0	
	መልሱ አዎ ከሆነ በሁለቱ ሳምንታት ውስጥ ለምን ያህል ጊዜ ተቸገሩ?	አዎ አልፎ አልፎ	1	
		ለአንድ ሳምንት ያህል	2	
		ከሞላ ጎደል በየቀኑ	3	

308.1	ለሌሎች ሰዎች እስከሚታወቅ ድረስ በእንቅስቃሴዎ ወይም በንግግርዎ በጣም ቀስ ብለው ነበር?	አዎ	1	PHDT
		የለም	0	
	መልሱ አዎ ከሆነ በሁለቱ ሳምንታት ውስጥ ለምን ያህል ጊዜ ነበር?	አዎ አልፎ አልፎ	1	
		ለአንድ ሳምንት ያህል	2	
		ከሞላ ጎደል በየቀኑ	3	
308.2	ለሌሎች ሰዎች እስከሚታወቅ ድረስ መረጋጋት አቅቶት፤ አንድ ቦታ አርፎ መቀመጥ ወይም መቆም እስከማይችሉ ሆነው ነበር?	አዎ	1	PHDS
		የለም	0	
	መልሱ አዎ ከሆነ በሁለቱ ሳምንታት ውስጥ ለምን ያህል ጊዜ ነበር?	አዎ አልፎ አልፎ	1	
		ለአንድ ሳምንት ያህል	2	
		ከሞላ ጎደል በየቀኑ	3	
309	ከምኖር ብሞት ይሻለኛል ብለው አስበው ወይም ራስዎን በሆነ መንገድ ሊጎዱ አስበው ነበር?	አዎ	1	PHWD
		የለም	0	
	መልሱ አዎ ከሆነ በሁለቱ ሳምንታት ውስጥ ለምን ያህል ጊዜ ነበር ያሰቡት?	አዎ አልፎ አልፎ	1	
		ለአንድ ሳምንት ያህል	2	
		ከሞላ ጎደል በየቀኑ	3	
310	ከተዘረዘሩት ችግሮች ለአንዳቸውም አዎ የሚል ምላሽ ከሰጡ ይህን ጥያቄ ይመልሱ። በእነዚህ ችግሮች ምክንያት ስራዎን ለመስራት፤የቤት ሃላፊነቶን ለመወጣት ወይንም ከሰዎች ጋር ተስማምተው ለመኖር ምን ያህል አስቸጋሪ ሆኖቦት ነበር	በጭራሽ አልተቸገርኩም	0	PHDR
		በመጠኑ ተቸግሬ ነበር	1	
		በጣም ተቸግሬ ነበር	2	
		እጅግ በጣም ተቸግሬ ነበር	3	

4.ማስላክ የበርንአውት (ከስራ ጋር የተያያዘ መታከት) መጠይቅ

Maslach Burnout Inventory (MBI)

የዚህ መጠይቅ አላማ ስራዎትንና አብረዎት በቅርበት የሚሰሩትን ሰዎች እንዴት እንደሚያዩአቸው ለማወቅ ነው::በጣም በተለያዩ የስራ አይነቶች ላይ ያሉ ሠዎች ይህን መጠይቅ ስለሚመልሱ ተገልጋዮች የሚለውን ቃል አገልግሎት፣ አንክብካቤ ወይም ህክምና የሚሰጧቸውን ሠዎች ለማመልከት ይጠቀማል:: በስራዎት ላይ ሌላ ቃል ቢጠቀሙም ይህንን መጠይቅ በሚመልሱበት ጊዜ እባክዎን እነዚህን ሰዎች ወይም ታካሚዎች እንደ "ተገልጋዮች" ያስቧቸው::

ከስራ ጋር የተያያዙ ስሜቶች ላይ 22 ዐረፍተ ነገሮች አሉ::እባክዎን እያንዳንዱን ዐረፍተ ነገር በጥንቃቄ ያንብቡና ስለስራዎ እንደዚህ ተሰምተዎት የሚያውቅ መሆኑን ይወስኑ::ይህ ስሜት ተሰምተዎት የማያውቅ ከሆነ ከዐረፍተ ነገሩ በፊት"0" (ዜሮ) ብለው ይፃፉ::ይህ ስሜት ተሰምተዎት የሚያውቅ ከሆነ በየምን ያህል ጊዜው እንደሚሰማዎት በሚገባ የሚያሳየውን ቁጥር(ከ1 እስከ 6) በመፃፍ ይግለፁ::

ስንት/ ምን ያህል ጊዜ የሚከተሉት ስሜቶች ተሰምቶዎት ያውቃል

401	በስራዬ የተነሳ ስሜቴ እንደተሟጠጠ ይሰማኛል (ትክት ይለኛል):: **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBED
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
402	ከስራ ውሎ በኋላ ባዶነት ይሰማኛል:: **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBUP
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
403	ጠዋት ተነስቼ ሌላ የስራ ቀን መጋፈጥ ሲኖርብኝ ድካም ይሰማኛል:: **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBFA
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	

404	ተገልጋዮች/ ታካሚዎች ስለነገሮች ምን እንደሚሰማቸው በቀላሉ መረዳት እችላለሁ፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBEA
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
405	አንዳንድ ተገልጋዮች/ ታካሚዎች ሰዎች እንዳልሆኑ ቁሶች እንደማስተናግዳቸው ይሰማኛል፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር**?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBIO
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
406	ሙሉ ቀን ከሰዎች ጋር መስራት ለኔ በጣም ከባድ/አስጨናቂ ነው፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBWS
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
407	የተገልጋዮች/ የታካሚዎችን ችግር በብቃት እወጣለሁ፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBDE
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
408	ከስራዬ የተነሳ ውስጤ ተቃጥሎ እንዳለቀ ይሰማኛል፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBBO
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	

		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
409	በስራዬ የሌሎች ሰዎች ህይወት ላይ በጎ ተፅዕኖ እንደምፈጥር ይሰማኛል፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBPI
		በአመት ጥቂት ጊዜ ወይም ያነሰ	ነ	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
410	ይህን ስራ ከጀመርኩ ወዲህ ይበልጥ ልበ ደንዳና እየሆንኩ መጥቻለሁ፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBCP
		በአመት ጥቂት ጊዜ ወይም ያነሰ	ነ	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
411	ይህ ስራ ስሜቴን እያደነደነው እንዳይሆን ያሰጋኛል፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBWJ
		በአመት ጥቂት ጊዜ ወይም ያነሰ	ነ	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
412	በጣም ብርታት (ሞራል) እንዳለኝ ይሰማኛል፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBFE
		በአመት ጥቂት ጊዜ ወይም ያነሰ	ነ	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	

		በየቀኑ	6	
413	በስራዬ ተስፋ እንደቆረጥኩ ይሰማኛል፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBFF
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
414	በመጠን ያለፈ ከባድ ስራ እንደምስራ ይሰማኛል፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBWTH
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
415	አንዳንድ ተገልጋዮች/ ታካሚዎች ላይ ምንም ቢደርስባቸው ግድ የለኝም፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBDCW
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
416	ከሰዎች ጋር በቀጥታ መስራት በጣም ብዙ ጫና ይፈጥርብኛል፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBWPS
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
417	ከተገልጋዮች/ ታካሚዎችጋር ዘና ያለን ድባብ በቀላሉ	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBRA
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	

	መፍጠር እችላለሁ፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
418	ከተገልጋዮች/ ታካሚዎችጋር በቅርበት ከሰራሁ በኋላ ከፍ ከፍ የማለት ስሜት ይሰማኛል፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBEF
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
419	በዚህ ስራ ውስጥ እርባና ያላቸው ብዙ ነገሮችን ሰርቻለሁ/ አከናውኛለሁ፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBAM
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
420	ጉዞዬን እንደጨረስኩ ይሰማኛል፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBAR
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
421	በስራዬ ላይ ስሜታዊ ችግሮችን በጣም በእርጋታ እወጣለሁ፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	አይ ፈፅሞ ተሰምቶኝ አያውቅም	0	MBIEE
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	

		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	
422	ተገልጋዮች/ ታካሚዎች ለአንዳንድ ችግሮቻቸው እኔን ተጠያቂ እንደሚያደርጉኝ ይሰማኛል፡፡ **ይህን አይነት ስሜት በየስንት ግዜው ይሰማዎት ነበር** ?	ኣይ ፈፅሞ ተሰምቶኝ ኣያውቅም	0	MBRBP
		በአመት ጥቂት ጊዜ ወይም ያነሰ	1	
		በወር አንዴ ወይም ያነሰ	2	
		በወር ጥቂት ጊዜ	3	
		በሳምንት አንድ ጊዜ	4	
		በሳምንት ጥቂት ጊዜ	5	
		በየቀኑ	6	

5. የኦስሎ ማህበራዊ ድጋፍ መለኪያ መጠይቅ
(The Oslo 3-items social support scale)

ለእርሶ ሁኔታ ትክክለኛ የሆነውን መልስ ያክብቡ

501	ከጎረቤትዎቾ እርዳታ/ድጋፍ ቢያስፈልግዎ ማግኘት ምን ያህል ቀላል ነው?	በጣም ቀላል	1	OSAS
		ቀላል	2	
		የሚቻል	3	
		አስቸጋሪ	4	
		በጣም አስቸጋሪ	5	
502	ከፍተኛ ችግር ቢያጋጥምዎ የቅርብ የሆኑ እና ይረዱኛል ብለው የሚተማመኑባቸው ምን ያህል ሰዎች ይኖራሉ?	ምንም	1	OSCRS
		1-2	2	
		3-5	3	
		5+	4	
503	ሌሎች ሰዎች ስለ እርሶ ጉዳይ ምን ያህል ግድ ይላቸዋል	በጣም	1	OSNPS
		የተወሰነ	2	
		አላውቅም	3	
		ትንሽ	4	
		ምንም	5	

6. በሰው ላይ ሊደርሱ የሚችሉ መጥፎ የህይወት አጋጣሚዎች
List of Threatening Events revised version (LTE)

601	**ባለፉት 6 ወራት** እርሶ ላይ ከበድ ያለ ህመም ፤የአካል ጉዳት ወይም ድብደባ አጋጥሞት ነበር?	አዎ	1	LEILL9
		አይ	2	
		አላውቅም	8	
		መልስ መስጠት አልፈለጉም	9	
602	**ባለፉት 6 ወራት ውስጥ** በቅርብ ዘመድዎ ላይ ከበድ ያለ ህመም ፤የአካል ጉዳት ወይም ድብደባ አጋጥሞት ነበር?	አዎ	1	LEILR9
		አይ	2	
		አላውቅም	8	
		መልስ መስጠት አልፈለጉም	9	
603	**ባለፉት 6 ወራት ውስጥ** ባለቤትዎ፤ ከወላጆችዎ አንዱ ወይም ከልጆችዎ አንዱ(አንዷ) የሞተ ሰው ነበር?	አዎ	1	LEBE9
		አይ	2	
		አላውቅም	8	
		መልስ መስጠት አልፈለጉም	9	
604	**ባለፉት 6 ወራት ውስጥ** የሞተብዎት የቤተሰብ ቅርብ ጓደኛ የሆነ ሰው ወይም ሌላ የቅርብ ዘመድ አለ?	አዎ	1	LEBEF9
		አይ	2	
		አላውቅም	8	
		መልስ መስጠት አልፈለጉም	9	
605	**ባለፉት 6 ወራት ውስጥ** በትዳር ውስጥ በተፈጠረ አለመስማማት ምክንያት ከባለቤትዎ ተለያይተው ያውቃሉ?	አዎ	1	LEMAR9
		አይ	2	
		አላውቅም	8	
		መልስ መስጠት አልፈለጉም	9	
606	**ባለፉት 6 ወራት ውስጥ** ጠንካራ የነበረ ግንኙነት ወይንም ጓደኝነት አፍርሰዋል?	አዎ	1	LEREL9
		አይ	2	
		አላውቅም	8	
		መልስ መስጠት አልፈለጉም	9	

607	**ባለፉት 6 ወራት ውስጥ** በእርስዎ እና በቅርብ ጓደኞችዎ፤ ጎረቤቶችዎ ወይንም ዘመዶችዎ መካከል ጠንከር ያለ ችግር(ወይም ጠብ) አጋጥሞ ያውቃል?	አዎ	1	LEFR9
		አይ	2	
		አላውቅም	8	
		መልስ መስጠት አልፈለጉም	9	
608	**ባለፉት 6 ወራት ውስጥ** ከአቅምዎ በላይ የሆነ ከባድ የገንዘብ ችግር አጋጥሞት ነበር? (**ከበድ ያለ ገንዘብ የማጣት ጭንቅ**)?	አዎ	1	LEFIN9
		አይ	2	
		አላውቅም	8	
		መልስ መስጠት አልፈለጉም	9	
609	**ባለፉት 6 ወራት ውስጥ** እርሶ ትልቅ ግምት የሚሰጡት እቃ ጠፍቶቦት ወይም ተሰርቆቦት ያውቃል?	አዎ	1	LETHF9
		አይ	2	
		አላውቅም	8	
		መልስ መስጠት አልፈለጉም	9	
610	**ባለፉት 6 ወራት ውስጥ** ከፖሊስ ጋር የሚያገናኝዎ ወይም ፍርድ ቤት የሚያስኬድ ችግር ነበረብዎ?	አዎ	1	LEPOL9
		አይ	2	
		አላውቅም	8	
		መልስ መስጠት አልፈልግም	9	
611	**ባለፉት 6 ወራት ውስጥ** ባለቤትዎ ስራ ፈተው (ስራ አጥ ሆነው) ነበር? ስራ መስራት አቅቷቸው የነበረበት ሁኔታስ ነበር?	አዎ	1	LEUNH9
		አይ	2	
		አይመለከኝም	3	
		አላውቅም	8	
		መልስ መስጠት አልፈልግም	9	
		አዎ	1	
612	**ባለፉት 6 ወራት ውስጥ** ሃይል የተጠቀመቦት ሰው ነበር? (ለምሳሌ የመታዎት፤ የደበደቦት፤ የገፈተሮት)	አዎ	1	VIOL9
		አይ	2	
		አላውቅም	8	
		መልስ መስጠት አልፈለጉም	9	
613	**ባለፉት 6 ወራት ውስጥ ከላይ ከዘረዘርናቸው ሌላ በጣም ያስቆጣዎ ወይም ያበሳጭዎት ነገር ነበር**?	አዎ	1	LEOT9
		አይ	2	
		አላውቅም/ አላስታውስም	8	
		መልስ መስጠት አልፈለጉም	9	

7. በስራ ላይ ያለ እርካታ መጠይቅ Job Satisfaction Questionnaire (JSQ 15)				
በስራዎ ምን ያህል እርካታ እንዳለዎ ምላሹን በማክበብ ይግለፁ፡፡ ከዚህ በታች በተዘረዘሩት ሁኔታዎች ምን ያህል እርካታ እንዳሎት ይግለፁልን፡፡				
701	የስራዎ አካባቢያዊ ሁኔታዎች? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSPWC
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
702	ስራዎን በፈለጉት መንገድ ለመስራት የመምረጥ ነፃነትዎ? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSFW
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
703	በስራ ባልደረቦችዎ/ አብረዎት በሚሰሩት ሰዎች ሁኔታ? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSWFW
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
704	በመልካም ስራዎ በሚያገኙት እውቅና? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSRGW
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	

		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
705	በቅርብ አለቃዎ ሁኔታ? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSWIB
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
706	በስራዎ ላይ በተሰጦት የሃላፊነት መጠን? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSRG
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
707	በሚሰጦት ክፍያ/ደመወዝ ? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSRP
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
708	ችሎታዎን ለመጠቀም የሚያስችል ሁኔታ? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSOUA
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
709	በመስሪያቤትዎ ውስጥ ያለው የስራ ግንኙነት በአስተዳደርና	እጅግ በጣም እርካታ የለኝም	1	JSPRS

	በሰራተኞች መካከል ያለ የስራ ግንኙነት **እርካታዎ እንዴት ነው?**	በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
710	በስራዎ ላይ ባለ የእድገት እድል? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSCP
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
711	የስራ ቦታዎ/ መስሪያ ቤቶ የሚተዳደርበት ሁኔታ? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSOM
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
712	ለሚሰጡት አስተያየት የሚሰጠው ትኩረት/ ቦታ? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSAYS
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
713	የሚሰሩት የስራ ሰአት ርዝመት?	እጅግ በጣም እርካታ የለኝም	1	JSHO
			2	

	እርካታዎ እንዴት ነው?	በጣም እርካታ የለኝም		
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
814	በሚሰሩት ስራ አይነት፤ መጠን? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSTJ
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	
815	በስራዎ ዋስትና/አስተማማኝነት ? **እርካታዎ እንዴት ነው?**	እጅግ በጣም እርካታ የለኝም	1	JSJS
		በጣም እርካታ የለኝም	2	
		ብዙም እርካታ የለኝም	3	
		እርግጠኛ አይደለሁም	4	
		በመጠኑ እርካታ አለኝ	5	
		በጣም እርካታ አለኝ	6	
		እጅግ በጣም እርካታ አለኝ	7	

9. ኦዲት የአልኮል መጠጥ አጠቃቀም መጠይቅ **Alcohol Use Disorders Identification Test (AUDIT): Self-Report Version**				
በመቀጠልም ባለፈው አንድ አመት ስለነበሮት የመጠጥ (አልኮል) አጠቃቀም አንዳንድ ጥያቄዎች ይቀርብሎታል። ምክንያቱም መጠጥ (አልኮል) ብዙ ተጓዳኝ የጤና ችግሮችን ያስከትላል (በተጨማሪም ሃኪም አዞልን ከምንወስዳቸው መድሃኒቶች ጋር ሊጋጭ ይችላል)፡ ስለዚህ የመጠጥ (አልኮል) አጠቃቀምዎን ወይም ምን ያህል እንደሚጠጡ ከመጠጥ ጋር የተያያዙ ችግሮች እንዳጋጠሞት ማወቁ ጠቃሚ ነው። ስለሆነም እባክዎን ግልፅ እና ትክክለኛውን መረጃ በመስጠት ይተባበሩን። የእርስዎ ምላሽ ሚስጥራዊነቱ የተጠበቀ ነው። ስለዚህ በግልፅነት ሃሳቦን ይግለፁ።				**CODE**
901	አልኮል ያላቸው መጠጦችን በየስንት ጊዜው ይወስዳሉ?	ፈፅሞ አልጠጣም [ምላሹ ይህ ከሆነ ወደ→ ሚቀጥለው ክፍል ይለፉ]	0	AUHO
		በወር ከአንዴ ያነሰ	1	
		2-4 ግዜ በወር	2	

		2-3 ግዜ በሳምንት	3	
		4 ወይም ከዚያ በላይ በሳምንት	4	
902	በሚጠጡበት ቀን ምን ያህል መለኪያ ይጠጣሉ?	2-Jan	0	AUHM
		4-Mar	1	
		6-May	2	
		9-Jul	3	
		10 ወይም ከዚያ በላይ	4	
903	በየስንት ጊዜው ከስድስት እና ከዚያ በላይ መለኪያ ይጠጣሉ?	ፈፅሞ አልጠጣም	1	AUHS
		በወር ከአንዴ ያነሰ	2	
		በወር	3	
		በሳምንት	4	
		በየቀኑ ወይም ከሞላ ጎደል ሁልቀን	5	
904	ባለፈው ዓመት ውስጥ በየስንት ጊዜው መጠጣት ጀምረው ለማቆም ተቸግረዋል?	ፈፅሞ አልተቸገርኩም	1	AUDS
		በወር ከአንዴ ያነሰ	2	
		በወር አንዴ	3	
		በሳምንት አንዴ	4	
		በየቀኑ ወይም ከሞላ ጎደል ሁልቀን	5	
905	ባለፈው ዓመት ውስጥ በየስንት ጊዜው በመጠጣትዎ ምክንያት መስራት ያለብዎትን ሳይሰሩ ቀርተዋል?	ፈፅሞ ሳልሰራ አልቀረሁም	1	AULD
		በወር ከአንዴ ያነሰ	2	
		በወር አንዴ	3	
		በሳምንት አንዴ	4	
		በየቀኑ ወይም ከሞላ ጎደል ሁልቀን	5	
906	ባለፈው ዓመት ውስጥ በየስንት ጊዜው በጠጓት ለመነቃቃት መጠጣት አስፈልጎዎታል ?	ፈፅሞ አላስፈለገኝም	1	AUEO
		በወር ከአንዴ ያነሰ	2	
		በወር አንዴ	3	
		በሳምንት አንዴ	4	
		በየቀኑ ወይም ከሞላ ጎደል ሁልቀን	5	
907	ባለፈው ዓመት ውስጥ በየስንት ጊዜው በመጠጣትዎ ተጸጽተዋል?	ፈፅሞ አልተጸጸትኩም	1	AUFG
		በወር ከአንዴ ያነሰ	2	
		በወር አንዴ	3	
		በሳምንት አንዴ	4	
		በየቀኑ ወይም ከሞላ ጎደል ሁልቀን	5	
908	ባለፈው ዓመት ውስጥ በየስንት ጊዜው በጠጡበት ጊዜ የሆነውን ለማስታወስ	ፈፅሞ አልተቸገርኩም	1	AUUR

	ተቸግረዋል?	በወር ከአንዴ ያነሰ	2	
		በወር አንዴ	3	
		በሳምንት አንዴ	4	
		በየቀኑ ወይም ከሞላ ጎደል ሁልቀን	5	
909	በ መጠጣትዎ ምክንያት እርስዎ ወይም ሌላ ሰው ተጎድቶ/አደጋ ደርሶበት ያውቃል?	አያውቅም	1	AUID
		አዎ፣ ዓመት አልፎታል	2	
		አዎ፣ ባለፈው ዓመት ውስጥ	3	
910	ዘመድ/ወዳጅ/ የጤና ባለሙያ መጠጥ እንዲያቆሙ መክሮዎት ያውቃል?	አያውቅም	1	AUAR
		አዎ፣ ዓመት አልፎታል	2	
		አዎ፣ ባለፈው ዓመት ውስጥ	3	
			ድምር	

10. በሃኪም የታዘዙ እና ያልታዘዙ መድሃኒቶች አጠቃቀም መጠይቅ
Prescription and non prescription drug and/or substance use questions

የሚከተሉት ጥያቄዎች ስለ በሃኪም የታዘዙ እና ያልታዘዙ መድሃኒቶች አጠቃቀምሞ ሁኔታ እንጠይቆታለን:: የሚሰጡት ምላሽ ሚስጥራዊነቱ በተጠበቀ ሁኔታ ይያዛል:: ስለዚህ እባክዎን በግልፅነት እና በነፃነት ሃሳቦን ይግለፁ::

1001	ባለፉት ስድስት ወራት ውስጥ በሃኪም የታዘዘ ማንኛውም አይነት ህመም ማስታገሻ መድሃኒት ወስደው ነበር?	አዎ	1	PNPA
		አይ	0	
1002	ባለፉት ስድስት ወራት ውስጥ በሃኪም ሳይታዘዝሎት ማንኛውም አይነት ህመም ማስታገሻ መድሃኒት ወስደው ነበር?	አዎ	1	PNWA
		አይ	0	
1003	ለጥያቄ ቁጥር 1302 ምላሾ አዎን ከሆነ የአጠቃቀሞን ሁኔታ እንዴት ነበር	በየቀኑ	1	PNUP
		በሳምንት ሶስት ወይም አራት ጊዜ	2	
		በሳምንት ሁለት ወይም አንድ ጊዜ	3	
		በወር ከአንድ እስከ ሶስት ጊዜ	4	
		በወር አንዴ ወይም ያነሰ	5	
1004	ባለፉት ስድስት ወራት ውስጥ ዳያዜፓም (diazepam) ወይም የእንቅልፍ መድሃኒት በሌላ (በራስዎ ሳይሆን) ሃኪም ትእዛዝ ወስደው ነበር?	አዎ	1	PNDPA
		አይ	0	
1005	ባለፉት ስድስት ወራት ውስጥ ዳያዜፓም (diazepam) ወይም የእንቅልፍ መድሃኒት ያለ ሃኪም ትእዛዝ ወስደው ነበር?	አዎ	1	PNDWA
		አይ	0	
1006	ለጥያቄ ቁጥር 1305 ምላሾ አዎን ከሆነ የአጠቃቀሞን ሁኔታ እንዴት ነበር	በየቀኑ	1	PNEFU
		በሳምንት ሶስት ወይም አራት ጊዜ	2	
		በሳምንት ሁለት ወይም አንድ ጊዜ	3	
		በወር ከአንድ እስከ ሶስት ጊዜ	4	
		በወር አንዴ ወይም ያነሰ	5	
1007	ባለፉት ስድስት ወራት ውስጥ ፊኖባረቢቶን (phenobarbitone) በሌላ (በራስዎ ሳይሆን) ሃኪም ትእዛዝ ወስደው ነበር?	አዎ	1	PNPPA
		አይ	0	
1008	ባለፉት ስድስት ወራት ውስጥ ፊኖባረቢቶን (phenobarbitone) ያለ ሃኪም ትእዛዝ ወስደው ነበር?	አዎ	1	PNPWA
		አይ	0	
1009	ለጥያቄ ቁጥር 1308 ምላሾ አዎን ከሆነ የአጠቃቀሞን ሁኔታ እንዴት ነበር	በየቀኑ	1	PNUPN
		በሳምንት ሶስት ወይም አራት ጊዜ	2	
		በሳምንት ሁለት ወይም አንድ ጊዜ	3	
		በወር ከአንድ እስከ ሶስት ጊዜ	4	
		በወር አንዴ ወይም ያነሰ	5	
1010	ሲጋራ ያጨሳሉ?	አዎ	1	PNCU
		አይ	0	
1011	ለጥያቄ ቁጥር 1310 ምላሾ አዎን ከሆነ በቀን ስንት ያጨሳሉ			PNCUF
1012	ጫት ይቅማሉ?	አዎ	1	PNCHU
		አይ	0	
1013	ለጥያቄ ቁጥር 1312 ምላሾ አዎን ከሆነ በየስንት ጊዜ ይቅማሉ	በየቀኑ	1	PNCHUF
		በሳምንት ሶስት ወይም አራት ጊዜ	2	
		በሳምንት ሁለት ወይም አንድ ጊዜ	3	
		በወር ከአንድ እስከ ሶስት ጊዜ	4	
		በወር አንዴ ወይም ያነሰ	5	

11. የጤና ባለሙያዎች በሚሰጡት አገልግሎት ላይ ያላቸውን እርካታ **Healthcare Workers reported satisfaction with delivery of care**				
በመቀጠልም በሚሰጡት አገልግሎት ላይ ምን ያህል እርካታ እንዳለዎት ይገልፁልናል፡፡ የሚመልሱት ምላሽ ትክክል እና ስህተት የለውም፤ በዚህ ክፍልየሚሰጡት ምላሽ ከላይ እንደተጠቀሰው ሚስጥራዎነቱ የተጠበቀ ነው፡፡				
1101	በጥቅሉ ለታካሚዎች በሚሰጡት አገልግሎት ምን ያህል ይረካሉ?	በፍፁም አልረካም	0	PSCPC
		አልረካም	1	
		ምንም አይል	2	
		እረካለሁ	3	
		በጣም እረካለሁ	4	
1102	በጥቅሉ እርሶ ለታካሚዎች በሚሰጡት አገልግሎት ታካሚዎቹ እና አስታማሚዎች ምን ያህል የረኩ ይመስሎታል ?	በፍፁም አይረኩም	0	PSCPA
		አይረኩም	1	
		ምንም አይል	2	
		ይረካሉ	3	
		በጣም ይረካሉ	4	
1103	በጥቅሉ እርሶ ለታካሚዎች በሚሰጡት አገልግሎት የስራ ባልደረቦችዎ እና ጓደኞቹ ምን ያህል የረኩ ይመስሎታል ?	በፍፁም አይረኩም	0	PSCBC
		አይረኩም	1	
		ምንም አይል	2	
		ይረካሉ	3	
		በጣም ይረካሉ	4	

12. Integrated Care Tasks **የተጣመረ የህክምና አገልግሎት ስለመስጠት** **ማስታወሻ፡1-27 ያሉት ጥያቄች፤ ስለተለያዩ ሃላፊነቶችና ድርሻሶች ይጠይቃሉ፡፡ ትክክለኛ ነው የሚሉትን መልስ በስራ ድርሻው ትይዩ ያሉትን ቁጥሮች በማክበብ ያመልክቱ፡፡**				
	ታካሚዎችን መለየትና ማሳተፍ			
1	እርዳታ ሊያስፈልጋቸው የሚችሉትን ሰዎች መለየት			
1.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICEPRO
		አይደለም	2	
		አላውቅም	3	
1.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICEPWR
1.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICEPOC
		መካከለኛ	5	
		ዝቅተኛ	6	
1.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICEPLC
		መካከለኛ	5	
		ዝቅተኛ	6	
1.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICEPWT
		አይደለም	2	
		አላውቅም	3	
2	መጠይቆችን በመሙላት የአእምሮ ጤና ችግሮችን መለየት			

2.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICSBR
		አይደለም	2	
		አላውቅም	3	
2.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICSBWR
2.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICSBOC
		መካከለኛ	5	
		ዝቅተኛ	6	
2.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICSBLC
		መካከለኛ	5	
		ዝቅተኛ	6	
2.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICSBWT
		አይደለም	2	
		አላውቅም	3	
3	የአእምሮ ጤና ችግሮችን መርምሮ ማግኘት			
3.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICDBR
		አይደለም	2	
		አላውቅም	3	
3.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICDBWR
3.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICDBOC
		መካከለኛ	5	
		ዝቅተኛ	6	
3.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICDBLC
		መካከለኛ	5	
		ዝቅተኛ	6	
3.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICDBWT
		አይደለም	2	
		አላውቅም	3	
4	ታካሚዎችን በተጣመረ የእንክብካቤ እቅድ ውስጥ ማሳተፍ			
4.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICEPIR
		አይደለም	2	
		አላውቅም	3	
4.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICEPIWR
4.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICEPIOC
		መካከለኛ	5	
		ዝቅተኛ	6	
4.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICEPILC
		መካከለኛ	5	
		ዝቅተኛ	6	
4.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICEPIWT
		አይደለም	2	
		አላውቅም	3	
	ህክምናን ማስጀመርና መስጠት			
5	የአእምሮ ጤና ምርመራ ማድረግ			
5.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICPBHR
		አይደለም	2	
		አላውቅም	3	
5.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICBHWR

5.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICBHOC
		መካከለኛ	5	
		ዝቅተኛ	6	
5.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICBHLC
		መካከለኛ	5	
		ዝቅተኛ	6	
5.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICBHWT
		አይደለም	2	
		አላውቅም	3	
6	የአእምሮ ጤና የህክምና እቅድ ማውጣትና በየጊዜው ማሻሻል			
6.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICDRXPR
		አይደለም	2	
		አላውቅም	3	
6.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICDRXPW
6.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICDRXOOC
		መካከለኛ	5	
		ዝቅተኛ	6	
6.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICDRXPLC
		መካከለኛ	5	
		ዝቅተኛ	6	
6.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICDRXPWT
		አይደለም	2	
		አላውቅም	3	
7	ስለ አእምሮ ህመም ምልክቶችና የህክምና አማራጮች ለታካሚ ትምህርት መስጠት			
7.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICPEWR
		አይደለም	2	
		አላውቅም	3	
7.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICPEW
7.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICPEOC
		መካከለኛ	5	
		ዝቅተኛ	6	
7.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICPELC
		መካከለኛ	5	
		ዝቅተኛ	6	
7.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICPEWT
		አይደለም	2	
		አላውቅም	3	
8	የአእምሮ ህክምና መድኃኒቶችን ማዘዝ			
8.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICPPR
		አይደለም	2	
		አላውቅም	3	
8.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICPPW
8.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICPPOC
		መካከለኛ	5	
		ዝቅተኛ	6	

8.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICPPLC
		መካከለኛ	5	
		ዝቅተኛ	6	
8.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICPPWT
		አይደለም	2	
		አላውቅም	3	
9	ስለ መድኃኒቶችና የጎንዮሽ ችግሮቻቸው ለታካሚ ትምህርት መስጠት			
9.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICPEMSR
		አይደለም	2	
		አላውቅም	3	
9.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICPEMSW
9.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICPEMSOC
		መካከለኛ	5	
		ዝቅተኛ	6	
9.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICPEMSLC
		መካከለኛ	5	
		ዝቅተኛ	6	
9.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICPEMSWT
		አይደለም	2	
		አላውቅም	3	
10	አጭር የምክር አገልግሎትና ተዛማጅ የስነልቦና ህክምናዎችን መስጠት			
10.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICINTR
		አይደለም	2	
		አላውቅም	3	
10.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICINTW
10.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICINTOC
		መካከለኛ	5	
		ዝቅተኛ	6	
10.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICINTLC
		መካከለኛ	5	
		ዝቅተኛ	6	
10.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICINTWT
		አይደለም	2	
		አላውቅም	3	
11	በመረጃ ላይ የተመሰረተ የስነ-አእምሮ ህክምና.(Evidence- based psychotherapy (ለምሳሌ. PST, CBT, IPT))			
11.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICEBPR
		አይደለም	2	
		አላውቅም	3	
11.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICEBPW
11.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICEBPOC
		መካከለኛ	5	
		ዝቅተኛ	6	
11.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICEBPLC
		መካከለኛ	5	
		ዝቅተኛ	6	
11.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICEBPWT
		አይደለም	2	

		አላውቅም	3	
12	ከአእምሮ ህመም በተጨማሪ ያለን አካላዊ ህመም መለየትና ማከም			
12.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICITCMR
		አይደለም	2	
		አላውቅም	3	
12.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICITCMW
12.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICITCMOC
		መካከለኛ	5	
		ዝቅተኛ	6	
12.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICITCMLC
		መካከለኛ	5	
		ዝቅተኛ	6	
12.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICITCMWT
		አይደለም	2	
		አላውቅም	3	
13	ታካሚዎች የአእምሮ ህክምና እንዲያገኙ ወደከፍተኛ/ስፔሻሊስት ህክምና ወይም ማህበራዊ ግልጋሎት መላክ			
13.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICFRR
		አይደለም	2	
		አላውቅም	3	
13.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICFRW
13.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICFROC
		መካከለኛ	5	
		ዝቅተኛ	6	
13.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICFRLC
		መካከለኛ	5	
		ዝቅተኛ	6	
13.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICFRWT
		አይደለም	2	
		አላውቅም	3	
14	ህመም እንደያገረሽ ለመከላከያ እቅድ ማውጣትና መደገፍ			
14.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICCSRR
		አይደለም	2	
		አላውቅም	3	
14.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICCSRW
14.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICCSROT
		መካከለኛ	5	
		ዝቅተኛ	6	
14.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICCSRLC
		መካከለኛ	5	
		ዝቅተኛ	6	
14.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICCSRWT
		አይደለም	2	
		አላውቅም	3	
	የህክምና ውጤትን መከታተል			
15	መዝገብን በመጠቀም የህክምና ተሳትፎንና ህክምና በአግባቡ መውሰድን መከታተል			
15.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICTRR

		አይደለም	2	
		አላውቅም	3	
15.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICTRW
15.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICTROC
		መካከለኛ	5	
		ዝቅተኛ	6	
15.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICTRLC
		መካከለኛ	5	
		ዝቅተኛ	6	
15.6	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICTRWT
		አይደለም	2	
		አላውቅም	3	
16	ህክምና ያቆሙ ወይም በደንብ የማይከታተሉ ታካሚዎችን መድረስ ያለብት ሄደ ማግኘት			
16.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICROPR
		አይደለም	2	
		አላውቅም	3	
16.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICROPW
16.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICROPOC
		መካከለኛ	5	
		ዝቅተኛ	6	
16.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICROPLC
		መካከለኛ	5	
		ዝቅተኛ	6	
16.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICROPWT
		አይደለም	2	
		አላውቅም	3	
17	የተለያዩ መጠይቆችን ተጠቅሞ (ለምሳሌ PHQ-9) የታካሚዎችን የህመም ምልክቶች መከታተል			
17.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICTPR
		አይደለም	2	
		አላውቅም	3	
17.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICTPW
17.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICTPOC
		መካከለኛ	5	
		ዝቅተኛ	6	
17.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICTPLC
		መካከለኛ	5	
		ዝቅተኛ	6	
17.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICTPWT
		አይደለም	2	
		አላውቅም	3	
18	የመድኃኒቶችን የጎንዮሽ ችግሮችንና ስጋቶችን መከታተል			
18.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICMSR
		አይደለም	2	
		አላውቅም	3	
18.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICMSW
18.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICMSOC

		መካከለኛ	5	
		ዝቅተኛ	6	
18.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICMSLC
		መካከለኛ	5	
		ዝቅተኛ	6	
18.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICMSWT
		አይደለም	2	
		አላውቅም	3	
19	ወደሌላ አገልግሎት የተላኩትንና የሌላ ህክምና ውጤቶችን መከታተል			
	ታካሚዎች ለውጥ ካላመጡ በንቃት ህክምናውን እቅድ ማስተካከል			
20	የሚሰጠው ህክምና መቀየር ይኑረበት ወይም አይኑርበት መከታተል			
20.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICANR
		አይደለም	2	
		አላውቅም	3	
20.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICANW
20.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICANOC
		መካከለኛ	5	
		ዝቅተኛ	6	
20.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICANLC
		መካከለኛ	5	
		ዝቅተኛ	6	
20.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICANWT
		አይደለም	2	
		አላውቅም	3	
21	የህክምና/የህክምና እቅድ ለውጦችን ማስፈፀም			
21.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICFCR
		አይደለም	2	
		አላውቅም	3	
21.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICFCW
21.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICFCOC
		መካከለኛ	5	
		ዝቅተኛ	6	
21.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICFCLC
		መካከለኛ	5	
		ዝቅተኛ	6	
21.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICFCWT
		አይደለም	2	
		አላውቅም	3	
22	የሚያዩትን ታካሚዎት ያማከለ የስነአእምሮ ምክር መስጠት			
22.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICCPCR
		አይደለም	2	
		አላውቅም	3	
22.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICCPSW
22.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICCPCOT
		መካከለኛ	5	

		ዝቅተኛ	6	
22.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICCPCLC
		መካከለኛ	5	
		ዝቅተኛ	6	
22.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICCPCWT
		አይደለም	2	
		አላውቅም	3	
23	ከባድ ህመም ወይም ችግር የለበትን ታካሚ መመርመር			
23.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICPAR
		አይደለም	2	
		አላውቅም	3	
23.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICPAW
23.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICPAOC
		መካከለኛ	5	
		ዝቅተኛ	6	
23.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICPALC
		መካከለኛ	5	
		ዝቅተኛ	6	
23.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICPA
		አይደለም	2	
		አላውቅም	3	
	ለእቅዱ አስፈላጊ የሆኑ ሊሎች ተግባራት (እንደ የአስፈላጊነቱ ተግባር ይጨምሩ)			
24	በቡድን አባላት/አገልግሎት ሰጪዎች መካከል የመረጃ ልውውጥን ማቀናበር			
24.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICCCTR
		አይደለም	2	
		አላውቅም	3	
24.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICCCTW
24.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	4	ICCCOC
		መካከለኛ	5	
		ዝቅተኛ	6	
24.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICCCLC
		መካከለኛ	5	
		ዝቅተኛ	6	
24.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICCCWT
		አይደለም	2	
		አላውቅም	3	
25	ለእቅዱ የአመራር/አስተዳደራዊ ድጋፍ (ለምሳሌ. መርሓ ግብር ማውጣት፤ rመርጃ ቁሶች)			
25.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICASR
		አይደለም	2	
		አላውቅም	3	
25.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICASW
25.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	**4**	ICASOC
		መካከለኛ	5	
		ዝቅተኛ	6	
25.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICASLC
		መካከለኛ	5	
		ዝቅተኛ	6	

25.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICASWT
		አይደለም	2	
		አላውቅም	3	
26	ለእቅዱ የህክምና አሰጣጥ ግምገማ			
26.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICCSPR
		አይደለም	2	
		አላውቅም	3	
26.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICCSPW
26.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	**4**	ICCSOCT
		መካከለኛ	5	
		ዝቅተኛ	6	
26.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICCSLCA
		መካከለኛ	5	
		ዝቅተኛ	6	
26.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICCSWT
		አይደለም	2	
		አላውቅም	3	
27	የቡድን/የመስሪያ ቤት አባላትን በአእምሮ ጤና ህክምና ላይ ማስልጠን			
27.1	**ይህ አሁን የእርስዎ ስራ ድርሻ ነው?**	አዎን	1	ICTTMR
		አይደለም	2	
		አላውቅም	3	
27.2	**የርስዎ ካልሆነ የማን ስራ ድርሻ ነው?**			ICTTMW
27.3	**ለዚህ ተግባር ለመፈፀም የድርጅትዎ አቅም?**	ከፍተኛ	**4**	ICTTMOC
		መካከለኛ	5	
		ዝቅተኛ	6	
27.4	**ይህን ተግባር ለመፈፀም ያለዎት ፈቃደኝነት ወይም ምኞት?**	ከፍተኛ	4	ICTTMLC
		መካከለኛ	5	
		ዝቅተኛ	6	
27.5	**ይህንን ተግባር ለማከናወን ስልጠና ይፈልጋሉ?**	አዎን	1	ICTTMWT
		አይደለም	2	
		አላውቅም	3	

Appendix 4 Study Two: Focus Group Discussion Guide

Welcome participants. Get them seated around and give them their code number.
Begin with participants self introduction by saying their code no, educational background, year of service and department they are working only.
Explain the purpose of the focus group session by saying:

Welcome to today's focus group discussion. I would like to thank you for taking part in this study for the second time (quantitative study and now the focus group discussion). Our aim for this focus group discussion is to gather information that would help us to better understand the results we obtained from the survey we conducted in July- August 2014.
We invited you to come to today's discussion session because I would like to hear from you about your opinions and ideas on healthcare workers burnout and job related stress. Since you are the experts, and we can learn from you and have clear understanding of our data.
We need your honest opinion, experience about your work particularly in relation to burnout and job related stress. We would like you to share what you think freely. Everything you are thinking is very important to us. There is no right or wrong answers. We value your opinion. The information you are sharing with us is completely confidential.
In our previous study we found that the level of burnout among the healthcare workers is quite lower than other similar settings. The main rationale of this focus group discussion is to understand why that is happening.

A. FGD discussion section

1. In the initial study you participated is found to be lower in burnout and job related stress than in other settings in this world. What do you think about this result?
2. Do you believe this is true result?

   Probes for Discussion:

   If yes why what explains it? What are the potential reasons?

   - *Work environment*
   - *Relationship with co-workers*
   - *Salary*
   - *Benefits(medical insurance)*
   - *Culture*
     - *Relationships with co-workers, camaraderie*
     - *Status in the community*
   - *Safety & Health protection*
     - *Protective measures (e.g., gloves)*
     - *Abuse issues on the job*
     - *Workplace security*
   - *Working conditions*
     - *Access to supplies, equipment, drugs*
   - *Respect/recognition from management or others*
   - *Opportunity, achievement, growth*
     - *Advancement, further education or training, responsibility*
   - *Management and supervision*
     - *Community fora*
   - *Is there a sense of ownership of the outcomes here?*
     - *Work content, responsibility*
   - *Standards of living*
     - *Cost of living*
     - *Housing*
     - *Electricity*
     - *Water*
     - *Transportation*
     - *Telephone*
   - *Education for children*
   - *Work/home balance*

   If no why what explains it? What are the potential reasons?

3. What makes your workplace good to work in (positive aspects)?
4. What makes your workplace not good to work in (negative aspects)?

B. FGD process observation section

Along with focus group discussion observations will also take place. A note taker will do the observations of the group dynamics using the following check list

1. Who participates in the discussion and who does not
2. Who dominates in the discussion
3. Tone of the group interaction (collegial, conflicted, angry, bored, etc)
4. Consistency of participants' observations.
5. Body language

Finally I would like to greatly appreciate you all for your time and sharing your important experience and ideas.

Appendix 5 A Healthcare Workers Consent Form, English Version

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Title of Study: "Primary Healthcare Workers Burnout and professional satisfaction among primary health providers in Sodo District, Southern Nations Nationalites and Peoples Region, Ethiopia"

Addis Ababa University Research Ethics Committee Ref No: PSY011/14

I want to thank you for taking the time to meet with me and to participate in this study. Now I will explain about this study before you are involved. If you have any query or need more information beyond what is explained in the information sheet you can ask the researcher. In addition you will be given one copy of consent form in case you want to refer it any time. The interview should take 45- 60 minutes.

I understand that if I decide at any time during the research that I no longer wish to participate, in this study, I can notify the researchers involved and withdraw from it immediately without giving any reason. Furthermore, I understand that I will be able to withdraw my data up until they are published.

I consent to the processing of my personal information for the purposes explained to me. I understand that such information will be handled in accordance with the terms of the national data protection rules.

If I am selected to be interviewed in more detail then I consent to that interview being audio-recorded.

The information you have submitted will be published as a report. Please note that confidentiality and anonymity will be maintained and it will not be possible to identify you from any publications.

I agree that the research team may use anonymized data for future research

I agree to be contacted for interview after six months even if I am not working in the district

Participant's Statement:

I _____

agree that the research project named above has been explained to me to my satisfaction and I agree to take part in the study. I have read both the notes written above and the Information Sheet about the project, and understand what the research study involves.

Signed Date

Investigator's Statement:

I _____

Confirm that I have carefully explained the nature, demands and any foreseeable risks (where applicable) of the proposed research to the participant.

Signed Date

Appendix 5 B Healthcare Workers Consent Form, Amharic Version

<u>የፈቃደኝነት መጠየቂያ ቅጽ (ለጤና ባለሙያዎች)</u>

እባከዎን የመረጃ ጽሑፉን ካነበቡ ወይም ስለጥናቱ የሚደረገውን ገለፃ ከሰሙ በኋላ ቅጹን ይሙሉ፡፡

የጥናቱ እርዕስ፡- "<u>የጤና ባለሙያዎች ደህንነት በጤና አገልግሎት አሰጣጥ ላይ ያለው ተጽዕኖ</u>"

አዲስ አበባ ዩኒቨርስቲ የምርምር ስነ-ምግባር ኮሚቴ መለያ ቁጥር፡

ጊዜዎትን ሰውተው ከእኔ ጋር ለመገናኘት እንዲሁም ጥናቱ ውስጥ ለመሳተፍ በመዎሰነዎ ላመሰግነዎት እዎዳለሁ፡፡ ከዚህም በመቀጠል ጥናቱ ውስጥ ከመሳተፌዎ በፊት ስለጥናቱ ገለጻ የማደርግ ይሆናል፡፡ጥያቄ ካለዎት ወይም የመረጃ ጽሑፉ ላይ ከተገለጸው ውጭ ተጨማሪ መረጃ ማግኘት ከፈለጉ ተመራማሪውን መጠየቅ ይችላሉ፡፡በተጨማሪም በማንኛውም ጊዜ ማመሳከር ከፈለጉ ይጠቅመዎት ዘንድ የፈቃደኝነት መጠየቂያ ቅጹን ቅጅ የምንሰጠዎት ይሆናል፡፡

- ጥናቱ በሚካሄድበት ወቅት ጥናቱ ውስጥ መሳተፌን ማቆም ከፈለኩኝ ያለምንም ቅድመሁኔታ ለተመራማሪው አሳውቄ ማቆም እንደምችል ተገንዝቤአለሁ፡፡ በተጨማሪም የሰተጠሁትን መረጃ እስካላሳተሙት ድረስ ከጥናቱ ውጭ ማድረግ እንደምችል ተገንዝቤአለሁ፡፡
- የግል መረጃየን ለተገለጸልኝ የጥናቱ አላማ እንዲውል በፍቃደኝነት ሰትቻለሁ፡፡ የዚህ አይነቱ መረጃም በሀገሪቱ መረጃ ደህንነት ደንብ/ህግ መሰረት እንደሚያዝ ተገንዝቤአለሁ፡፡
- ቃለ መጠይቅ እንዲደረግልኝ ከተመረጥኩ ድምፄ በድምፅ መቅረጫ እንዲቀረጽ/እንዲቀዳ ተስማምቻለሁ፡፡
- የሚሰጡት መረጃ በዘገባ/ሪፖርት ምልከ ለህትምት ይበቃል ሆኖም ማንነተዎን በሚሰጥር የምንጠብቅ መሆኑን እንገልፃለን፡፡ በተጨማሪም የእርሰዎን ማንነት ቤየትኛውም ህትመት ላይ ማንም ሊለየው የሚችልበት አጋጣሚ ሊኖር አይችልም፡፡
- የተመራማሪ ቡድኑ የሰጠሁትን መረጃ ማንነቴን በማይገልጽ መልኩ ለቀጣይ ጥናቶች እንዲጠቀምበት ተስማምቻለሁ፡፡
- ምንም እንኳን አሁን በምሰራበት የስራ ገበታ ላይ ባልሆንም ከስድስት ወር በኋላ ቃለ መጠይቅ ለመደረግ ፈቃደኛ ነኝ፡፡

የተሳታፊዋ/ው ቃል፡

እኔ _____ ለመሳተፍ ተስማምቻለሁ፡፡ እላይ ስለፕሮጀክቱ የተፃፈውን ማስታወሻም ሆነ የመረጃ ጽሑፉን አንብቢያለሁ በተጨማሪም ጥናቱ የሚያካትታቸውን ነገሮች አውቂያለሁ፡፡

ፊርማ _____ ቀን_____

የተመራማሪው ቃል፡

እኔ _____ ለተሳታፊው በሚገባ እና ግልፅ በሆነ ሁኔታ ስለ ጥናቱ ለተሳታፊው ማስረዳቴን አረጋግጣለሁ ::

ፊርማ _____ ቀን _____

አዲስ አበባ ዩኒቨርስቲ በጤና ሳይንስ ኮሌጅ የምርምር ስነ-ምግባር ኮሚቴ፡ ስልክ ቁጥር፡- 0ll5553834

የዋና አጥኚ አድራሻ፡ ሲ/ር መድህን ሰላሙ ስልክ 09ll685300

Appendix 6 A Healthcare Workers Information Sheet, English Version

Addis Ababa University Research Ethics Committee Ref No:

YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET

"Primary Healthcare Workers Burnout and professional satisfaction among primary health providers in Sodo District, Southern Nations Nationalites and Peoples Region, Ethiopia"

We would like to invite you to participate in this post graduate research project. You should only participate if you want to; choosing not to take part will not disadvantage you in any way. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information.

This study is being funded by PRIME project and Addis Ababa University.

- **Aims of the research**

Is to understand the impact of Healthcare Workers physical, psychological and social wellbeing on the health care service they are rendering.

- **Who are we recruiting?**

This study will include Healthcare Workers namely nurses, health officers and health extension workers in the district.

- **What will happen if you agree to take part?**

You will be asked few questions for screening and if you are eligible for the study, you will fill some questions. The questions will be asking about your own understanding and experience in the health care service delivery. The interview will take about 45 -60 minutes. The in-depth interviews will audo-record. In addition you will be contacted after six months for another roud of interview. If you left your work place we will contact you via telephone for some information.

- **Risks of being in the study**

We don't expect any sort of risks associatied with this study. In case if you are not comforable to answer some of the questions you are not obliged to answer all. If you are distressed during the interview it can be stopped.

- **Possible benefits**

We hope that the information obtained will help to inform the relationship between Healthcare Workers wellbeing and the health care service they are delivering.

- **What we will do with your data**

The questionnaires will not include your name so nobody except the researcher and co-ordinators (people who facilitate the data collection) and data managers will know that the information belongs to you. We will keep the questionnaires in a locked cupboard.

If you take part in the audo-recorded interview, maximum care will be taken not to include any personal identifers with the data. The audio files, interview transcripts and any related soft copy documents will be kept in a pasword protected computers. All hard copy documents and personal identifiers will be kept in a locked cupboard.

After the end of this study, the information you shared with us may be used for another studies, but your anonymity will be maintained.

Main researchers:

Medhin Selamu, telephone 0911685300 advisor Dr Abebaw Fekadu . You can contact us at the AAU department of Psychiatry research project office on telephone number 0112139744, from Monday to Friday during working hours.

It is up to you to decide whether to take part or not. If you decide to take part you are still free to withdraw at any time and without giving a reason.

If this study has harmed you in any way you can contact the Institutional Review Board, Addis Ababa University, using the details below for further advice and information:

Institutional Review Board, School of Medicine, Addis Ababa University

Telephone number: 0115-5538734

- You may withdraw your data from the project at any time up until it is transcribed for use in the final report.
- If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form.

Appendix 6 B Healthcare Workers Information Sheet, Amharic Version

የመረጃ ቅጽ (ለጤና ባለሙያዎች)

አዲስ አበባ ዩኒቨርስቲ የምርምር ስነ-ምግባር ኮሚቴ መለያ ቁጥር፡

የዚህ የመረጃ ቅጽ ቅጅ የሚሰጠዎት ይሆናል

<u>የጤና ባለሙያዎች ደህንነት በጤና አገልግሎት አሰጣጥ ላይ ያለው ተጽዕኖ</u>

በዚህ የድህረ ምረቃ ምርምር ፕሮጀክት ውስጥ እንዲሳተፉ ስንጋበዘዎት ደስታ ይሰማናል፡፡ መሳተፍ ያለበዎት እርሰዎ ለመሳተፍ ፈቃደኛ ከሆኑ ብቻ ነው ወይም ባለመሳተፈዎ ምንም የሚደርስበዎት ወይም የሚያሳጣዎት አንዳችም ነገር የለም፡፡ለመሳተፍ ከመዎሰነዎት በፊት ምርምሩ ለምን እንደሚሰራና እርሰዎ ምን አይነት ተሳትፎ ሊያደረጉ እነደሚገባ መገንዘብ አስፈላጊ ነው፡፡ ስለሆነም የሚከተለውን መረጃ በጥሞና ያንብቡት ካሰፈለገም ከስራባልደረባዎቸዎ ጋር ይወያዩበት፡፡ ጥያቄ ካለዎት ወይም የመረጃ ጽሑፉ ላይ ከተገለጸው ውጭ ተጨማሪ መረጃ ማግኘት ከፈለጉ ማንኛውንም የተመራማሪ ቡድኑን አባል መጠየቅ ይችላሉ፡፡

ጥናቱ ከፕራይም ፕሮጀክት እና ከአዲስ አባባ ዩኒቨርስቲ የገንዘብ ድጋፍ ይደረግለታል

- **የጥናቱ አላማ**

የጤና ባለሙያዎች አካላዊ፣ ስነ-ልቡናዊ እንዲሁም ማህበረሰባዊ ደህንነት በጤና አሰጣጡ ላይ ያለውን ተጽዕኖ ለማወቅ

- **ጥናቱ የሚያካትታቸው**

ጥናቱ የሚያካትተው በአካባቢው ያሉትን የጤና ባለሙያዎች ሲሆን እነሱም ነርሶችን፣ ጤና መኮንኖችንና የጤና ኤክንስቴንሽን ሰራተኞችን ነው፡፡

- **በጥናቱ ለመሳተፍ ፈቃደኛ ከሆኑ በኋላ ከተሳታፊው ምን ይጠበቃል**

በመጀመሪያ ደረጃ ጥናቱ ውስጥ እንዲሳተፉ ለመመረጥ ጥቂት ጥያቄዎችን የሚጠየቁ ይሆናል፤ ቀጥሎም ለጥናቱ ብቁ ሆነው ከተገኙ ዋናውን መጠይቅ እንዲሞሉ ይደረጋል፡፡መጠይቁ እርሰዎ በጤና አገልግሎት አሰጣጡ ላይ ስላለዎት ግንዛቤና ልምድ የሚጠይቅ ሲሆን ከ45 - 60 ደቂቃ ሊወስድ ይችላል፡፡ ከዚህም በተጨማሪ ለአይነታዊ ጥናት /Qualitative study/ የሚመረጡ ከሆነ ቃለምልልሱ በድምጽ መቅረጫ/መቅጃ የሚቀረጽ/የሚቀዳ ይሆናል ለዚህም ሲባል ቃለ ምልልሱ ከስድስት ወር በኋላ በሌላ ዙር የሚካሄድ ይሆናል፡፡ በዛን ወቅት ምንም እንኳን አሁን በሚሰሩበት የስራ ገበታ ላይ ባይሆኑም በስልክ መረጃውን የምንጠይቀዎት ይሆናል፡፡

- **በጥናቱ ላይ በመሳተፈዎት ሊደርስበዎት የሚችሉ ችግሮች**

ጥናቱ ጋር በተገናኘ ምንም አይነት ችግር ይደርሳል ብለን አንገምትም ይሁንና በማንኛውም ሁኔታ ከጥያቄዎቹ መካከል ለመመለስ ፈቃደኛ ያልሆኑት ካለ ለመመለስ አይገደዱም። መጠይቁን በሚሞሉበት ወቅትም ሆነ ቃለ ምልልስ በሚያደርጉበት ወቅት ያለመመቸት/የመከፋት/የመበሳጨት ስሜት ካደረበዎት ማቆም ይችላሉ፡፡

- **እርሰዎ የሚሰጡት መረጃ የሚኖረው ጠቀሜታ**

እርሰዎ የሚሰጡን መረጃ የጤና ባለሙያዎች ደህንነት ከሚሰጡት የጤና አገልግሎት ጋር ያለውን ዝምድና/ግንኙነት ያሳይልናል ብለን ተስፋ እናደርጋለን፡፡

- **እርሰዎ የሚሰጡት መረጃ እንዴት ይያዛል**

መጠይቁ የእርሰዎን ስም አያካትትም ስለሆነም ከተመራማሪውና ከአስተባባሪዎቹ (መረጃ ስብሰባውን ከሚሳልጡት ሰዎች) በስተቀረ ማንም መረጃው የእርሰዎ እንደሆነ ሊለየው አይችልም፡፡ መጠይቁንም በቁምሳጥን ውስጥ ቆልፈን የምናስቀምጠው ይሆናል፡፡

በአይነታዊ ጥናቱ /Qualitative study/ ወይም በድምጽ መቅረጫ/መቅጃ በሚቀረጽ/በሚቀዳ የሚመረጡ ከሆነ በመረጃው ውስጥ ማናቸውንም የእርሰዎን ማንነት የሚያመላክቱ ነገሮችን ሁሉ ላለማካተት ከፍተኛ ጥረት የምናደርግ ይሆናለ፡፡ የተቀረጸው ድምጽና ከእሱጋር ተያያዥነት ያላቸው መረጃዎች ሁሉ በሚስጥር ጽሁፍ በተቆለፈ ኮምፒውተር ውስጥ የሚቀመጡ ይሆናል፡፡

ማንኛውም በወረቀት ላይ ያሉና ማንነትን የሚገልጹ መረጃዎች ሁሉ በቁምሳጥን ውስጥ ቆልፈን የምናስቀምጠው ይሆናል፡፡

ጥናቱ ሲጠናቀቅ እርሰዎ የሰጡን መረጃ ምንአልባት ለሌላ ጥናት ልንጠቀምበት እንችላለን ነገርግን የእርሰዎን ማንነት በሚስጥር የምንጠብቅ ይሆናል፡፡

ዋና ተመራማሪዎች

ሲ/ር መድህን ሰላሙ ስልክ 0911685300 ፣ አማካሪ ዶ/ር አበባው ፈቃዱ፡፡ ሊያገኙን ከፈለጉ ሰኞና አርብ በስራ ስዓት አዲስ አባባ ዩኒቨርሲቲ የስነ-አዕምሮ ትምህርት ክፍል ፕሮጀክት ቢሮ ስልክ 0112139744

ጥናቱ ውስጥ የመሳተፍ ወይም ያለመሳተፍ ምርጫዎ የእርሰዎ ሲሆን ለመሳተፍ ከወሰኑም በኋላ ያለምንም ቅድመ ሁኔታ ማቋረጥ የሚችሉ መሆኑን እንገልጻለን፡፡

ከጥናቱ ጋር በተያያዘ ምንም አይነት ችግር ቢደረስበዎት የሚከተለውን አድራሻ በመጠቀም በአዲስ አበባ ዩኒቨርስቲ የምርምር ስነ-ምግባር ኮሚቴ ማናገር ይችላሉ፡፡

አዲስ አበባ ዩኒቨርስቲ በጤና ሳይንስ ኮሌጅ የምርምር ስነ-ምግባር ኮሚቴ፡

ስልክ ቁጥር፡- 0115553834

- የሰጡንን መረጃ እስካላሳተምነው ድረስ ከጥናቱ ውጭ ማድረግ ይችላሉ፡፡
- ጥናቱ ውስጥ ለመሳተፍ ከወሰኑይህንን የመረጃ ቅጽ ሰጥተነዎት የፈቃደኝነት መጠየቂያ ቅጹ ላይ የሚፈርሙ ይሆናል፡፡

Appendix 7 A In-Depth Interview Participant Contact Form

Date: Venue**:**

Moderator : Note taker: Other attendants:

Id no	Name of Participant	Position/ role	Department	Educational level	Year of service	Sex	Age	Marital status	Telephone	Remark
1										
2										
3										
4										
5										
6										
7										
8										
9										

Appendix 7 B Focus Group Discussion Participant Contact Form

Date: Venue:

Id no	Name of Participant	Position/ role	Department	Educational level	Year of service	Sex	Age	Marital status	Telephone	Remark
1										
2										
3										
4										
5										
6										
7										
8										

Moderator : Note taker: Other attendants:

Appendix 8 Time Frame

Activities	Mar-May 2014	June 2014	July 2014	July 2014	Aug 2014	Sept. 2014	Oct. 2014	Nov 2014	Dec 2014	Jan-Dec 2015	Oct 2017	Nov 2017	Dec 2017	Oct 2018	Dec 2018
Literature review															
Proposal development															
Proposal submission															
Study One															
Study Two															
Study Three															
Write up															
Thesis submission															
Defence															

Appendix 9 Budget

	Category	**Item total**	**Remark**
I	**Personnel**		
	Graduate research assistant	10,000	For qualitative study * note taking
	Data collector	70,000	
	Process data collector	15,000	
	Data entry clerk	50,000	
	Transcription	20,000	
	Translation	35000	
	Study participants time compensations		
	Healthcare Workers	80,000	
	Total	**280,000**	
II	**Material and Supplies**		
	Print and photocopy	5,000	
	Total		
III	**Travel**		
	Perdiem	15,000	
	Total	**20,000**	
IV	**Communication**		
	Telephone	5,000	
	Internet	10,000	
	Total	**35,000**	
	Grand Total	315,000 Birr	

* An individual who can assist in focus group note taking and facilitation

Appendix10: Literature Review Data Abstraction Format

Author Country Setting	Type of staff	Design	Analysis	Sample size (response rate)	Tool	Objective	Results	Strengths/limitation	Inclusion critera

Appendix 11 : Manuscripts (one published, one accepted and one under review)

Paper One

Conceptualisation of job-related wellbeing, stress and burnout among healthcare workers in rural Ethiopia: a qualitative study

Medhin Selamu[1*], Graham Thornicroft[2,] Abebaw Fekadu[1,3] and Charlotte Hanlon[1,4]

Institutional affiliations:

[1]Addis Ababa University, College of Health Sciences, School of Medicine, Department of Psychiatry, Addis Ababa, Ethiopia

[2]King's College London, Institute of Psychiatry, Psychology and Neuroscience, Centre for Global Mental Health and Centre for Implementation Science Health Services and Population Research Department, London, UK

[3]King's College London, Institute of Psychiatry, Psychology and Neuroscience, Department of Psychological Medicine, Centre for Affective Disorders, London, UK

[4]King's College London, Institute of Psychiatry, Psychology and Neuroscience, Centre for Global Mental Health, Health Services and Population Research Department, London, UK

Corresponding Author:

Medhin Selamu

Email: medhins10@gmail.com

*Address for correspondence: PO Box 9086, Addis Ababa University, College of Health Sciences, School of Medicine, Department of Psychiatry, Addis Ababa, Ethiopia

Graham Thornicroft: graham.thornicroft@kcl.ac.uk

Abebaw Fekadu: abe.wassie@kcl.ac.uk

Charlotte Hanlon: charlotte.hanlon@kcl.ac.uk

Key words: stress, stressor, job related stress, burnout, wellbeing, healthcare workers, primary care, Ethiopia

Abstract

Background: Wellbeing of healthcare workers is important for the effective functioning of health systems. The aim of this study was to explore the conceptualisations of wellbeing, stress and burnout among healthcare workers in primary healthcare settings in rural Ethiopia in order to inform the development of contextually appropriate interventions.

Methods: A qualitative study was conducted in a rural zone of southern Ethiopia. A total of 52 frontline primary healthcare workers participated in in-depth interviews (n=18) or focus group discussions (FGDs) (4 groups, total n=34). There were 35 facility based and 17 community-based healthcare workers. Data were analysed using thematic analysis.

Results: Most participants conceptualised wellbeing as absence of stress rather than as a positive state. Many threats to wellbeing were identified. For facility-based workers, the main stressors were inadequate supplies leading to fears of acquiring infection and concerns about performance evaluation. For community health workers, the main stressor was role ambiguity. Workload and economic self-sufficiency were a concern for both groups. Burnout and its symptoms were recognised and reported by most as a problem of other healthcare workers. Derogatory and stigmatising terms, such as "chronics", were used to refer to those who had served for many years and who appeared to have become drained of all compassion. Most participants viewed burnout as inevitable if they continued to work in their current workplace without career progression. Structural and environmental aspects of work emerged as potential targets to improve wellbeing, combined with tackling stigmatising attitudes towards mental health problems. An unmet need for intervention for healthcare workers who develop burnout or emotional difficulties was identified.

***Conclusion*:** Ethiopian primary healthcare workers commonly face job-related stress and experience features of burnout, which may contribute to the high turnover of staff and dissatisfaction of both patients and providers. Recent initiatives to integrate mental healthcare into primary care provide an opportunity to promote the wellbeing of healthcare workers and intervene to address burnout and emotional problems by creating a better understanding of mental health.

Background

The wellbeing of healthcare workers (HCWs) is important for the effective functioning of health systems. High levels of job-related stress can affect the wellbeing of HCWs adversely, leading to mental health problems and experience of burnout (28).Burnout is a global occupational hazard among HCWs and other human service professionals (73, 243). Burnout is conceptualised as comprising emotional exhaustion, distancing oneself from patients and reduced feelings of personal accomplishment (257). In studies from high income countries, the prevalence of burnout among HCWs ranges from 12.6% (74) to 29.9% (34). In a large survey of mental health professionals in the United Kingdom, emotional exhaustion was reported to affect 20.1% . Although there have only been a few reports from low and middle income countries (LMICs), the prevalence of burnout has been found to be much higher; for example, affecting 68.0% of nurses in Tunisia (141). Mental health problems also appear to be common. In a study from a tertiary level health facility in Ethiopia, 29.9% of HCWs reported mental distress (36). These indicators of compromised wellbeing may be related to high levels of job-related stress in under-resourced settings. Job related stress was reported by 52.7% of primary care medical officers in a study from Pakistan (236).

Worldwide there is a shortage of HCWs (1) which is particularly acute in sub-Saharan Africa (SSA) (2, 3). In the 2007 World Health Report, it was estimated that African healthcare systems provide care to address the world's most substantial disease burden (24%) with only 3% of the global HCWs and scant financial resources (6). In LMICs, HCWs are exposed to poor wages, low socioeconomic status (8, 243), high workload, role ambiguity, challenging working conditions (8, 141), limited support in handling disturbed patients (11)and poor management (12). These factors are also shared by studies in high-income countries (13, 14). Threats to the wellbeing of HCWs in SSA are, therefore, substantial.

Compromised HCW wellbeing has important implications for the health system. High staff turnover (18) and 'brain drain' is an ever-present challenge to African health sector human

resources; both brain-drain to more wealthy countries and also in-country brain drain to the private or non-governmental sector (19). This adds greatly to healthcare organisational costs due to the need for recruitment and training of new HCWs. Staff wellbeing may be an important factor contributing to staff turnover, but there has been little exploration of this relationship in sub-Saharan Africa to date (12). Health service quality is also highly influenced by the skill and enthusiasm of staff, as well as their number and the availability of material resources (20). Indeed HCW wellbeing and patient safety are strongly associated (21). There is evidence that the poor quality of health services in sub-Saharan Africa is related, at least in part, to the job satisfaction and level of motivation of HCWs, both of which are associated with wellbeing (80).

Ethiopia is moving towards expansion of healthcare coverage for all, but is still a disadvantaged country on most health parameters, including life expectancy, maternal mortality and infant mortality (60). There is a high level of unmet need for health services (61), which is exacerbated by the shortage and high turnover of staff (62, 63). In the Ethiopian Health Sector Transformation Plan (HSTP), the need to develop 'caring, respectful and compassionate' HCWs is emphasised as a means to transform primary care (64). HCW wellbeing is critical to achieving this goal, but the construct of wellbeing has not been investigated adequately in low-income countries like Ethiopia. Findings from high-income countries may not be generalisable due to differences in expected HCW roles, in particular the strong reliance on task-shifting to lower cadres of healthcare worker in LMICs, the level of disease burden and the weak health system infrastructure. Investigation of wellbeing of both community- and facility-based primary HCWs in rural Ethiopia is both timely and necessary.

The aim of this qualitative study was to explore conceptualisations of job-related stress, burnout and wellbeing amongst primary HCWs in Ethiopia, in order to inform the future development of an intervention to promote their wellbeing.

Methods

Study setting

The study was conducted in the Silte Zone of the Southern Nations, Nationalities and Peoples' Regional state of Ethiopia (SNNPR). The Silte Zone has a total population of approximately

750,000 (183). In keeping with most rural Ethiopian settings, the health service in the zone is provided by the government, with a focus on primary care. The zone has a total of 33 primary healthcare (PHC) facilities in the public sector, each serving 15 to 25,000 people. The study site was selected for the following reasons: facilities in the Zone are typical of rural PHC settings in Ethiopia, the research team has an established relationship with the district health office administration and the zone is in close proximity to Sodo district which is the site for the next phase of the study(184) .

Almost all public PHC facilities are staffed by health officers and nurses, usually with no doctors (258). Health officers are Bachelors level first degree holders, trained for three to four years. They are trained to be an intermediate between medical doctors and diploma nurses. There are also some degree level nurses who are trained for three to four years, but most frontline nurses are diploma level, with only two years of training. Health officers and both levels of nurses are expected to see patients and to manage all types of cases, with a focus on outpatient care, as well as to support the health extension workers (HEWs). HEWs are trained for one year after completion of high school (tenth grade). Their work is community-based and they are mostly engaged in prevention and health education work. In addition, they are expected to run satellite, community-based clinics called health posts, which provide family planning, vaccinations and other related preventive services.

The present study was nested in an international project, the Programme for Improving Mental health care (PRIME) involving five LMICs, including Ethiopia (185). PRIME aims to develop evidence for the provision of mental health services in primary healthcare and is being implemented in the Sodo district of the Gurage zone, which neighbours the Silte zone (185, 186). The PRIME service approach (184) is informed by the National Mental Health Strategy of Ethiopia (98) in which primary HCWs will receive brief training and periodic supervision to provide mental healthcare in a task-sharing model of care (188). This study was conducted as part of PRIME because previous studies have indicated that HCW wellbeing is essential for delivery of quality mental health care (189), and to inform potential interventions that could be integrated into the PRIME scale-up to promote and improve HCW wellbeing (184).

Study design and sample

A qualitative study was used because the concepts of wellbeing, job-related stress and burnout have not, to our knowledge, been explored previously in frontline PHC workers in LMICs, particularly community based workers, such as HEWs. In-depth interviews (IDIs) and focus group discussions (FGDs) were used. A semi-structured topic guide was employed for the interviews. The rationale for using both FGD and IDIs was to obtain a range of information and to triangulate the information from different data sources. We anticipated that some topics would be sensitive, for example, disclosing emotional problems or discussing difficulties in the relationship with senior managers, and best addressed in an IDI. On the other hand, FGDs allow for exploration of how concepts around wellbeing are talked about in front of others and the relative priorities given within the group, as well as the extent to which the concepts are shared by different types of HCWs.

The study participants were selected purposively in order to investigate perspectives by gender, place of work (facility-based or community-based), type of training and levels of experience. FGDs were organised in two groups, one for community based workers and one for facility-based workers. For each FGD, participants of similar level were grouped together to maximize homogeneity. The final sample size was decided by the point at which theoretical saturation was obtained (199). The inclusion criteria were: (1) working in a PHC setting in the Silte zone, (2) being engaged in direct patient care or supervision and planning, and (3) having a minimum of three months work experience in the current work place or similar setting.

Data collection procedures

Prior to data collection, permission to carry out the study was obtained from the Zonal Health Office. The Zonal Health Office provided a list of all HCWs working in their zonal health centres and health posts. Data was collected from May up to June 2014.

All IDIs were conducted by the first author (MS). MS also moderated all FGDs and was assisted by experienced note-takers. With the consent of the participants, all IDIs and FGDs were audio-recorded. The interviews and focus group discussions were conducted in Amharic, the official language of Ethiopia. The audio records were transcribed in Amharic and then translated into English for further analysis and write up. The translation was checked by one of the researchers

to ensure that the concepts had been translated correctly. All the IDIs and FGDs were carried out either in health centres where the HCW was working or in a nearby health centre. Nurses and health officers were interviewed in their workplace, but HEWs were invited to come to a nearby health centre. During the IDIs and FGDs the Amharic terms "*kesera gar yeteyayaze metaket*" (job related emotional and physical exhaustion or job related lassitude) and "*weteret /chenket*" (tension or unable to relax/ being anxious) were used to describe burnout and stress, respectively. Apart from the two FGDs with HEWs, people working in the same health centre were grouped together.

Data analysis methods

Data analysis was carried out alongside ongoing data collection and an interim analysis informed adaptation of the topic guide and ongoing sampling. To analyse the data, thematic analysis (200) was used. We employed a rigorous and systematic approach(201): *Step 1*: The English transcripts were read repeatedly by MS and last author (CH) to ensure familiarity with the data. *Step 2*: After independent coding by co-authors MS and CH, there was a discussion which led to development of categories and a coding plan. *Step 3*: MS and CH tested the codes for clarity and consistency by selecting a given text. *Step 4*: MS coded the rest of the text and identified emerging themes as the data were still being collected. *Step 5*: MS and CH reassessed coding consistency. *Step 6*: MS interpreted the coded data and described the themes and categories of the data. *Step 7*: MS summarised the report including the method followed in order to make the study replicable (202-204). NVivo 9 software was used to support the analysis and management of the data (205). To ensure the credibility of the analysis, member checking was done with three study participants (206, 207).

Ethical considerations

Ethical approval was obtained from the Institutional Review Board of the College of Health Sciences, Addis Ababa University. All participants gave written informed consent. Participants who experienced any sort of emotional disturbance or mental health problem were informed about how they could obtain care.

Results

Participants

The sample comprised five BSc degree nurses, 23 diploma nurses, five health officers and 17 health extension workers (HEWs). There were 22 males and 30 females, with 17 working in health posts and 35 working in health centres. Two participants were health centre heads and the rest were frontline staff. The IDIs took a minimum of 35 and maximum of 90 minutes. The FGDs took a minimum of 60 and maximum of 120 minutes. The size of the FGDs ranged from 7 to 10 participants.

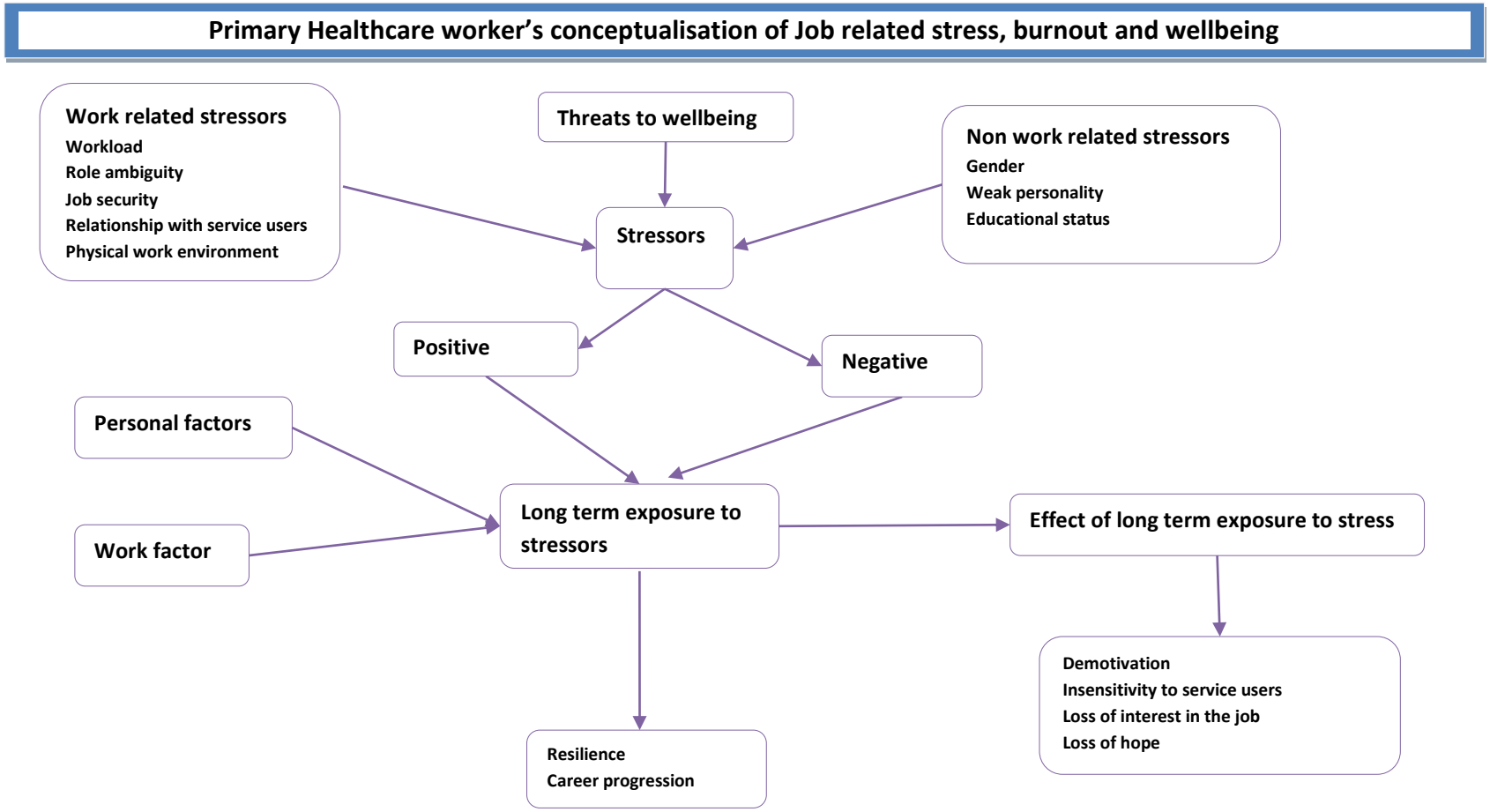
Table 1 Socio demographic characteristics of study participants

	IDI		FGD	
	Male	Female	Male	Female
Number of participants involved	11	7	12	22
Age (years)				
<25	1	3	4	13
25-34	8	4	7	9
35-44	1	-	-	-
>44	1	-	1	-
Marital status				
Married	4	3	-	16
Single	7	4	-	6
Educational background				
Health officer	3	2	1	1
BSC nurse	3	1	1	-
Diploma nurse	4	3	10	6
HEW	-	2	-	15
Year of service				
<1 year	1	2	2	1
1-3 years	4	1	1	7
>3 years	6	4	9	14

The sociodemographic characteristics of the participants are presented in Table 1. Due to the consistency of information between IDIs and FGDs we have presented the results together, highlighting differences where present. The main results of this study are presented under the

identified three themes. The conceptual model of this study is presented in Figure 1. Additional quotes under the identified themes are included in the supplementary file.

Figure 1. Conceptual Framework



Theme one: wellbeing and threats to wellbeing

Wellbeing

Wellbeing was more often explained as the absence of negative things in the HCW's life rather than being described in relation to its positive attributes. For example, wellbeing was equated with workplace safety from infection and security from violent caregivers or patients. However, a few respondents had positive descriptions of well-being: being accepted and having a good relationship with the community, being healthy and economically self-sufficient. The descriptions of wellbeing lacked depth and contrasted to the rich explanations given about the threats to wellbeing.

Threats to wellbeing

Stressors related to the job were not considered to be uniformly negative. Most participants agreed that some degree and type of stress was acceptable and unavoidable in healthcare. Working night shifts and on public holidays, treating patients who are in pain and sharing distressing moments of patients and caregivers were some of the acceptable stressors. Some said that HCWs are expected to be strong to handle those stressors, but others spoke of the profession as being too demanding. A participant described his experience as follows:

We are sacrificing our life to give life to the patients. We have much contact with patients who are facing diverse problems…we are listening to their problems and watching when they [patients] are in pain. Eventually this will pressure us and create some stress and make us unhappy…there are situations that demands our immediate action but we can't… which is quite stressful [25 Male, Clinical nurse/ FGD four code 07]

All of the participants shared the view that exposure to stressors is acceptable for a certain period of time. However, across the interviews and FGDs, it was indicated that prolonged exposure to stressors might progress to an unacceptable or negative stressor and lead to emotional disturbance. Participants also spoke about personal life stressors, such as competing family responsibilities like child care, as well as being unable to fulfil family demands due to low income or having a physical illness. Most of the participants presented general life stressors and job-related stressors as overlapping and interconnected. For example the imbalance between the demands of the job and their income was presented as both a personal life and job-related stressor.

Emotional consequences of exposure to stressors ("being stressed") were related by participants to the characteristics of the individual. Participants implied that HCWs who displayed any type of emotional response to stressors were somehow weak or showing 'instability'. For example:

If the person is thinking too much or if the person is worried about everything he can be stressed. ...it can also be caused by [mental] instability [23, Female, Health Officer/ IDI code 06]

Workload and lack of clarity about the boundaries of their role were mentioned as stressors. Facility based participants said that outreach work, which involves walking long distances, was a cause of exhaustion. Community based workers spoke of the lack of definition to their roles and workload as the major sources of stress. A participant shared her experience:

We are responsible for most of the activities in the sub-district, be it health or agricultural issues. We are working under great pressure. When there is new fertilizer we are supposed to introduce it… when there is primary school registration we are the ones who will go house to house and register… I sometimes feel difficulty to see the boundary of my responsibilities [28, Female, HEW/ IDI code 05]

Most participants described how the relationship with patients and co-workers, including superiors, could either be a stressor or protector. The majority of participants reported a positive and harmonious workplace relationship with co-workers that had helped them to handle stressors. Some indicated that they were part of a close-knit team, with supportive and encouraging relationships that gave them joy in their workplace. Perspectives on relationships with superiors were more mixed, with most giving the impression that they were indifferent. All facility based participants mentioned that their superiors or health centre leaders were distant because they are very busy, but most appeared reluctant to discuss the topic openly.

The relationship with the patients and caregivers was reported as difficult by most respondents, with only a few considering it to be good. Respondents reported being undervalued by the community, especially after the government's recent introduction of HCWs evaluation by patients, community members and government officials. All reflected that this monitoring and evaluation system had made their relationship with the community

challenging and contributed to feelings of insecurity. Some reported being discouraged or frustrated, particularly as the community evaluation carried punitive consequences:

During a community forum, any community member can accuse you of anything… and you will be demoted to very remote place without getting a chance to explain ourselves, we are uncertain what will happen to us. [26 Male Health Officer/ FGD one code 02]

In contrast, one participant spoke positively about the community evaluation system:

When they [patients] face a delay or any sort of inconvenience or mistreatment they know how to complain about it....They will raise the issues in the community forum which is very helpful for the improvement of the health service. It is really helpful system; they can tell us what we cannot observe. [28 Male, Clinical Nurse/ IDI code 04]

The physical workplace conditions especially infrastructure such as tap water, phone signal, access to public transportation and availability of medical supplies were mentioned as stressors by many participants. Many participants said that shortage of medical supplies was one of the worst stressors, mainly due to fear of acquiring infection. One participant described the situation with respect to shortage of gloves as follows:

If you want to work properly and protect yourself…you are supposed to persuade the family to buy gloves…but sometimes we expose ourselves in order to save their money.... our work environment is not comfortable, it is not safe, it is stressful. [BSC nurse, male 23/ IDI code 01]

However, participants who were involved in management and leadership reported that there were adequate medical supplies.

Theme two: "the chronics"

According to participants, long-term exposure to stressors had a critical impact on the HCW. They indicated that stagnating in one place without career progression can lead to long-term exposure to stressors. This was seen as a pathway to becoming a "chronic" member of staff. Healthcare workers who had remained in their posts for many years were described in derogatory terms as 'the chronics' and characterised as lacking empathy for their patients. This term carried a negative connotation for the bearer of the label. Although most respondents identified the effects of long-term exposure to stressors, most spoke of it as a

problem of other HCWs. One participant shared her observation of a 'chronic' staff member as follows:

There was a HCW 'who adapted to other person's pain' ... The incident was like this... There was a female patient who was being catheterized [urinary catheter]; the way he inserted the catheter was very inhumane. I was feeling the pain; my eyes were filled with tears ... but this person was a senior professional. At that time he was treating the lady as something without sense... he was like a carpenter who is hammering a wood. The patient was shouting but he was not able to notice that... he was just doing his job without being disturbed. [22, Female Health Officer/ IDI code 02]

Another participant described this group as follows:

These are very bored professionals...those who are paid less, especially the 'chronic ones' are very bored and exhausted. We [BSc level professionals] earn better than them. Most of them are supposed to support their families, the financial burden has dissatisfied them and they work carelessly [29, Male BSC Nurse/ FGD four code 06]

All except two respondents said that they had encountered the consequences of long-term exposure to stressors in other HCWs. The terms "burnout" and "burnout syndrome" were not familiar to most of the participants; however, they described in detail how HCWs can become demotivated, insensitive to patients, lose interest in their job, feel exhausted when treating patients and lose hope. Most said that they have encountered someone in their workplace experiencing those problems. A participant described it as follows:

The consequence... is loss of hope. I have never experienced it but I can tell you about my friends. I used to have friends who were very courageous and enthusiastic when they joined the profession. But now become demotivated and insensitive to patients. I understand them totally.....it is the situation that made them like this... they did not get upgrading chance [professional development opportunities] after serving many years [28 Male Clinical Nurse/ IDI code 15]

In addition, minimising contact time with patients was also mentioned as one of the consequences. Some also mentioned that workload was another factor in triggering these reactions in staff. One staff member recalled his personal experience as follows:

I experienced 'kesera ga yeteyayaze metaket' [burnout] once. At that time....there was a community based campaign task and all staff except two HCWs went out for the task. I was with the group that was staying behind in the health centre to provide all the services… here adult, child outpatient service, family planning and antenatal care, delivery you name it... only two individuals were supposed to cover that. No lunch break. We were seeing patients continuously ... it was exhausting and stressful. Seeing patient after patient was monotonous.... it makes you passive. ... I guess this was when I had the experience of burnout. [28 Male Clinical Nurse/ IDI code 04]

Although exposure to stressors for a period of time was seen as inevitable, developing the consequences of prolonged stress exposure was thought to be avoidable by not staying in the same post. Most said that the professionals should make an effort to improve their educational status or change the place of work. Few participants expressed sympathy towards the 'chronic' staff. Some tended to blame them for their predicament, on the grounds of personal weakness or laziness, and to feel proud that they themselves were resilient enough not to give way to such challenges and stressors.

Sometimes there are staff who are not acting like HCWs… he acts carelessly even when he sees the worst cases. I always ask myself why staff are acting like this… become isolated and hostile. I think it is because he wasn't a good person or he lacked motivation. What I understand is that, he may not achieve his economic desire or he may not be satisfied regarding that….that is why he is so harsh to everyone. I think he is unhappy and he is not motivated in my opinion [because] his income is small… Due to this economic problem he is unhappy and dissatisfied on his job. [27 Female BSC Nurse/ IDI code 11]

...There are demotivated people who are not interested in the profession; I can understand those who experience burnout due to other economic problems. Apart from this I see it as being lazy. So far I have never experienced it. I hope I will not experience it in the future. [25 Male health officer/ IDI code 10]

Theme three: strategies to handle stressors and their consequences

To handle stress and its impacts, participants reported using or planning to use various strategies. These ranged from enduring the situation to planning to quit the job. Apart from system level changes, participants mentioned inter- and intra-personal factors such as resilience, good peer relationships and social support as important factors for handling stressors or coping. Provision of a good service and avoiding procrastination, especially in relation to paperwork, were some of the strategies used to enhance wellbeing.

When I make my patients comfortable and treat them with respect we will communicate peacefully ... I will get peace of mind and satisfaction. Then I will be well. This is my experience [HO female 21/ FGD one code 06]

Family and having social support were mentioned as important factors to cope with the stressors in the work place. One participant described the advantage of family as follows:

When I don't attend some social events or get involved in social activities as I am expected, I have to explain my situation to my family and people around me. Otherwise I will be in trouble, if there is someone who can understand my day-to-day task and what is happening in my workplace that would be great. Because that person will have a positive attitude, he/she will support me. I will not be expected to explain what is going on every day. Having such kind [supportive] of family is useful to work in a place like us. [25, Female HEW/ FGD two code 01]

Experience sharing with senior staff and getting technical support from other co-workers were other strategies employed. Some participants said that spirituality and prayer helped them to cope with stressful situations. The over-riding coping strategy of HCWs was, however, focused on upgrading their educational status, which would have a direct impact on their career progression and economic security.

Other structural or system level factors that were identified by participants as useful to handle the threats to wellbeing were providing recognition for the HCWs, ensuring adequate numbers of staff, workload reduction, fair career progression, improving the community awareness about their responsibilities as well as their rights, improving public transportation access, and also ensuring adequate remuneration through their salary and benefit packages. Improving communication skills, understanding the culture and norms of the community, explaining what one is doing and discussing plans with patients, preparing social events like

coffee ceremonies to share experiences and to refresh themselves were all ways that the HCWs had used to cope with stress and remain mentally healthy.

Discussion

In order to promote the wellbeing of HCWs in Ethiopia, it is necessary to have a clear understanding of the construct in this sociocultural context, as well as threats to wellbeing and the consequences of those threats. In this exploratory study, wellbeing was largely conceptualised by HCWs as the absence of negative factors rather than as a positive state. An extensive range of threats to wellbeing was identified, spanning the personal and work domains. Core features of burnout were described and portrayed as a consequence of long-term exposure to stressors. Burnout was presented as a problem of others, especially those who have not been able to progress in their careers. Few participants were comfortable to disclose the consequences of long-term exposure to stressors or burnout as a personal experience. Potential targets for intervention were identified. The conceptual framework for this study is illustrated in figure 1.

Wellbeing and threats to wellbeing

Wellbeing is a dimension of health and has been conceptualised in various ways. For some it is related to a state of mind and virtue (93), for others it is the ability to effectively perform some life tasks. Generally speaking, the wellbeing model views the individual in an holistic manner and focuses on the interface between an individual's physical, social, psychological and spiritual life (94). Our study participants' description also shares the reliance of wellbeing on the interface of the individual with their surroundings but it gives greater prominence to threats to wellbeing.

Participants identified a range of threats to their wellbeing and emphasized the interconnectedness of general life and job-related stressors (118, 236). Exposure to stressors as part of their job was viewed as unavoidable, which is in keeping with previous work from both high income countries (237) and LMICs (3, 12, 79). Nonetheless, participants distinguished between stressors that were acceptable (related to patent care) and those which were unacceptable (e.g. unable to become economically self-sufficient). Both the physical and the social/ relational aspects of the environment were identified as important contributors to wellbeing. The social/ relational work environment included workplace relationships with

peers, superiors, patients and community members. A previous study found that HCWs friendships were inversely related to job-related stress (240).

New policies to allow patients to express dissatisfaction with the quality of care in a public forum were viewed by most as a potent threat to wellbeing. The experience of being questioned by patients and community members was perceived as being disrespectful to HCWs and undermining of their status. For many of the participants in our study, the traditional status bestowed on HCWs was identified as a motivating factor for pursuing this line of profession despite the stressful environment and limited financial remuneration. However, with the perceived loss of standing in the eyes of the community, many of the HCWs in the study expressed demoralisation.

Participants indicated that the physical demands of the work environment played a significant role in their wellbeing. Availability of medical supplies, tap water, a phone signal and access to public transportation were raised as important factors for doing the job well, protecting their safety and facilitating communication with other HCWs and their family members. Other studies have found that the physical work environment has an influence on HCWs-patients communication and the retention of HCWs , as well as in the promotion of positive outcomes, such as employees' wellbeing (161), productivity (162) and morale (237).

Another set of threats to wellbeing identified in the literature, particularly in relation to the experience of burnout and job related stress, include job title (259), level of education, job characteristics (8) and socio-economic status (especially wage levels) (34). Our results also indicated that qualification or belonging to a professional group has an explicit contribution to the experience of job-related stress and burnout. Diploma level nurses seemed to be particularly vulnerable.. Level of income, position, workload, control over the job and lack of career progression opportunities are directly linked to a strong sense of identification with one's profession. Level of educational progression in the profession also directly impacts the professional's sense of job security and potential for growth. In contrast, in a quantitative study from a high income country, job characteristics, as well as belonging to different health professional groups, had no significant influence on the experience of job-related emotional strain . Other studies have indicated that long working hours and shift work are associated with impaired HCW wellbeing (260), but were not prominent in the responses of participants in our study.

“The chronics”

The effects of long-term exposure to stressors, including features of burnout, were viewed negatively and considered as socially unacceptable in this study. Although most of the participants were not familiar with the terms ‘burnout’ or ‘burnout syndrome’, they recognised undesirable consequences for HCWs when they stagnate in one position without educational improvement and career progression. The three dimensional description of burnout was not fully shared by our participants (128). Although they gave descriptions approximating to all of the dimensions, the personal accomplishment component dominated their discourse. Our study participants stressed that the feeling of personal accomplishment, status and recognition were more important than the experience of emotional exhaustion and depersonalisation. Burnout is associated with various physical and emotional symptoms (129), such as sleep disturbance, headache, hypertension, lower back pain and gastric disturbance among others (239). However none of the physical symptoms were identified by most of our participants; only one participant described experiencing frequent headaches. The participants extensively discussed the emotional and psychological symptoms such as a sense of hopelessness; irritability and overall dissatisfaction in their professional life.

Due to the stigma or risk of being seen as weak, most of the study participants were not willing to share their experiences and were more comfortable discussing the experiences of other professionals. However, many of the participants admitted to the inevitability of the exposure to the threats of work related stress and burnout, if current contributing factors were not addressed. In a recent study from Northwest Ethiopia HCWs facing dissatisfaction in their income expressed the intention to leave their workplace (79). A study on PHC workers in Ghana has also indicated there is a strong association between motivation, job dissatisfaction and intention to leave the workplace (12). A similar finding was reported in a study of rural health workers in Zambia (247). In our study, most participants reported that the potential for upward career progression and/or change of work place helped them cope with the day-to-day stress of their profession. In the FGD there was one participant who openly spoke about their plan to leave their job and even to change profession.

Implications for practice

A multi-faceted and contextually adapted approach is required to promote HCW wellbeing. Interventions need to enhance HCW resilience, address the identified threats to wellbeing and

support those HCWs who develop burnout or mental health problems. Respondents in this study indicated that strengthening resilience may be achieved through providing opportunities for experience-sharing and shared social activities, such as participation in the Ethiopian coffee ceremony. This result is echoed by a study on the impact of psychosocial support on resilience building (254). Greater awareness of actions that can be taken to prevent mental illness and promote mental health and wellbeing (e.g. positive coping skills) may also be of benefit (254).

In terms of addressing threats to well-being, our findings indicate that the Ethiopian primary care system requires interventions which target both the health management structure and the work environment. In particular, ways to promote more constructive criticism of health workers during the public evaluation fora may be helpful. The 'learning health system' approach, whereby service users are proactively engaged to work with healthcare providers to improve care, has the potential to lead to more productive collaboration and awareness between service providers and service users(255). Alongside this, necessary environmental interventions include the provision of basic infrastructure such as tap water, electricity and transportation, and ensuring an environment that allows the safe practice of care. Interventions outside of the healthcare system also have the potential to benefit HCW wellbeing, in particular those ensuring that HCWs receive adequate remuneration and opportunities for career development. In a systematic review on interventions to retain HCWs in rural and remote areas of LMICs, to address high turnover and poor quality of the health service (7), financial incentives were important for retention. A programme of continuous professional development is needed for all staff in order to ensure fair career progression, as well as to improve the knowledge and skill of the staff.

Interventions are also needed to address burn-out and other mental health problems in HCWs. Accepting or admitting vulnerability and manifesting emotional consequences of exposure to stressors was seen by almost all respondents as a sign of weakness or defeat, reflecting the stigma associated with mental health problems in Ethiopia (256). Such attitudes may hinder health providers from sharing their experiences and getting support from their peers or usual social support networks. Therefore, countering stigmatising attitudes towards of burnout and mental health problems is needed. The integration of mental health services in PHC settings in Ethiopia and other LMIC provides an opportunity to raise awareness in HCWs of their own vulnerability to burnout and mental health problems (depression, anxiety, substance use

and stress-related conditions) and the availability of treatments. In particular, provision of contextually adapted psychosocial interventions through primary health care facilities may be of benefit to service users and HCWs alike.

Limitations of the study

We only interviewed two HCWs in a managerial position and may not have adequately captured the perspectives of this group of HCWs. Participants from the same health centre were grouped together for FGDs which meant that some participants might not have felt free to speak about relationships with colleagues and issues that might jeopardise their promotion or standing within the facility. However maximum effort was made to encourage participants to openly share their ideas.

Conclusions

The findings of this study indicate that threats to health worker wellbeing are commonplace and that burnout is a valid concept in the context of Ethiopian primary healthcare. There is a need for further studies to understand the impact of burnout in relation to staff mental health, job turnover and the quality of care provided, as well as to develop and evaluated contextually appropriate interventions to improve staff wellbeing. Recent initiatives to integrate mental healthcare into primary care may provide an opportunity to promote the wellbeing of healthcare workers and address burnout and emotional problems by creating a better understanding of mental health and opportunities to access care.

References

1. Dagget T, Molla A, Belachew T: **Job related stress among nurses working in Jimma Zone public hospitals, South West Ethiopia: a cross sectional study**. *BMC Nursing* 2016, **15**(39).
2. Lasebikan VO, Oyetunde MO: **Burnout among Nurses in a Nigerian General Hospital: Prevalence and Associated Factors**. *ISRN nursing* 2012, **2012**:402157.
3. Aloulou J, Damak R, Masmoudi F, Sidhom O, Amami O: **Burn out in health care providers: A Tunisian study about 142 nurses**. *LA TUNISIE MEDICALE* 2013, **91**(01):44-49.
4. Maslach C, Leiter PM: **Understanding the burnout experience: recent research and its implications for psychiatry**. *World Psychiatry* 2016, **15**:103-111.
5. Abdulla L, Al-Qahtani D, Al-Kuwari M: **Prevalence and determinants of burnout sydnrome among primary health care physicans in Quatar**. *South African Family Practice* 2011, **53**(4):380-383.
6. Abdulghafour Y, Bo-hamra A, Al-Randi M, Kamel M, El-Shazly M: **Burnout syndrome among physicians working in primary health care centers in Kuwait**. *Alexandria Journal of Medicine* 2011, **47**:351-357.
7. Johnson S, Osborn D, Araya R, Wearn E, Paul M, Stafford M, Wellman N, Nolan F, Killaspy H, Lloyd-Evans B *et al*: **Morale in the English mental health workforce: questionnaire survey** *British Journal of Psyciatry* 2012(201):239-246.
8. Asrat. B, Girma. E, Soboka. M, K T: **Mental Distress and Associated Factors among Health Professionals Working In Tertiary Teaching Hospital, South West Ethiopia.** . *J Depress Anxiety* 2015, **4**(192).
9. Kazmi R, Amjad S, Khan D: **OCCUPATIONAL STRESS AND ITS EFFECT ON JOB PERFORMANCE A CASE STUDY OF MEDICAL HOUSE OFFICERS OF DISTRICT ABBOTTABAD**. *Journal of Ayub Medical College, Abbottabad : JAMC* 2008, **20**(3):135-139.
10. WHO: **The Kampala Declaration and Agenda for Global Action**. In. Edited by alliance Ghw. Geneva; 2008.
11. Chen L, Evans T, Anand S, Boufford J, Brown H, Chowdhury M, Cueto M, Dare C, Dussault G, Elzinga G *et al*: **Human resources for health: overcoming the crisis**. *Lancet* 2004, **364**:1984-1990.
12. Belita A, Mbindyo P., English M: **Absenteeism amongst health workers – developing a typology to support empiric work in low-income countries and characterizing reported associations**. *BMC Human Resources for Health* 2013, **11**.
13. Dal Poz M, Kinfu Y, Dräger S, Kunjumen T: **Counting health workers: definitions, data, methods and global results**. *World Health Organization: Department of Human Resources for Health* 2007.
14. Haq Z, Iqbal Z, A. R: **Job stress among community health workers: a multi-method study from Pakistan**. *International journal of mental health systems* 2008, **2**(15):1-6.
16. Bonenberger M, Aikins M, Akweongo P, Wyss K: **The effects of health worker motivation and job satisfaction on turnover intention in Ghana: a cross-sectional study**. *Human Resources for Health* 2014, **12**:43.
17. Graveling R, Crawford J, Cowie H, Amati C, Vohra S: **A Review of Workplace Interventions that Promote Mental Wellbeing in the Workplace** *IOM* 2008.
18. Mateen F, Dorji C: **Health-care worker burnout and the mental health imperative**. *wwwthelancetcom* 2009, **374**
19. Dovlo D: **Wastage in the health workforce: some perspectives from African countries**. *Human resources for health* 2005, **3**:6.
20. Jensen N: **The Health Worker Crisis: an analysis of the issues and main international responses**. In. UK: Health poverty action 2013.
21. (WHO) WHO: **Working Together for health** In. Geneva: WHO; 2006.

22. Hall HL, Johnson J, Watt I, Tsipa A, O'Connor BD: **Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review**. *PLoS ONE* 2016.
23. Alhassan KR, Spieker N, Ostenberg P, Ogink A, Nketiah-Amponsah E, Rinke de Wit FT: **Association between health worker motivation and healthcare quality efforts in Ghana**. *Human Resources for Health* 2013, **11**.
24. FMOH: **Health Policy of the Transitional Government of Ethiopia**. *Policy* 1993.
25. Girma S, G/Yohannes A, Kitaw Y, Ye-Ebiyo Y, Seyoum A, Desta H, Teklehaimanot A: **Human Resource Development for Health in Ethiopia: Challenges of Achieving the Millennium development Goals**. *Ethiopian Journal of Health Development* 2007, **21**(3):216-231.
26. FMOH: **Health Sector Development Program IV 2010/11 – 2014/15 FINAL DRAFT**. *Policy* 2010.
27. El-Saharty S, Kebede S, Olango P, Siadat B: **Health, Nutrition and Population (HNP) Discussion Paper Ethiopia: Improving Health Service Delivery**. *World Bank* 2009.
28. FMOH: **National Health Sector Transformation Plan**. In. Edited by Health Mo. Addis Ababa; 2015.
29. Agency CS: **Population size and characterstics**. In.; 2015.
30. Fekadu A, Hanlon C, Medhin G, Alem A, Selamu M, W. Giorgis T, Shibre T, Teferra S, Tegegn T, Breuer E *et al*: **Development of a scalable mental healthcare plan for a rural district in Ethiopia**. *The British Journal of Psychiatry* 2015, **s1-s9**.
31. **Health Facility lists** [http://www.snnprhb.gov.et/]
32. Lund C, Tomlinson M, De Silva M, Fekadu A, Shidhaye R, Jordans M, Petersen I, Bhana A, Kigozi F, Prince M *et al*: **PRIME: A Programme to Reduce the Treatment Gap for Mental Disorders in Five Low- and Middle-Income Countries**. *PLoS Med* 2012, **9**(12): e1001359.
33. Hanlon C., Luitel NP, Kathree T, Murhar V, Shrivasta S, Medhin G, Ssebunnya J, Fekadu A, Shidhaye R, Petersen I *et al*: **Challenges and Opportunities for Implementing Integrated Mental Health Care: A District Level Situation Analysis from Five Low- and Middle-Income Countries**. *PloS one* 2014, **9**(2).
34. FMOH: **NATIONAL MENTAL HEALTH STRATEGY 2012/13 - 2015/16**. 2012.
35. Lund C, De Silva M, Plagerson S, Cooper S, Chisholm D, Das J, Knapp M, Patel V: **Poverty and mental disorders: breaking the cycle in low-income and middle income countries**. *The Lancet,* 2011.
36. Petersen I: **Comprehensive integrated primary mental health care for South Africa. Pipedream or Possibility**. *Social Science & Medicine* 2000, **51**(3):321-334
37. Sandelowski M: **Focus on Qualitative Methods Sample Size in Qualitative Research**. *Research in Nursing & Health* 1995, **18**:179-171 183.
38. Vaismoradi M, Turunen H, Bondas T: **Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study**. *Nursing and Health Sciences* 2013, **15**:398-405.
39. Berg B: **QUALITATIVE RESEARCH METHODS FOR THE SOCIAL SCIENCES**. In. Edited by Kelbaugh S, FOURTH EDITION edn. Printed in the United States of America; 2001.
40. Bordens K, Abbott B: **Research Design and Methods A Process Approach**. In., Eighth edition edn. Americas, New York: The McGraw-Hill Companies,; 2011.
41. Cohen L, Manion L, Morrison K: **Research Methods in Education**. In., Sixth edition edn. USA: Taylor & Francis 2007.
42. Graneheim UH, Lundman B: **Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness**. *Nurse education today* 2004, **24**:105-112.
43. NVivo: **NVivo qualitative data analysis software. Version 9**. *QSR International Pty Ltd* 2010.
44. Rolfe G: **Validity, trustworthiness and rigour: quality and the idea of qualitative research**. *Journal of Advanced Nursing* 2004, **53**(3):304-310.

45. Sharts-Hopko CN: **Assessing Rigor in Qualitative Research**. *JOURNAL OF THE ASSOCIATION OF NURSES IN AIDS CARE* 2002, **13**(4):84-86.
46. James G: **Well-Being Its Meaning, Measurement and Moral Importance**. *book* 1988:299.
47. Andrews G: **A Glossary of Terms for community health care and Services for older persons** *WHO Document* 2004.
48. Stranks J: **Stress at Work Management and Prevention**. *Book* 2005.
49. Johnson S, Osborn D, Araya R, Wearn E, Paul M, Stafford M ea: **Morale in the English mental health workforce: questionnaire survey** *British Journal of Psyciatry* 2012, **201**:239-246.
50. Totman J, Hundt LG, Wearn E, Paul M, Johnson S: **Factors affecting staff morale on inpatient mental health wards in England: a qualitative investigation**. *BMC Psychiatry* 2011, **11**(68).
51. Abera E, Yitayal M, Gebreslassie M: **Turnover Intention and Associated Factors Among Health Professionals in University of Gondar Referral Hospital, Northwest Ethiopia**. *International Journal of Economics & Management Sciences* 2014.
52. Shin YS, Lee GS: **Effects of Hospital Workers' Friendship Networks on Job Stress**. *PLoS ONE* 2016.
53. Ratanawongsa N, Roter D, Beach M, Laird S, Larson S, Carson K, Cooper L: **Physician Burnout and Patient -Physician Communication During Primary Care Encounter**. *Journal of general internal medicine* 2008, **23**(10):1581-1588.
54. Dollard M, Winefield H, Winefield AH, Jong J: **Psychosocial job strain and productivity in human service workers: A test of the demand-control-support model** *journal of organizational psychology* 2000, **73**:501-510.
55. Boran A, Shawaheen M, Khader Y, Amarin Z, Hill Rice V: **Work-related stress among health professionals in northern Jordan**. *occupational medicine* 2012, **62**:145-147.
56. Dall'Ora C, Griffiths P, Ball J, Simon M, Aiken HL: **Association of 12 h shifts and nurses' job satisfaction, burnout and intention to leave: findings from a cross-sectional study of 12 European countries**. *BMJ Open* 2015.
57. Maslach C, Schaufeli W, Leiter P: **Job Burnout**. *Annual Review of Psychology* 2001, **52**:397-422.
58. Felton J: **Burnout as a clinical entity its importance for health care workers**. *occupMed* 1998, **48**(4):237-250.
59. Burch. J, Tom. J, Zahi. Y, Criswell. L, Leo. E, K. O: **Shiftwork impacts and adaptation among health care workers**. *Occupational medicine* 2009, **59**:159-166.
60. Mutale W, Ayles H, Bond V, Mwanamwenge TM, Balabanova D: **Measuring health workers' motivation in rural health facilities: baseline results from three study districts in Zambia**. *Human Resources for Health* 2013.
61. Vesel L, Waller K, Dowden J, Fotso CJ: **Psychosocial support and resilience building among health workers in Sierra Leone: interrelations between coping skills, stress levels, and interpersonal relationships**. *BMC Health Services Research* 2015, **15**.
62. English M, Irimu G, Agweyu A, Gathara D, Oliwa J, Ayieko P, Forrest CB: **Building Learning Health Systems to Accelerate Research and Improve Outcomes of Clinical Care in Low- and Middle-Income Countries**. *PLoS Medicine* 2016, **13**(4).
63. Buykx P, Humphreys J, Wakerman J, Pashen D: **Systematic review of effective retention incentives for health workers in rural and remote areas: Towards evidence-based policy**. *Aust J Rural Health* 2010, **18**:102-109.
64. Shibre T, Negash A, Kullgren G, Kebede D, Alem A, Fekadu A, Fekadu D, Medhin G, Jacobsson L: **Perception of stigma among family members of individuals with schizophrenia and major affective disorders in rural Ethiopia**. *Social Psychiatry and Psychiatric Epidemiology* 2001, **36**(6):299-303.

Paper Two

Burnout and professional satisfaction of primary healthcare workers in rural Ethiopia

Medhin Selamu[1*], Charlotte Hanlon[1, 2], Girmay Medhin[3], Graham Thornicroft[2] and Abebaw Fekadu[1, 4, 5,6]

Institutional affiliations

[1]Addis Ababa University, College of Health Sciences, School of Medicine, Department of Psychiatry, Addis Ababa, Ethiopia

[2]Centre for Global Mental Health, Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, UK

[3]Addis Ababa University, Aklilu Lemma Institute of Pathobiology, Addis Ababa, Ethiopia

[4] Center for Innovative Drug Development and Therapeutic Trials for Africa (CDT-Africa), Addis Ababa University, College of Health Sciences, Addis Ababa, Ethiopia

[5]Global Health and Infection Department, Brighton and Sussex Medical School, University of Sussex, Brighton, United Kingdom

[6]King's College London, Institute of Psychiatry, Department of Psychological Medicine, Centre for Affective Disorders and Affective Disorders Research Group, London, UK

*Address for correspondence: PO Box 9086, Addis Ababa University, College of Health Sciences, School of Medicine, Department of Psychiatry, Addis Ababa, Ethiopia

Email address

Medhin Selamu: medhins10@gmail.com

Charlotte Hanlon: charlotte.hanlon@kcl.ac.uk

Girmay Medhin: gtmedhin@yahoo.com

Graham Thornicroft: graham.thornicroft@kcl.ac.uk

Abebaw Fekadu: abebaw.fekadu@aau.edu.et

Key words: Job related stress, Burnout, Wellbeing, Healthcare workers, Primary healthcare, Ethiopia

Abstract

Background: Healthcare workers (HCWs) are at an increased risk of stress and burnout, but this has been little investigated in low income countries. The aim of this study was to investigate burnout, and professional satisfaction of HCWs in primary healthcare (PHC) facilities in rural Ethiopia.

Method: This was a sequential, mixed quantitative and qualitative methods study of HCWs working in 66 PHCs in a rural district of southern Ethiopia. A quantitative survey of 145 HCWs was conducted initially. The Maslach Burnout Inventory was the primary measure of burnout, comprising of three domains: emotional exhaustion, cynicism and reduced feeling of personal accomplishment. To understand further the findings of the initial quantitative study, four focus group discussions (FGD) were conducted with 17 community and 16 facility-based HCWs.

Results: The HCWs had worked for a median of 5.0 ((25th and 75th percentiles: 0.4, 12) years. Most participants were female (62.1%) and working in healthcare facilities (65.5%); a third were community-based health extension workers. The median score was 3 ((25th and 75th percentiles: 0, 8) for emotional exhaustion and 34 (24, 40) for reduced personal accomplishment. High depression symptom scores (adjusted Odds Ratio (aOR) 1.25, 95% CI 1.05, 1.50), poor social support (aOR 1.58, 95% CI 1.01, 2.46), and being community-based HCW (aOR 13.55, 95% CI 1.24, 147.36) were associated with higher emotional exhaustion. About half (50.8%) reported a high level of job satisfaction. FGD participants spoke of high levels of burnout and job-related stress, which the discussants believed were under-reported in the quantitative study due to the overwhelming expectations to be strong and exemplary in the eyes of the community.

Conclusion: Although there is evidence for the existence of job related stress and burnout among Ethiopian rural primary HCWs, the magnitude was low compared to other studies. Nevertheless, this lower magnitude might be an under-report due to health professional expectation to be strong. Future studies are needed to improve the understanding of the expression and impact of burnout in this setting and how barriers to detection can be overcome.

Introduction

Effectively functioning healthcare workers (HCWs) are an essential building block of the health system (15). They determine the amount and quality of health service provided. To ensure accessible and equitable health services, as well as to attain health-related development goals, such as the sustainable development goals (SDGs) and universal health coverage (UHC), the wellbeing of HCWs is of great importance (22). The World Health Organisation (WHO), in its health human resource strategy to 2030 (23), and the global code of practice for the recruitment of HCWs (24) have emphasised the importance of HCW wellbeing. Nevertheless there is a global shortage and high turnover of HCWs, which is a threat to the quality, accessibility and equitability of healthcare services (7). In 2011, WHO identified 57 Low and middle income countries (LMIC) with a critical shortage of HCWs; 37 were in sub-Saharan Africa (SSA), including Ethiopia (4, 5). LMICs, specifically SSA, suffer from a high disease burden combined with low financial and human resources (6). Healthcare workers in these countries with critical shortage of man power may be at particular risk of developing burnout because of the high demand for care with limited resources.

The International Labour Organisation (ILO) has listed job-related stress as one of the psychosocial occupational hazards faced by HCWs (78). Burnout is a job-related phenomenon and a threat to wellbeing which manifests as: emotional exhaustion, cynicism (also termed depersonalisation in the burnout literature), and reduced feeling of personal accomplishment. Emotional exhaustion is considered to be the core domain of burnout, and is evident when a person runs out of the desire to help others; loses the capacity for compassion towards clients or loses their devotion to their job (30). Cynicism is a state when the service provider views their clients negatively and is unable to create a human connection with them. Reduced feeling of personal accomplishment is accompanied by a tendency to evaluate job performance negatively regardless of successes with patient care (77, 128). Burnout therefore, has serious consequences for HCWs, patient satisfaction with the service (81) and the healthcare organisation (82). A prolonged exposure to job-related stress is one of the causes of burnout (128, 261). Studies among HCWs from high income countries (74, 262) and the few from LMICs (79, 80, 259, 263) have demonstrated high levels of job-related stress and burnout. Moreover, Job Demand Contol (JDC) (102) and Job Demand Contol Support (JDCS) theories

of work have respecively indicated that controls over one's job and social support are important factors for job relate wellbeing. As to these theories it determines the experience of job related stress (102) and psychological wellbeing such as burnout (264). However, studies from Sub-Saharan Africa are rare and those that focus on the whole primary healthcare (PHC) team are virtually non-existent.

The primary aim of this study was to investigate burnout and professional satisfaction among all HCWs working across the primary healthcare system in a rural district in Ethiopia. We also conducted a qualitative study to explore the findings of the initial survey.

Methods

This was an explanatory, sequential mixed quantitative and qualitative methods study (193). First we conducted a quantitative study (a cross-sectional survey) to estimate the level of burnout and job satisfaction. This was followed by an explanatory qualitative study (focus group discussion (FGD)), which aimed to obtain a better understanding of the quantitative findings (197).

Setting

Both components of the study were conducted in the Sodo district, Gurage zone, Southern Nations, Nationalities and Peoples' Region (SNNPR), Ethiopia. Sodo is located 100 kilo meters from the capital city, Addis Ababa. The district is divided into 58 sub-districts or *kebeles,* which is the lowest government administrative structure. At the time of the study the district had 58 health posts each located in the centre of respective *kebele* and 8 health centres. During the study period the district was inhabited by around 161,952 people (79,356 men; 82,596 women) (265). Recently the district opened a primary hospital in the town of Buei.

This site was selected because it hosted the PRIME (PRogramme for Improving Mental health carE) project, a mental health services research project, which aims to develop evidence to support integration of mental healthcare into primary care (185). The current study was nested in the PRIME study because there is evidence that the quality of mental health delivery is highly dependent on HCW wellbeing (189) as well as the potential for future integration of HCW wellbeing interventions linked to the mental health service scale up (184).

The Ethiopian healthcare system consists of three tiers. The first level consists of rural health centres and primary hospitals; the second level is general hospitals, and the last one is specialised referral hospitals. Our focus was on the first tier. Primary health centres are generally staffed by health officers, nurses and midwives. Each facility is expected to serve 15,000-25,000 people in rural and up to 40,000 people in urban areas (64). Each health centre is linked to satellite health posts staffed by health extension workers (HEW), who split their time between the health post and making home visits, with disease preventive and health promotion activities. The health centres and health posts together comprise the 'primary care unit'. Health officers were first degree holders with four years of training in healthcare. Nurses and midwifes have a BSc degree or a diploma in nursing or midwifery. Health extension workers (HEWs) are high school graduates with one year of training in health. Except HEWs, the primary HCWs were mainly based in the health facilities. HEWs in the district work at both rural and urban health posts and live in rural villages.

Study participants

Quantitative (Cross sectional survey) participants

All HCWs (n=200) who were working in primary care units in the district during the survey period (July 2014–August 2014) were invited to participate. The inclusion criteria were: (1) working in a PHC setting in the Sodo district; (2) directly engaged in health service provision; and (3) a minimum of three months work experience in the current work place or in a similar setting.

Qualitative study participants

The participants for the qualitative study were selected purposively from the quantitative survey participants; based on gender, place of work and professional group. A total of 33 HCWs, 16 facility-based (two FGDs) and 17 community-based (2 FGDs) have participated. This was about 20% (n=33) of the participants of the quantitative study. The FGDs took 60 up to 90 minutes and each group consisted of 8 or 9 participants.

Measures

All survey instruments were translated from English to Amharic (the official language of the country) through expert consensus. The instruments were piloted before actual data collection. This was done to check for to check the clarity of the questions, acceptability and feasibility of the survey instruments.

The primary outcome of burnout was assessed using the Maslach Burnout Inventory (MBI) human service survey version (82). Socio-demographic, work related, and associated psychosocial factors were assessed by the fully structured instruments described below.

Burnout

Maslach Burnout Inventory (MBI): is the most widely used instrument to measure burnout (213). It is generally a self-administered questionnaire with 22 items (214) and has three main domains: emotional exhaustion (EE) with nine items, depersonalisation or cynicism (CY) with five items and personal accomplishment (PA) with eight items. The responses of individual items are rated on a seven-point scale that ranges from "0", indicating the experience never happened up to "7", indicating that the experience happens every day. Higher total scores in EE and CY as well as lower scores in the PA domain are indicative of higher levels of burnout. The standard cut-off scores to define high burnout are: EE score above 27, CY score above 13 and PA score below 32.

Work-related and psychosocial factors

Job Satisfaction Questionnaire (JSQ): has 15 items rated in a seven-point scale that ranges from extremely dissatisfied to extremely satisfied. The JSQ evaluates overall, intrinsic and extrinsic job satisfaction (169). Intrinsic job satisfaction is related to recognition, responsibility and the job content or particular tasks that constitute that job. But extrinsic job satisfaction is related to working conditions, particularly support from co-workers, supervisors and payment (170). The JSQ was used as an indicator of professional satisfaction which has been associated with burnout in many studies (144, 172).

Job Content Questionnaire (JCQ): is a 27 item instrument that focuses on decision latitude, psychological demand and social support. It also covers issues related to physical demands of the job and job insecurity (216). It has seven domains: Job skill discretion, Job decision

making authority, job demand, job decision latitude (i.e the combination of job skill discretion and job decision making authority), co workers support, supervisions support and job insecurity. There domains are associated with the job demand and as well as control which have a direct impact in the experience of burnout (217) according to the Job Demand Control (JDC) model (102).

Patient Health Questionnaire (PHQ): is a 9 item self administered questionnaire used to assess depression symptoms. The PHQ-9 has good psychometric properties (218) and has been validated in Ethiopia (219). The validated score of five was used as a cut-off point to indicate significant level of depressive symptoms (219).

Oslo Social Support scale (OSS): is a three item scale which measures the person's percieved social support system (220). This instrument has been used previously in Ethiopia and found to have convergent validity (221). It is interpreted by its total score: 3-8 means poor social support, 9-11 means moderate social support and 12-14 means strong social support (222). However, for the bivariate and multivariable regression the score was dichotomised as poor (score of 3-8) versus moderate to strong (a score from 9-14) social support.

List of Threatening Experiences (LTE): is a 12 item questionnaire which assesses the experience of 12 various groups of major stressful life events happened during the past six months (223). This instrument have a good psychometric property (224). The item responses are scored as yes/no and a total score is obtained by adding the item responses (225).

Alcohol Use Disorders Identification Test (AUDIT): is a 10-item questionnaire which was used to assess the alcohol consumption and drinking behaviour of the participant. The AUDIT was developed by WHO to identify alcohol use disorders, and has been used in various LMICs, including Ethiopia (226).

Demographic and work-related details were assessed with structured questions that contained the participants' socio-demographic details and years of service.

Qualitative data collection was carried out using a semi-structured FGD guide. The FGD guide was developed by the first author (MS) and last author (AF) with a focus on understanding the survey findings. Specifically, the FGD guide sought to check the clarity of survey questions, participants understanding and experience of burnout and job-related stress as well as exploring the reason for the low burnout score compared to similar settings.

Psychometric properties of the Maslach Burnout Inventory

Since MBI has not been previously validated in a similar (low income country) the construct validity of the MBI was evaluated using exploratory factor analysis (EFA). Factors were extracted using principal component factoring with varimax rotation and Kaiser normalisation. Kaiser-Meyer-Olkin measure of sampling adequacy was carried out prior to performing EFA, resulting in an acceptable alpha value of 0.68. Similar to other studies (227), we found that MBI is a multi dimensional scale with three domains (EE, CY, PA). Three items, one from each domain, loaded poorly on the identified factors: item number 11 ("I worry that this job is hardening me emotionally") from the CY domain; item number 16 ("Working with people directly puts too much stress on me") from the EE domain; and item number 18 ("I feel exhilarated after working closely with my recipients") from the PA domain. The overall internal consistency of the MBI for the 22 items was sufficient (Cronbach's α=0.70) and the 19 items (excluding the three items that did not load—Cronbach's α=0.71). Therefore, the full 22 items were used for the descriptive analysis. Both EE and PA domains had acceptable internal consistency (Cronbach's α=0.75 and α=0.80 respectively). However, the internal consistency of the domain CY was low (Cronbach's alpha 0.18) and so we excluded this domain from the analysis (Supplementary file Table 1).

Procedures of data collection

Prior to the main quantitative data collection, pilot interviews were conducted with 25 PHC staff in the neighbouring Silte zone (data not included). Questionnaires were distributed to all eligible HCWs to be self-administered. Participants were given one day to complete the questionnaire. The completed questionnaires (n=148) were returned in a closed and coded envelope with no personal identifier. Three of the 148 questionnaire were partially complete and excluded from the analysis (Figure 1).

All FGDs were moderated by MS with the help of an experienced research assistant and were conducted in Amharic. The interviews were audio-recorded with the permission of the participants, transcribed in Amharic and translated into English for analysis. During the FGDs we used similar Amharic terms to refer to job related stress and burnout as our formative work (228).

Data management and analysis

Quantitative data management and analysis

Quantitative data were double-entered using EpiData version 3.1 (http://www.epidata.dk/) and exported to Stata version 13 (StataCorp, 1985-2013) for statistical analysis. For each of the three measures (i.e for MBI, JCQ, and JSQ) total scores were generated by adding up the items for each measure. The median score was taken as a cut-off value to binarize the response for the analysis and grouping of study participants into high and low scoring groups on each scales (median for MBI sub domains; EE=3, PA= 34, overall JSQ=72, intrinsic JS= 35, extrinsic JS=35 and sub domains of JCQ; job skill discretion=34, job decision making authority= 36, job demand=34, job decision making latitude=72, co-workers support=12, supervisors support=12 and job insecurity=5).

Multivariate logistic regression was used to evaluate the association of potential correlates of burnout (i.e sex, age, marital status, place of work, level of depression, perceived social support, experience of stressful or threatening life events and work-related factors) with the odds of reporting above median burnout. While using the standard cut-off for reporting prevalence of burnout, the median score was mainly used for the multivariate logistic regression of the sub domains. This provided sufficient numbers and good fitness of model for the regression analysis. Based on existing evidence, potential confounders were defined *a priori* and included in the multivariable logistic regression model.

For descriptive analysis of the individual burnout item responses, the seven response categories of each item were collapsed into three groups based on the frequency of experiences. Thus, those who did not have the experience were in the 'never' group; those with the experience of a few times a year or less were in the 'few times in a year' group; and the final group captured all those whose experience ranged from daily to a few times monthly. The regression model was fitted taking EE total score as the dependent variable; the included independent variables were demographic, psychosocial and work related factors. Multi-collinearity was assessed in model using a correlation matrix which led to one work related variable (i.e. Job decision making latitude) being excluded from the multivariable analysis.

To evaluate the experience of burnout among different HCW groups, participants were grouped into community-based (HEWs) and facility-based workers (nurses, health officers and midwifes). The rationale for this classification was that setting or the context of work (the range of tasks HCWs are assigned to, and their level of control over their job) may impact upon their wellbeing and professional satisfaction.

Qualitative data management and analysis

Translated interviews were entered in Nvivo software. Initially, independent coding was done by two of the co-authors and similarity of codes was checked by MS and AF. Interpretation and summary was done by MS. The data were analysed using a thematic approach (200).

Ethical considerations

This study was approved by the Institutional Review Board of the College of Health Sciences of Addis Ababa University (protocol number 011/14/Psy). After full explanation about the objectives of the study, written informed consent was obtained from all study participants prior to data collection.

Results

Participants background characteristics

From 168 eligible HCWs who received the questionnaires, 145 returned completed questionnaires resulting in a response rate of 86.3%. The majority of the survey participants were female (62.10%, n=90) and young, with 93.8% falling within the 19-34 year age range. In terms of professional group composition, 53.3% (n=73) were nurses, 34.5% (n=50) were HEWs, 8.9% (n=13) were midwives, and 6.2% (n=9) were health officers. Except one nurse with a BSc degree qualification, all of the nurses had a qualification of diploma certificate. Participants had worked between three months and 17 years, with a median of 5.0 (25%, 75% percentiles: 0.4, 12) years (Table 1).

Table 17: Socio-demographic characteristics of study participants

		Quantitative study		Qualitative study	
	Characteristics	**Number**	**Percent**	**Number**	**Percent**
Gender	**Male**	55	37.9	13	40.0
	Female	90	62.1	20	60.0
Age (years)	**<25**	78	53.8	-	-
	25-35	58	40.0	24	73.0
	>35	9	2.6	9	27.0
Marital status	**Single**	96	66.2	12	36.0
	Married	49	33.8	21	64.0
Professional groups	**Nurse**	73	50.3	15	45.4
	Health officer	9	6.2	1	3.0
	Midwife	13	8.9	-	-
	Health Extension Worker	50	34.5	17	51.5
Place of work	**Urban**	64	44.0	21	64.0
	Rural	81	56.0	12	36.0
Year of service	**<1 year**	10	6.9	-	-
	1-3 years	44	30.3	-	-
	>3 years	91	62.7	33	100

MBI item response

The most endorsed item from EE domain was “I feel frustrated by my job” (34.3%) and the least endorsed was “working with people the whole day is really a strain for me” (5.5%). For the core item of EE domain, “I feel burned out from my job”, 9.0% endorsed having had the experience with a significant difference between the professional groups (18.0% in the community-based and 4.3% in facility-based HCWs) (Supplementary file: Table 2).

Table 2:Burnout score using standard cutoff points

Burnout domains	Score	Overall N (%)	Community based HCWs N(%)	Facility based HCWs N(%)
Emotional exhaustion	**Moderate to high burnout**	11(7.7)	9 (18.0)	2(2.2)
	Low burnout	131(92.2)	41(82.0)	90(97.8)
Personal accomplishment	**Moderate to high burnout**	59(43.7)	22(50.0)	37(40.6)
	Low burnout	76 (56.3)	22 (50.0)	54 (59.3)

Overall burnout

Using the standard cut-off on the MBI (following exclusion of the CY domain because of poor reliability), only 3.8% (n=5) had burnout in both EE and PA domains, although the proportion with moderate to high level of burnout in at least one of the two domains was much higher 42.9% (n=57).

Emotional exhaustion (EE)

The median (25^{th} and 75^{th} percentiles) of EE domain was 3 (0, 8). Using the standard cut-off point, only 7.7% (n=11; 95% CI: 0.04, 0.15) of the total participants had moderate to high EE. This constituted 18.0 % (n=9) of community based HCWs and 2.1% (n=2) of facility-based HCWs (Table 2). Female staff (11.2% n=10) experienced EE significantly more frequently than males (1.8% n=1). Being a community-based HCW was significantly associated with increased odds of experiencing higher EE (OR=2.0, 95% CI: 1.1, 3.6) (Table 3).

Table 3: Comparison of burnout domain above or below median scores and psychosocial factors between health worker type

			Community based healthcare Workers Number (%)	Facility-based healthcare workers Number (%)	Chi-square (degree fo freedom)	P value
Burnout domains (Categorised by median score)	**Emotional exhaustion**	**Low**	16 (32.0)	53 (55.8)	7.43 (1)	0.01
		high	34 (68.0)	42 (44.2)		
	Personal accomplishment	**Good**	24 (48.0)	52 (54.7)	0.59 (1)	0.44
		Poor	26 (52.0)	43 (45.3)		
Psychosocial factors	**Social support**	**Poor**	36 (73.5)	63 (66.3)	0.77 (1)	0.38
		Moderate/strong	13 (26.5)	32 (33.7)		
	Stressful life events	**None**	25 (51.0)	46 (48.4)	0.27 (2)	0.87
		1 or 2	17 (34.7)	37 (38.9)		
		3 and above	7 (14.3)	12 (12.6)		
	Patient Health Questionnaire score*	**< 5**	34 (70.8)	78 (83.9)	3.29 (1)	0.07
		5 or more	14 (29.2)	15 (16.1)		
	Year of service	**< 2 years**	13 (26.0)	16 (16.8)	2.85 (2)	0.24
		2-5 years	25 (50.0)	45 (37.4)		
		>5 years	12 (24.0)	34 (35.8)		

*cut off score for depression symptom was five

Personal Accomplishment (PA)

The median (25^{th} and 75^{th} percentiles) of PA domain was 34 (24, 40). A reduced sense of PA was reported by 43.7% (n=59) of the overall participants using the standard cut-off; non-significantly lower ($Chi^2(1)=2.56$, p=0.110) among community-based HCWs (37.3%, n=22) compared with facility-based HCWs (62.7%, n=37) (Table 2).

Associated work and psychosocial factors

Job satisfaction

From the total participants, almost half (49.2%; n=62) reported low overall job satisfaction. Low intrinsic and extrinsic job satisfaction was reported by 46.5% (n=60) and 45.4% (n=64) of participants respectively.

Job content and control

Low skill discretion was reported by 28.3% (n=13) of community-based and 21.4% (n=18) of facility-based HCWs. Low decision-making attribute was reported by 28.1% (n=39) of the participants, which was higher among community-based HCWs (34.0% n=16) compared to facility-based HCWs (25.0% n=23). High job demand was reported by 59.7% (n=83) of the participants, consisting of a comparable proportion of community-based (57.4%; n=27) and facility-based (60.9%; n=56) HCWs. Around half (48.0% n=61) of the participants had low decision making latitude, which was again comparable between community (50.0%; n=22) and facility based HCWs (46.9%; n=39). Most HCWs reported good co-workers support (76.3% n=100), with no significant difference between the facility-based (78.2%; n=68) and community-based (72.2%; n=32) HCWs.

Over two-thirds (68.7% n=99) reported having poor social support and the majority had experienced stressful or threatening life events in the preceding six months: 37.5% (n=54) had one or two and 13.2% (n=19) had three or more. Family member's or close friend's death was the most endorsed stressful life event (23.5% n=34). Possible depression was reported by 20.6% (n=29) of the HCWs. Although 29.0% (42/145) of the respondents consume alcohol, none of them had AUDIT scores suggestive of harmful use.

Evaluation of factors associated with burnout

In the multivariate model, age was the only demographic factor associated with higher EE (aOR=1.32; 95% CI: 1.05, 1.34) only in the fully adjusted model. From the psychosocial factors; PHQ score (aOR=1.25; 95% CI: 1.05, 1.50), and poor social support (aOR=1.58; 95% CI: 1.01, 2.46) were significantly associated with high levels of EE.

The work related factors such as; being a community-based HCW was significantly associated with higher EE compared to facility-based HCWs in the crude (OR=2.68; 95%CI:

1.30, 5.50) and adjusted model (aOR=13.55; 95% CI: 1.24, 147.36). Job insecurity was also significantly associated with increased EE, in both the crude and fully adjusted models (OR=1.55; 95% CI: 1.22, 1.97 and aOR=1.85; 95%CI: 1.07, 3.18). Supervisor's support was also associated with higher EE only in the fully adjusted model (aOR=1.46; 95% CI 1.02, 2.12) (Table 4). We have also run the multivariate analysis by excluding the item that doesn't load in the EE sub domain but the result has no difference with what is being reported.

Table 4:Regression model for factors associated with high* level of emotional exhaustion with socio-demographic, psychosocial and work related factors

Characteristics		Crude model			Fully adjusted model	
		N	**OR**	**95% CI**	**OR**	**95% CI**
Sex	**Male**	55	Ref			
	Female	90	1.39	0.71, 2.73	0.36	0.05, 2.41
Age (years)		145	1.04	0.97, 1.13	1.32	1.07, 1.64
Marital status	**Single**	145	Ref			
	Married		1.17	0.59, 2.34	0.66	0.14, 3.41
Place of work	**Urban**	145	Ref			
	Rural		1.06	0.55, 2.05	1.52	0.34, 6.80
Psychosocial factors	**Patient Health Questionnaire score****	141	1.20	1.06, 1.35	1.25	1.05, 1.50
	Percived social support score**	144	1.28	1.04, 1.59	1.58	1.01, 2.46
	Stressful life events score**	144	1.52	1.14, 2.04	1.61	0.82, 3.15
Profession	**Facility based HCWs**	95	Ref			
	Community based HCWs	50	2.68	1.30, 5.50	13.55	1.24, 147.36
Year of sevice		145	1.01	0.90, 1.13	0.94	0.72, 1.22
Job satisfaction	**Intrinsic job satisfaction**	129	0.93	0.89, 0.97	1.10	0.90, 1.34
	Extrinsic job satisfaction	141	0.93	0.89, 0.97	0.86	0.72, 1.02
Job content and control	**Job skill discretion**	130	0.98	0.91, 1.05	0.94	0.77, 1.15
	Job decision making attribute	139	1.00	0.88, 1.15	1.02	0.96, 1.07
	Job demand	139	1.00	0.932, 1.07	0.97	0.83, 1.14
	Job decision making latitude*	127			-	-
	Co-workers support	131	0.77	0.62, 0.94	0.64	0.37, 1.10
	Supervisors support	137	0.96	0.85, 1.08	1.46	1.01, 2.12
	Job insecurity	137	1.55	1.22, 1.97	1.85	1.07, 3.18

MBI: Maslach Burnout Inventory

* Defined as above median score on the MBI Emotional Exhaustion domain

**Total score *Omitted in the fully adjusted model due to multi-collinearity: MBI (Maslach Burnout Inventory)

Qualitative exploration of job related wellbeing

Most of the participants were female (60.0% n=20), married (64.0% n=21) and working in urban areas (64.0% n=21). Nevertheless, almost half (n=16) were facility-based, while the other half (n=17) were community-based. All participants have worked for at least three years (Table 2).

No participants reported any problems related to the clarity of the survey questions. Respondents indicated that there were high levels of job related stress and burnout while at the same time reporting a high level of job satisfaction. The findings are summarised under the themes of: (i) Burnout and barriers to reporting, (ii) need for resilience.

Theme one: Burnout and barriers to reporting

All FGD participants except one indicated that there was a considerable level of job related stress and burnout among HCWs in the district. Participants gave multiple specific examples and singled out some of the common causes of job related stress and burnout in their workplace, including high work load, shortage of staff, and repeated unanticipated urgent tasks being given by managers.

"Though it is not easy to recall what I filled in that questionnaire. I can tell you how much I am dissatisfied with my job and feel burned out in my day to day work life. I do experience burnout. I am even planning to quit this job" [FGD two male participant / code01]

Another participant also shared her experience about the extent of burnout she is facing and why she refrains from sharing by saying:

"We do have workload …we have also told you about our burnout experience at that time though… we did not tell you by exaggerating it. We are working under great stress these days our work packages are increasing, the demand from the community is also increasing because of improved awareness…If you want to know we are having this problem to the extent we are unable to do our house hold chores. You know, I don't think sharing this thing has any use because there is no solution to it"

[FGD four, female participant /code 05]

One of the FGD participants from the facility noted as follows:

"Sometimes you don't know what will come... people from the district health office will come and tell you to do some community based work and report to them within 24 hours. We are the ones who will be walking long distance and mobilise the community in collaboration with the health extension workers. Such kind of unplanned tasks are very stressful for me...in addition to tight deadlines for report, which will lead us to be stressed and burnout" [FGD one male participant/ code 05]

In addition to the routine health service, participants reported having additional non-health related tasks and responsibilities. A participant shared her experience about the stress resulting from those non-health tasks.

"*If you are HEW, you are obliged to be a member of the sub-district administration committee. This means you are supposed to sit for a meeting with them at least weekly. The sub district officials usually conduct the meetings on Sundays …so we can't take a break at least to wash our clothes. If we missed that meeting they will deduct money from our salary …it is so annoying. It is like hell for me"* [FGD four, female participant/ code 07]

Lack or career progression opportunity was also mentioned as a factor that drains their motivation. Small salary was other key source of dissatisfaction. Most of the participants place themselves in the low socioeconomic strata. A participant said that even the community they are serving see them as needy. He shared his experience:

"*One day I was travelling to one rural health post ...I was using a public transport and a farmer lady who was sitting next to me ... whom I know in the health centre said to me that I will pay your [transport cost]. Then I said, "No it is okay I can pay mine". She smiled at me and said that "we all know that you are a government employee and paid less" [...] then she paid. You can't imagine how much irritated I was*" [FGD one, male participant /code 06]

Three main barriers emerged as reasons for underreporting: interpretation of experience, fear of reporting and anticipation that their situation would never change whether they talked about it or not.

Regarding the potential influence of a culture of keeping feelings to oneself and also the lack of awareness about burnout, one participant noted that:

"In my opinion this (underreporting) is related with our trend of opening up and sharing what we are feeling. As my colleagues have said already, there are very stressful times …when we were facing burnout …but we don't have the culture of this stress situation (burnout)…" [FGD one, male participant/ code 07].

Misinterpretation of the experience because of lack of knowledge was highlighted by another participant:

"For the question if there is burnout among us or not yes there is …but since we do have number of tasks and huge workload we tend to interpret it as exhaustion"

[FGD four, female participant / code 01].

Most of the participants said that they refrain from sharing their experience about burnout because they were afraid of reprimand and other consequences of sharing this information.

"*When we complain or talk about our job-related stress or burden we are worried ...they* [their superiors] *might immediately consider that we are spreading discontent to hinder the work. They might label us as reactionary ...so it would not be safe. We rather keep quiet*" [FGD two, male participant / code04]

In all the focus group discussions participants appeared cautious not to portray a negative image of either their facility or the district's health system. A participant said that:

"*I remember when I filled your survey questionnaire ...I was stressed and having difficult time with my job at that time. But I refrained from telling the truth because I wasn't sure about the consequences of sharing that information. I can't be sure if I am going to be labelled as resistant ....In short I was afraid of the consequences*" [FGD two, male participant/ code07]

Though most participants agreed that job related stress was a common occurrence, they did not think that it is something worth sharing with other people because of the sense that no one would be interested to help. They reported that many external visitors were asking about the issue without later bringing any change. They felt it was better to pretend that it was all ok. A participant expressed her feelings by saying;

"*Prior to this group meeting we were discussing just to be quiet and say nothing about our job. Because we have seen many people, who came from the ministry of health, non-governmental organisations and universities ...were raising similar issue. Honestly we are tired of you people...we will tolerate our problem, sorry, I don't think you can change our situation [beka chegrachenen wat endadergewaln yekerta ene lewete limeta yemichil ayemeselegnim]*" [FGD three, female participant/ code 03]

A participant also shared her view and hopelessness about talking on issues related to their job related problem in general as follows;

"*There are many gaps in our work environment. When we gather for a meeting with various stakeholders including our superiors, they ask us about our problems and our needs....., neither our work nor working condition is changed and our problem is still here. People like you are just collecting and writing the information. I don't think there is anyone who can give us justice so we have decided to be quiet*" [FGD three female participant / code 02]

Theme two: Need for resilience

Though almost all FGD participants said that there is job related stress and burnout in their environment, they reported that HCWs need to be strong and resilient. Most said that HCWs need to be seen as a role model in the community. A participant said that:

"*Health professionals are good at describing other people's situation not their own. We believe that we are supposed to be strong teachers and examples to our community*" [FGD two male participant/ code 07]

Another one shared her commitment to the health profession by saying:

"*...our job has lots of burden, but we are tolerating it. Whatever the stress and the pressure, we are accomplishing our mission...*" [FGD three female participant/ code 04].

Another participant highlighted also emphasised the view that tolerance is needed as part of their job as clinicians: *"As far as I recall there was pressure on us at that time this doesn't mean that were not experiencing burnout but I personally thought that I am supposed to tolerate it because it is my job and I joined this profession by my choice…"*

[FGD three, participant five]

The majority of the FGD participants agree that HCWs need to tolerate the hardship in the work environment. Even some were considering themselves as weak when they spoke about job related stress and burnout.

"*At that time there was big workload...the work load was heavier than now. We were stressed and under lots of pressure, but we can't say it is totally job related; it may be our personal problem, it may be our weakness...*" [FGD two male participant / code 06]

Despite the job-related stress and burnout participants are facing, all agreed that there is a tremendous amount of satisfaction that they get from their job. All reported that they were proud of serving their community as a health care provider. The community-based workers emphasised that the good relationship and recognition they are getting from the community is the main source of the satisfaction in their job. However, for the facility-based HCWs, the increasing community demand for explanations about their illness and treatment and the involvement of the community in evaluating the HCWs, meant that the community was perceived as a cause of stress instead of satisfaction.

Discussion

This is the first study of burnout and wellbeing of rural healthcare workers in sub-Saharan Africa in a health system that is rapidly changing. The level of burnout found through the quantitative survey was low when applying standard but locally non-validated cut-off scores from Western populations. The qualitative component of the study indicated that the level of burnout among these rural primary HCWs might be higher than that captured by the survey. Under-reporting may have occurred due to HCWs feeling there was no point disclosing their feelings because of previous experience that nothing would change, fears that disclosure of dissatisfaction could be used against them and a prevailing norm that HCWs need to be seen as strong and resilient. On the other hand, participants reported high level of job satisfaction in both components of the study.

Our findings are in keeping with the findings from our formative study, which showed that job related stress and burnout are likely to be well understood and a phenomenon that is experienced by rural primary HCWs (228). Being tolerant, strong and resilient or 'keeping an appearance of strength' in the face of challenges was considered a necessary attribute of

HCWs. HCWs in this setting consider themselves to be role models for the community. Although the level of burnout, particularly measured with EE, was lower than anticipated based on previous reports from LMIC (79, 80, 259, 263) and high income countries (74), the factors that were expected to be associated with high EE were found to be associated with high EE in this study confirming the utility of the construct. Such factors included being a community-based HCW, job insecurity and social support.

The level of burnout and job satisfaction differed between community-based and facility-based HCWs. In both qualitative and quantitative components of the study, community-based workers reported higher burnout (higher EE and lower PA scores) compared to the facility-based HCWs. This may be due to differences in the level of control over their job or the work environment (217) as proposed by the Job Demand Control (JDC) model. JDC is an interactional theory of work, which assumes that control over one's job is an important factor that determines the experience of job related stress (102). Community-based HCWs have a peculiar labour dynamic that obliges them to live and work with the community they serve. This can put pressure on their personal life because of difficulty with keeping a boundary between personal and work life. This is consistent with the results of a study on Brazilian community health workers (250). In contrast to a previous study from Ethiopia (251), community and facility-based workers in the current study reported a high level of job satisfaction. Having good perceived social support was also associated with reduced reports of EE, which is also shared by the assertion of Job-demand-control-support (JDCS) theory(264). This theory states that reduced social support can increase the risk of reaction to stress (102).

In some studies, females were identified as a vulnerable group for burnout and job related stress (74, 243, 244). This result was also shared in the EE and reduced PA domains. Depressive symptoms were associated with experiencing EE. This may be due to the similarity of symptoms in both conditions (246, 259) . Since community workers are expected to go to the service recipients' home, and this may be one of the predisposing factors to higher EE experience by community-based workers. There was a significant difference between the experience of reduced PA feelings of different HCW groups; midwifes had better feeling of PA followed by nurses, HOs and HEWs. This may have resulted from the type of health service they are providing especially in the case of midwifes.

For example delivery procedure is one of the stressful and satisfying procedures most of the time.

In both components of the study, participants reported good level of overall job satisfaction. Community-based HCWs reported better job satisfaction than the facility-based group. Participants have reported that they are proud to serve their community as a health provider. Participants' satisfaction of serving their community is the main source of job satisfaction, which corroborates the findings of our formative study on conceptualisation of burnout, job related stress and wellbeing (228). Though it was difficult to estimate the extent of underreporting and how it might have impacted the quantitative study, the qualitative study has clearly indicated the possibility of underreporting of job related stress and burnout. In this study what we have reported is the results of the two domains, further validation study of the burnout measure and cross cultural adaptation of the instrument is essential to have objective evidence about the problem.

Since HCWs are the key players in the health service and towards achieving health related development goals, ensuring their wellbeing is essential (22). Ensuring HCWs wellbeing is also important to efficiently use the small number of HCWs in the region (6). Therefore, interventions to promote the wellbeing of HCWs and reduce burnout need to be prioritised considering the work context and setting.

There are some limitations to be considered. The sample size was relatively small because of the limited number of staff available within the study district. The primary outcome measure, MBI, was not validated in our context although two of the domains, EE and PA, had good psychometric properties. Though confirmatory factor analysis was the best way to evaluate the psychometric property of MBI but we were unable to do that due to the small sample size. We have used the standard cut-off to analyse the burnout score but since this was not validated, the median score was used for bivariate and multivariable regression models.

Conclusion

Given the dearth of data on burnout in this region with high disease burden and critical shorage of healthcare workers, the existence and experience of burnout is of major concern. However, its magnitude is lower as compared to other studies this might be an under-report due to health professional expectation to be strong. Future studies are needed to improve the

understanding of the expression and impact of burnout in this setting and how barriers to detection can be overcome.

Improving detection of burnout and developing appropriate intervention, particularly considering those potentially at increased risk, such as community health wokrers, are important next steps.

References

1. Organization WH: **Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies**: World Health Organization; 2010.
2. **SUSTAINABLE DEVELOPMENT GOALS** [http://www.undp.org/content/undp/en/home/sustainable-development-goals.html]
3. WHO: **Global Strategy on human resources for health: workforce 2030. Draft resolution** In.: World Health Organisation 2016: 5.
4. WHO: **WHO Global Code of Practice on the International Recruitment of Health Personnel**. In. Edited by Assembly S-tWH: World Health Organisation 2010.
5. Buykx P, Humphreys J, Wakerman J, Pashen D: **Systematic review of effective retention incentives for health workers in rural and remote areas: Towards evidence-based policy**. *Aust J Rural Health* 2010, **18**:102-109.
6. Fieno VJ, Dambisya MY, George G, Benson K: **A political economy analysis of human resources for health (HRH) in Africa**. *Human Resources for Health* 2016, **14**(44).
7. Kinfu Y, Dal Poz RM, Mercerb H, Evans BD: **The health worker shortage in Africa: are enough physicians and nurses being trained?** *Bull World Health Organ* 2009(87):225–230.
8. Dal Poz M, Kinfu Y, Dräger S, Kunjumen T: **Counting health workers: definitions, data, methods and global results**. *World Health Organization: Department of Human Resources for Health* 2007.
9. Niu S: **ILO list of occupational diseases and health care workers**. *Afr Newslett on Occup Health and Safety* 2010, **20**(3):4-9.
10. Worley JA, Vassar M, Wheeler DL, Barnes LL: **Factor structure of scores from the Maslach Burnout Inventory: A review and meta-analysis of 45 exploratory and confirmatory factor-analytic studies**. *Educational and Psychological Measurement* 2008, **68**(5):797-823.
11. Maslach C, Schaufeli W, Leiter P: **Job Burnout**. *Annual Review of Psychology* 2001, **52**:397-422.
12. Halbesleben J, Buckleu M: **Burnout in Organisational Life**. *Journal of Management* 2004, **30**(6):859-879.
13. Altaras R, Nuwa A, Agaba B, Streat E, Tibenderana KJ, Martin S, Strachan EC: **How Do Patients and Health Workers Interact around Malaria Rapid Diagnostic Testing, and How Are the Tests Experienced by Patients in Practice? A Qualitative Study in Western Uganda**. *PLoS ONE* 2016, **11**(8).
14. Maslach C, Jackson ES, Leiter PM: **Maslach Burnout Inventory Manual** *Mind Garden* 1996.
15. Maslach C, Schaufeli WB, Leiter MP: **Job burnout**. *Annu Rev Psychol* 2001, **52**:397-422.
16. Johnson S, Osborn D, Araya R, Wearn E, Paul M, Stafford M ea: **Morale in the English mental health workforce: questionnaire survey** *British Journal of Psyciatry* 2012, **201**:239-246.
17. Abdulla L, Al-Qahtani D, Al-Kuwari M: **Prevalence and determinants of burnout sydnrome among primary health care physicans in Quatar**. *South African Family Practice* 2011, **53**(4):380-383.
18. Abera E, Yitayal M, Gebreslassie M: **Turnover Intention and Associated Factors Among Health Professionals in University of Gondar Referral Hospital, Northwest Ethiopia**. *International Journal of Economics & Management Sciences* 2014.
19. Alhassan KR, Spieker N, Ostenberg P, Ogink A, Nketiah-Amponsah E, Rinke de Wit FT: **Association between health worker motivation and healthcare quality efforts in Ghana**. *Human Resources for Health* 2013, **11**.
20. Ashtari. Z, Farhady. Y, Khodaee. MR: **Relationship between burnout and work performance in a sample of Iranian mental health professionals**. *African Journal of Psychiary* 2009.
21. Boran A, Shawaheen M, Khader Y, Amarin Z, Hill Rice V: **Work-related stress among health professionals in northern Jordan**. *occupational medicine* 2012, **62**:145-147.

22. Rodriguez I, Bravo J, Peiro J, Schaufeli W: **The Demands-Control-Support model, locus of control and job satsfaction: a longitudnal study** *Department of Management, University of Missouri-Columbia, Columbia, Missouri 65211–6100, USA* 2001, **15**(2):97-114.
23. Alarcon GM: **A meta-analysis of burnout with job demands, resources, and attitudes**. *Journal of Vocational Behavior* 2011, **79**(2):549-562.
24. Cresswell J: **Qualitative inquiry and research design: Choosing among five approaches**. *Book* 2007, **second edition**
25. Darlington Y, scott D: **Qualitative Research in Practice Stories from the Field**. In. Australia: Allen and Unwin; 2002.
26. Fekadu A, Medhin G, Selamu M, Hailemariam M, Alem A, Giorgis T, Breuer E, Lund C, Prince M, Hanlon C: **Population level mental distress in rural Ethiopia** *BMC Psychiatry* 2014, **14**(194).
27. Lund C, Tomlinson M, De Silva M, Fekadu A, Shidhaye R, Jordans M, Petersen I, Bhana A, Kigozi F, Prince M *et al*: **PRIME: A Programme to Reduce the Treatment Gap for Mental Disorders in Five Low- and Middle-Income Countries**. *PLoS Med* 2012, **9**(12): e1001359.
28. Petersen I: **Comprehensive integrated primary mental health care for South Africa. Pipedream or Possibility**. *Social Science & Medicine* 2000, **51**(3):321-334
29. Fekadu A, Hanlon C, Medhin G, Alem A, Selamu M, W. Giorgis T, Shibre T, Teferra S, Tegegn T, Breuer E *et al*: **Development of a scalable mental healthcare plan for a rural district in Ethiopia**. *The British Journal of Psychiatry* 2015, **s1-s9**.
30. FMOH: **National Health Sector Transformation Plan**. In. Edited by Health Mo. Addis Ababa; 2015.
31. SCHAUFELI W, GREENGLASS E: **INTRODUCTION TO SPECIAL ISSUE ON BURNOUT AND HEALTH**. *Psychology and Health* 2001, **16**:501-510.
32. Kalliath T, O'Driscoll M, Gillespie D, Bluedorn A: **A test of the Maslach Burnout Inventory in three samples of healthcare professionals**. *Department of Management, University of Missouri-Columbia, Columbia, Missouri 65211–6100, USA* 2000, **14**(1):35-50.
33. Stride C, Wall T, Catley N: **MEASURES OF JOB SATISFACTION, ORGANISATIONAL COMMITMENT, MENTAL HEALTH AND JOB-RELATED WELL-BEING: A Benchmarking Manual**. In. England: John Wiley & Sons Ltd; 2007.
34. Heritage B, Pollock C, Roberts LD: **Confirmatory Factor Analysis of Warr, Cook, and Wall's (1979) Job Satisfaction Scale**. *Australian Psychologist* 2015, **50**(2):122-129.
35. Kabir MJ, Heidari A, Etemad K, Gashti AB, Jafari N, Honarvar MR, Ariaee M, Lotfi M: **Job burnout, job satisfaction, and related factors among health care workers in Golestan Province, Iran**. *Electronic physician* 2016, **8**(9):2924.
36. Alharbi J, Wilson R, Woods C, Usher K: **The factors influencing burnout and job satisfaction among critical care nurses: a study of Saudi critical care nurses**. *Journal of nursing management* 2016, **24**(6):708-717.
37. Leka S, Jain A: **Health Impact of Psychosocial Hazards at Work: An Overview**

WHO document: Institute of Work, Health & Organisations, University of Nottingham 2010.
38. Theorell T, Hammarström A, Aronsson G, Träskman Bendz L, Grape T, Hogstedt C, Marteinsdottir I, Skoog I, Hall C: **A systematic review including meta-analysis of work environment and depressive symptoms**. *BMC Public Health* 2015, **15**(1):738.
39. Kroenke K, Spitzer R, JBW. W: **The PHQ-15: validity of a new measure for evaluating the severity of somatic symptoms.** . *Psychosomatic Medicine* 2002, **64**:258-266.
40. Hanlon C, Medhin G, Selamu M, Breuer E, Worku B, Hailemariam M, Lund C, Prince M, Fekadu A: **Validity of brief screening questionnaires to detect depression in primary care in Ethiopia**. *Journal of affective disorders* 2015(186):32-39.

41. Abiola T, Udofia O, M. Z: **Psychometric properties of the 3-item Oslo Social Support Scale among Clinical students of Bayero University, Kano, Nigeria.** . *MJP Online* 2013, **22**(2):23-27.
42. Fekadu A, Rane LJ, Wooderson SC, Markopoulou K, Poon L, Cleare AJ: **Prediction of longer-term outcome of treatment-resistant depression in tertiary care**. *The British Journal of Psychiatry* 2012, **201**(5):369-375.
43. Kroll L, Lampert T: **Unemployment, Social Support and Health Problems**. *Dtsch Arztebl Int: Medicine* 2011, **108**(4):47-52.
44. Brugha T, Bebbington P, Tennant C, Hurry J: **The List of Threatening Experiences: a subset of 12 life event categories with considerable long-term contextual threat.** *Psychological Medicine* 1985, **15**:189-194.
45. Motrico E, Moreno-Kustner B, de Dios Luna J, Torres-Gonzalez F, King M, Nazareth I, Monton-Franco C, Gilde Gomez-Barragan MJ, Sanchez-Celaya M, Diaz-Barreiros MA *et al*: **Psychometric properties of the List of Threatening Experiences--LTE and its association with psychosocial factors and mental disorders according to different scoring methods**. *Journal of affective disorders* 2013, **150**(3):931-940.
46. Rosmalen J, Bos E, De Jonge P: **Validation of the Long-term Difficulties Inventory (LDI) and the List of Threatening Experiences (LTE) as measures of stress in epidemiological population-based cohort studies**. *Psychological Medicine* 2012, **42**(12):2599-2608.
47. Babor T, Higgins-Biddle J, Saunders J, Monteiro M: **A U D I T: The Alcohol Use Disorders Identification Test Guidelines for Use in Primary Care**. In.: World Health Organization; 2001.
48. Worley AJ, Vassar M, Wheeler LD, Barnes LBL: **Factor Structure of Scores From the Maslach Burnout Inventory A Review and Meta-Analysis of 45 Exploratory and Confirmatory Factor-Analytic Studies**. *Educational and psychological measurement* 2008, **68**(5):797-823.
49. Selamu M, Thornicroft G, Fekadu A, Hanlon C: **Conceptualisation of job-related wellbeing, stress and burnout among healthcare workers in rural Ethiopia: a qualitative study**. *BMC Health Services Research* 2017, **17, 412**.
50. Vaismoradi M, Turunen H, Bondas T: **Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study**. *Nursing and Health Sciences* 2013, **15**:398-405.
51. Correia da Silva AT, Menezes PR: **Burnout syndrome and common mental disorders among community-based health agents**. *Rev Saúde Pública* 2008, **42**(5):1-8.
52. Deriba BK, Sinke SO, Ereso BM, Badacho AS: **Health professionals' job satisfaction and associated factors at public health centers in West Ethiopia**. *Human resources for health* 2017, **15**(1):36.
53. Lasebikan VO, Oyetunde MO: **Burnout among Nurses in a Nigerian General Hospital: Prevalence and Associated Factors**. *ISRN Nurs* 2012, **2012**:402157.
54. Győrffy Z, Dweik D, Girasek E: **Workload, mental health and burnout indicators among female physicians**. *Human Resources for Health* 2016, **14**(12).
55. Bianchi R, Schonfeld IS, Laurent E: **Burnout-depression overlap: a review**. *Clinical psychology review* 2015, **36**:28-41.

Paper Three

Burnout among primary healthcare workers during implementation of integrated mental healthcare in rural Ethiopia: a cohort study

Medhin Selamu[1*], Charlotte Hanlon[1,2,3], Girmay Medhin[3,4], Graham Thornicroft[2] and Abebaw Fekadu[1, 3, 5, 6]

Institutional affiliations

[1]Addis Ababa University, College of Health Sciences, School of Medicine, Department of Psychiatry, Addis Ababa, Ethiopia

[2]Centre for Global Mental Health, Health Service and Population Research Department, Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, UK

[3] Centre for Innovative Drug Development and Therapeutic Trials for Africa (CDT-Africa), Addis Ababa University, College of Health Sciences, Addis Ababa, Ethiopia

[4]Addis Ababa University, Aklilu Lemma Institute of Pathobiology, Addis Ababa, Ethiopia

[5] Global Health & Infection Department, Brighton and Sussex Medical School, Brighton, UK

[6]King's College London, Institute of Psychiatry, Psychology and Neuroscience, Department of Psychological Medicine, Centre for Affective Disorders, London, UK

*Address for correspondence: PO Box 9086, Addis Ababa University, College of Health Sciences, School of Medicine, Department of Psychiatry, Addis Ababa, Ethiopia

Email address

Medhin Selamu: medhins10@gmail.com

Charlotte Hanlon: charlotte.hanlon@kcl.ac.uk

Girmay Medhin: gtmedhin@yahoo.com

Graham Thornicroft: graham.thornicroft@kcl.ac.uk

Abebaw Fekadu: abebaw.fekadu@aau.edu.et

Key words: Job related stress, Burnout, Professional satisfaction, Wellbeing, Healthcare workers, Primary healthcare, Ethiopia

Abstract

Background

The short term course of burnout in healthcare workers in low- and middle-income countries has undergone limited evaluation. The aim of this study was to assess the short-term outcome of burnout symptoms in the context of implementation of a new mental health programme in a rural African district.

Methods

We followed up 145 primary healthcare workers (HCWs) working in 66 rural primary healthcare (PHC) facilities in Southern Ethiopia, where a new integrated mental health service was being implemented. Burnout was assessed at baseline, i.e., when the new service was being introduced, and after six months. Data were collected through self-administered questionnaires, including the Maslach Burnout Inventory (MBI) and instruments measuring professional satisfaction and psychosocial factors. Generalised estimating equations (GEE) were used to assess the association between change in the core dimension of burnout (emotional exhaustion) and relevant work-related and psychosocial factors.

Results

A total of 136 (93.8%) of HCWs completed and returned their questionnaires at six months. There was a non-significant reduction in the burnout level between the two time points. In GEE regression models, high depression symptom scores (adjusted mean difference (aMD) 0.56, 95% CI 0.29, 0.83 $p<0.01$), experiencing two or more stressful life events (aMD 1.37, 95% CI 0.06, 2.14 $p<0.01$), being a community health extension worker vs. facility-based HCW (aMD 5.80, 95% CI 3.21, 8.38 $p<0.01$), perceived job insecurity (aMD 0.73, 95% CI 0.08, 1.38 $p=0.03$) and older age (aMD 0.36, 95% CI 0.09, 0.63 $p=0.01$) were significantly associated with higher levels of emotional exhaustion longitudinally.

Conclusion:

In the short-term, there was no significant change in the level of burnout in the context of adding mental healthcare to the workload of HCWs. However, longer term and larger scale studies are required to substantiate this. This evidence can serve as baseline information for an interventions development to enhance wellbeing and reduce burnout.

Background

Mental healthcare is a neglected component of healthcare in most low- and middle income countries (LMICs). As a consequence, the treatment gap even for serious mental disorders in LMICs is substantial (65). The available mental health services are mostly centralized and led by a small number of specialists (68). In recognition of the impossibility of reaching all in need through specialists, the World Health Organization (WHO) developed the Mental Health Gap Action Programme (mhGAP) (266) . This initiative provides interventions for improving access to care through task-shared care integrated into primary healthcare (PHC)(253) .There is some evidence indicating the feasibility (67), efficiency and cost-effectiveness (68) of this model of care provision, in addition to some evidence that PHC-based care may be less stigmatising (69). Moreover, as PHC is the place where most people across the world receive health care (56), task-sharing is an attractive proposition for achieving Universal Health Coverage (UHC) (57, 58).

However, the acute shortage and maldistribution of HCWs in LMICs (267, 268) has major implications for the feasibility and acceptability of task-shared care. For example, in Ethiopia the HCW to population ratio of 0.7 per1000 population is much lower than the minimum that has been recommended by WHO (2.3 per 1000) (59). This occurs in the context of a fragile healthcare system and a high disease burden, low healthcare resources and stressful work environment (269, 270). Therefore, engaging HCWs in task-shared care for people with mental health problems may expose them to an additional burden with the potential for increased work-related stress and burnout. On the other hand, training HCWs in mental healthcare could reduce stress and burnout because they are better equipped to deal with a set of commonly-encountered conditions and may also develop understanding of their own mental health needs.

Ethiopia has chosen to undertake the expansion of mental healthcare through integration into primary care as a major strategic agenda (70). Although this will undoubtedly expand the responsibility of primary HCWs and may expose them to job-related health issues such as burnout, appropriate training support may increase their competence and confidence. The latter may enhance their wellbeing. Expanding the responsibility of HCWs doess not necessarily increase the risk of burnout however significant the risk might be.

Burnout is a phenomenon resulting from exposure to continuous job-related stress (29). It is understood to be a group of three sub-syndromes constituted as domains. The first domain is emotional exhaustion (EE), which is a feeling of being overextended and inability to be compassionate to others. The second domain is cynicism (CY) or depersonalisation in which the HCW distances him/herself from the patient and begins to see them as impersonal objects. The third domain is a reduced feeling of personal accomplishment (PA). EE is considered as the core element of burnout (30). In this state, the provider evaluates his/her work negatively irrespective of patient outcomes (31, 32). Burnout may have serious consequences for the quality of healthcare delivery, patient safety (43, 44) and the wellbeing of the HCW. For example, burnout has been associated with chronic fatigue (271), physical health problems such as low back pain(27) , cardiovascular diseases (272), depression (40, 41), and substance abuse problems (42) in HCWs experiencing burnout.

Several factors have been found to be associated with the development of HCW burnout, including socio-demographic (144, 273), psychosocial (39), work related factors, such as role ambiguity and lack of experience (10), and team relationships (9). Lower job satisfaction and employee's negative attitude towards their job are linked with burnout (45) . Several studies have indicated that African HCWs have low job satisfaction (52-54), which may increase the risk of burnout (55). Development of burnout can impact on the HCW's motivation (46), intention to stay in the position (47), compassion to (48), and communication with, patients (49) as well as service quality (50, 51).

However, HCW wellbeing in general, and level of burnout and professional satisfaction in the context of mental health service integration in particular, is a little-investigated area in LMICs especially in sub-Saharan Africa. (27, 49, 71). In addition, most of the available studies on the subject in LMIC have used a cross sectional study design (9, 10, 27, 72, 274).

In our previous studies, we have explored the conceptualisaton of burnout, job related wellbeing and wellbeing (275) and cross sectionally estimated the magnitude of burnout (276) in HCWs in a rural Ethiopian district. In this study we aim to evaluate change in burnout symptoms and associated factors among rural primary HCWs during the implementation of a new integrated mental health service. ,

Method

Study design

A cohort study was conducted with HCWs working in governmental health facilities in a rural Ethiopia district, followed up for six months.

Setting

The study was conducted over six months, between July 2014 and December 2014, in the Sodo district of the Gurage zone, Ethiopia. Details of the setting have been reported previously and will be described in brief (276). During the study, the district had 54 rural and four urban sub districts and an estimated population of 161,952 (79,356 men; 82,596 women) (265).

Sodo district was chosen for this study because the district hosts the PRogramme for Improving of Mental health care (PRIME) where the integration of mental health services in PHCs through task-sharing was taking place (185). Primary care in the integration site consisted of 66 facilities that include 8 primary health centres and 58 health posts. The health centres are staffed by health officers (practitioners with three to four years of clinical training), nurses and midwifes. The health posts are led by community-based health extension workers (HEWs). HEWs are high school graduates with one year training. Their work focus on prevention and health promotion, HEWs mainly provide a house to house service. The Ethiopian healthcare system has three tiers. The first level is made of rural health centres and primary hospitals; the second level is general hospitals, and the third one is specialised referral hospitals. The workforces in the first level are health officers, nurses and midwives with the expectation of serving 15,000-25,000 community members in rural area and up to 40,000 in urban areas (64). Mental health service training guided by mhGAP intervention guide manual (192) was provided to all facility and community based HCWs based on an initial mental healthcare plan (190).

Study participants

To be included, participants had to fulfil the following criteria: (1) work in a PHC setting in the Sodo district; (2) have direct engagement in health service provision; (3) be already trained in mhGAP and; (4) have a minimum of three months work experience in the current

work place or similar setting. The details of the recruitment and six months follow up are presented in Figure 1.

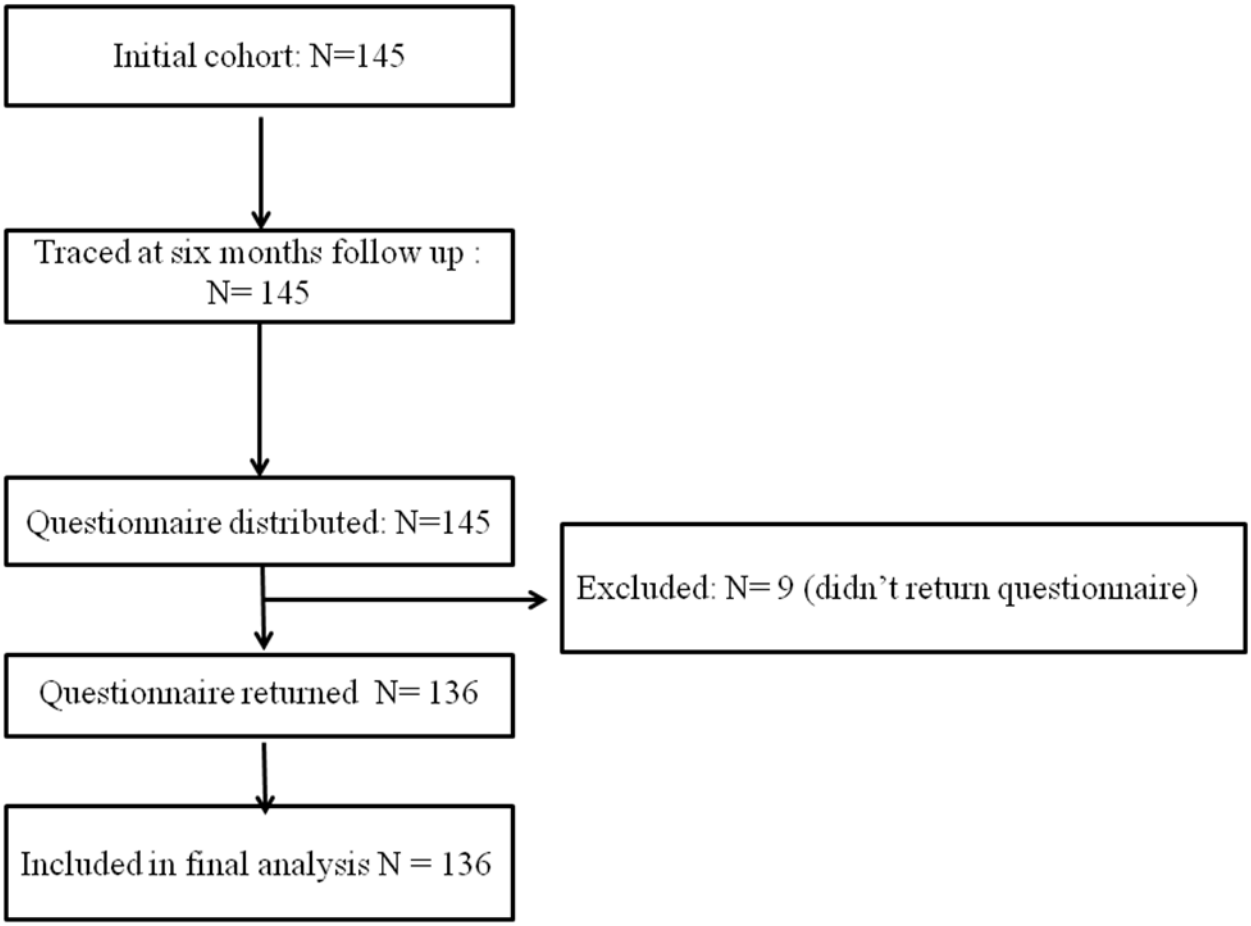


Figure 1: Cohort flow diagram

Participants were grouped based on their primary place of work as facility based or community based HCWs. Facility based HCWs are health officers, nurses and midwives, and the community based HCWs.

Outcome variables and measures

The outcome measure was used at baseline and six months follow up. The primary outcome was change in level of burnout and secondary outcomes was the change in the professional satisfaction. The Maslach Burnout Inventory (MBI) human service survey version, a widely used burnout measure, was the main scale used as a measure of burnout (213). The scale has 22 items (214) focused at assessing emotional exhaustion (EE), Cynicism (CY) and reduced

personal accomplishment (PA) domains. The interpretation of the MBI score relies on the total score of each domain. High score of EE and CY domains and low score of PA domain represent burnout (277). EE score of 0-16 and CY score of 0-6 are considered low or normal scores, while scores above 16 for EE and scores above 6 on CY are considered moderate or high score. (278). The psychometric property of the MBI was generally acceptable and comparable with other studies (30) . In our baseline cross sectional study we assessed the psychometric properties of MBI. The overall internal consistency of the 22 items was adequate (Cronbach's α=0.70). The domain specific internal consistency was acceptable for EE (Cronbach's α=0.75) and PA domains (Cronbach's α=0.80). However, the internal consistency of the domain CY was unacceptable (Cronbach's α =0.18). We have, therefore, excluded the CY domain from all the analysis.

Professional satisfaction was also assessed as a secondary outcome using the Job Satisfaction Questionnaire (JSQ). This is a 15 item scale(279) rated on a seven point scale with responses ranging from extremely dissatisfied (coded as 1) to extremely satisfied (coded as 7). The JSQ evaluates intrinsic and extrinsic job satisfaction and can also be summarised as an overall job satisfaction score(279) . It has good overall internal consistency (Cronbach's α= 0.89).

Exposure variables

Socio-demographic and work-related characteristics were assessed using a structured questionnaire locally designed to collect information on age, gender, marital status, educational level, place of work, type of work and work experience.

Psychosocial factors: Depression was assessed using the locally validated nine item Patient Health Questionnare (PHQ-9) (25, 219, 229, 230) a cutoff point five and above was used to define probable depression. Social support was assessed using the three item Oslo social support scale (OSS) (222) and the list of threatening experiences (LTE) was used to identify the expeicence of stressful life events in the previous six months (223, 224). The Alcohol Use Disorders Identification Test (AUDIT) was used to evauate the alcohol consumption and drinking behaviour of the participants (226).

The Job Content Questionnaire (JCQ) was used to measure work-related factors; it is a 27 item scale with three main domains that focus on the individual's decision latitude, psychological demand and social support. This scale also assesses the physical demands of the job and job insecurity (25). The decision latitude is consisted of two things the first is job skill discretion; that is the opportunity to use a given skill in executing the job. The second is decision making authority which is the degree of making autonomous decision regarding how to do the job.

Procedures for data collection

At baseline, the instruments were pilot tested in a neighbouring area of Silte zone on 25 primary HCWs (the data have not been included in this report). All the questionnaires were in self-report format. At both time points, (i.e at baseline or T1 and six months follow up or T2) MS provided information about the study and how to fill the self-reported questionnaire and distributed the questionnaires to the participants. Participants returned the completed questionnaires in a sealed envelope.

Data management and analysis

Epi Data version 3.1 (http://www.epidata.dk/) was used for double data entry and Stata version 13 (StataCorp, 1985-2013) was used for statistical analysis. In addition to simple descriptive statistics, longitudinally collected data were analysed using generalised estimating equation (GEE). Change in EE was considered as the main outcome representing burnout and professional satisfaction as secondary outcome, whereas demographic, psychosocial and work related factors were treated as covariates. Factors associated with change in the major outcomes variables were explored. In the descriptive section burnout result was summarised by adding those who scored moderate to high EE and low PA. Those endorsing either one of the two or both domains of burnout were grouped as having burnout.

Ethical approval

This study was approved by the Addis Ababa University, College of Health Sciences Institutional Review Board (protocol number 011/14/Psy). Written informed consent was obtained from all study participants after providing information about the aim of the study to the participants. Hard copies of the data were kept in a locked cabinet and soft copies were kept in password protected computers in order to maintain anonymity of participants and

confidentiality of information. Care was available after the interviews for those experiencing distress or any sort of emotional problem, including suicidal ideation.

Results

Socio-demographic characteristic of the study participants

From the 145 HCWs recruited at baseline, 136 (93.8%) competed the six months follow-up assessment. At baseline most participants were female (61.0%, n=80), under 35 years of age (93.0% n=110), single (63.0%, n=83) and nurses (51.0%, n=70). About a third of the participants were HEWs (33.0%, n=45) working in the community while two thirds were facility-based (Table 1). Loss to follow up was not significantly associated with the outcome of interest or demographic factors.

Table 18 Baseline demographic characteristics of study participants

	Characteristics	Number	Percent
Gender(n=148)	**Male**	57	39
	Female	91	61
Age (n= 145)	**<25**	57	39
	25-35	79	55
	>35	9	6
Marital status (n=145)	**Single**	96	66
	Married	49	34
Professional group(n=148)	**Nurse**	75	51
	Health officer	9	6
	Midwife	13	9
	Health Extension Worker	51	34
Place of work (n=145)	**Urban**	64	44
	Rural	81	56

Overall burnout score

The proportion categorised as having moderate to high burnout in both domains, EE and reduced PA, was relatively low at both time points: 3.8% (n=5) at baseline and 4.6% (n=6) at the six months follow-up time-point (p-value =0.765) (Table 2). There was statistically non significant change in the proportion endorsing either of the sub domains (42.9%, n=57 versus 46.6%, n=61; p-value = 0.584).

Table 19: Baseline and endline burnout scores of study participants using Emotional exhaustion and Personal accomplishment domains

		Baseline			Endline		
Burnout domains	**Score**	**Overall N (%)**	**Community based HCWs N (%)**	**Facility based HCWs N (%)**	**Overall N (%)**	**Community based HCWs N (%)**	**Facility based HCWs N (%)**
Emotional exhaustion	**Moderate to high burnout***	11 (7.7)	9 (18.0)	2 (2.2)	10 (7.5)	5 (11.4)	5 (5.6)
	Low burnout	131 (92.2)	41 (82.0)	90 (97.8)	123 (92.5)	39 (88.6)	84 (94.4)
Personal accomplishment	**Moderate to high burnout**	59 (43.7)	22 (50.0)	37 (40.6)	64 (48.5)	21 (50.0)	43 (47.8)
	Low burnout	76 (56.3)	22 (50.0)	54 (59.3)	68 (61.9)	21 (50.0)	47 (52.2)
***Significant difference between community and facility based HCWs at baseline** **HCWs=Health care workers**							

Domain-specific burnout scores

Emotional Exhaustion (EE)

The median (Interquartile range) scores were 3 (0, 23) at baseline and 2 (0, 29) at follow up (Table 4). The proportion of participants with elevated EE score was almost identical at the two time points (T1=7.7% (n=11) and T2=7.5% (n=10)), with no statistically significant difference. At both time points, community-based HEWs experienced higher EE than

facility-based HCWs (p = 0.12). However, there was no statistically significant change in EE scores over time by professional group (Table 3). At both time points, women were more likely to report moderate to high EE: 11.2% (n=10) in women vs. 1.9% (n=1) in men at T1 and 10.1% (n=8) in women at T1 vs. 3.9% (n=2) in men at T2.

Table 20: Burnout domain score status of study participants stratified by the study period

Emotional exhaustion (EE) and reduced personal accomplishment (PA) Scores	**Baseline**		**Endline**	
	N	**%**	**N**	**%**
Low score in both domains (i.e. EE and PA)	71	53.4	64	48.8
Moderate to high score only in one domain (i.e. in EE or in PA but not both)	57	42.9	61	46.6
Moderate to high score in the two domains (i.e. EE and PA)	5	3.8	6	4.6

Personal Accomplishment (PA)

The median (Interquartile range) scores were 34 (0, 47) at baseline and 32 (0, 43) at six months follow up (Table 4). At T1, 43.7% (n=59) and at T2 48.5% (n= 64) participants reported reduced feeling of PA defined by the standard authors' cut-off. The baseline differences in PA were maintained at six months follow up in the various professional groups without a statistically significant change over time.

Secondary outcomes

Job satisfaction: There was no significant change in intrinsic and extrinsic job satisfaction scores, and consequently of overall job satisfaction, between T1 and T2 (Table 4).

Explanatory variables

Job content: There was no marked change in the job content measure score in any of the domains of job content and control between T1 and T2 (Table 4).

Depressive symptoms: The proportion of HCWs with a high score on the PHQ has reduced from 20.6% (n= 29) at T1 to 11.2% (n= 5) at T2, which was statistically significant p=0.03.

(Table 4 about here)

Table 4: Median and 25th, 75th percentiles ranges of burnout, job content and satisfaction of study participants stratified by the time of survey

Burnout and job related factors	Baseline		Endline	
Burnout domain	Median	IQR (25th , 75th)	Median	IQR (25th , 75th)
Emotional exhaustion	3	(0, 23)	2	(0, 29)
Personal accomplishment	34	(0, 47)	32	(0, 43)
Job content domain				
Job skill discretion	34	(26, 44)	34	(32, 36)
Job decision-making authority	36	(24, 48)	36	(20, 48)
Job demands	34	(24, 46)	34	(26, 42)
Job decision latitude	72	(54, 90)	70	(44, 90)
Co-worker support	12	(8, 16)	12	(7, 16)
Supervisor support	12	(5, 17)	12	(5, 17)
Job insecurity	5	(3, 9)	5	(3, 8)
Job satisfaction				
Intrinsic job satisfaction	35	(15, 48)	35	(17, 46)
Extrinsic job satisfaction	35	(15, 54)	35	(18, 53)
Overall job satisfaction	72	(32, 99)	70	(38, 98)

Generalised Estimating Equation (GEE) Model

In the crude model, a longitudinal higher average EE score was associated with female gender, lower co-workers support, lower supervisor support, low job skill discretion (which is the opportunity to use one's specific skill), lower intrinsic and extrinsic job satisfaction. High PHQ score or elevated depressive symptoms (adjusted mean difference (aMD) = 0.56, 95% CI 0.29, 0.83 p<0.01), and having experience of a stressful life event (aMD = 1.37, 95% CI 0.60, 2.14 p<0.01), being community based HCWs (aMD = 5.80, 95% CI 3.21, 8.38 p<0.01) and high job insecurity (aMD = 0.73 95% CI 0.08, 1.38 p=0.03) were significantly associated with higher EE scores in both crude and fully adjusted models. Increase in age was significantly associated with higher EE in the fully adjusted model (aMD= 0.36, 95% CI 0.09, 0.63 p=0.01 (Table 5).

Table 5 Association of demographic, psychosocial and work related factors with emotional exhaustion using generalised estimating equations

		Crude Model			Fully adju
Selected characteristics	Response categories	**Mean difference**	**95% CI**	**P-value**	**Mean differenc**
Time		-0.04	-0.27, 0.17	0.68	0.16
Sex	Male	Ref			
	Female	2.68	0.95, 4.41	<0.01	-1.28
Age		-0.003	-0.18, 0.17	0.97	0.40
Marital status	Single	Ref			
	Married	0.77	-1.02, 2.56	0.40	-1.07
Place of work	Urban	Ref			
	Rural	1.51	-0.18, 3.20	0.08	1.63
Psychosocial factors	PHQ score	0.70	0.53, 0.87	<0.01	0.58
	Social support	0.32	-0.19, 0.85	0.22	-0.02
	Stressful life events	1.43	0.83, 2.02	<0.01	1.37
Profession	Facility based Healthcare workers	Ref			
	Community based Healthcare workers	5.71	4.0, 7.39	<0.01	5.65
Year of service		-0.23	-0.52, 0.05	0.11	-0.18
Job satisfaction	Intrinsic job satisfaction	-0.32	-0.43, -0.21	<0.01	-0.02
	Extrinsic job satisfaction	-0.22	-0.31, -0.14	<0.01	-0.14
Job content and control	Job skill discretion	-0.25	-0.46, -0.03	0.02	-0.22
	Job decision making attribute	-0.06	-0.19, 0.08	0.42	0.01
	Job demand	-0.02	-0.19, 0.16	0.84	0.06
	Co-workers support	-0.57	-1.05. -0.09	0.02	-0.50
	Supervisors support	-0.44	-0.75, -0.14	<0.01	0.22

Discussion

In this short-term cohort study of primary HCWs in Ethiopia, carried out during implementation of a new integrated mental healthcare service, we found no significant change in burnout or professional satisfaction. Community-based HCWs, females, older staff, those with higher depressive symptom scores, those having two or more threatening life experiences at baseline and those with high perceived job insecurity were at increased risk of emotional exhaustion. Since health service in general and mental health service in particular is dependent on the HCWs wellbeing (189), the results of this study may inform intervention development to promote HCWs wellbeing and facilitate the integration of mental health service in other PHCs.

As far as we know, this is the first study of its kind conducted in the context of implementation of integrated mental healthcare and one of the few longitudinal studies on HCW burnout in a LMIC. The results indicate that burnout level in HCWs did not increase or worsen during an early integration stages of a new mental health programme. The steady nature of burnout was also reported in the findings of a longitudinal study on burnout of teachers (248). In other contexts, for example, in humanitarian work context, burnout and anxiety levels may rise in the initial stage and then settle at a steady level over three to six months of follow up (249).

Although the work itself might be additional burden, the enhancement of knowledge through the mhGAP for the diagnosis and treatment of mental disorders (253), may have boosted their confidence in dealing with those with complex health needs and thus counter balanced potential negative impact of additional work load. This can help them to have more confidence and skill in their work, especially while handling people in need of mental health services.

While there might be some overlap between the constructs of depression and EE, some have reported depression as a predictor of burnout (40) while other studies fail to find association (245). Our study found association between EE and depression but only depression reduced significantly during the follow up suggesting perhaps the two constructs might be different.

Although some studies have found association between social support and burnout (241) , we did not find such association. However, being community based health worker (HEW) was significantly associated with burnout. This may have arisen from the difference in the job demand as well as control over their job (238). Lower level of education might also have contributed as suggested in an Iranian health workers study (144).

In contrast to many African studies (52-54), including Ethiopian studies (181, 182), in this study we found that there is a good level of professional satisfaction among the HCWs which was steady over the six months follow up period. This is a promising and favourable situation for scaling up of not only mental health care but also healthcare in general as envisaged in the sustainable development goals [74].

The study has important limitations that impact interpretation. First, the sample size was relatively small although all health workers from the district were included. Secondly, there is the potential for social desirability bias due to stigma against reporting burnout and associated concepts. Thirdly, although some pre-testing and reliability checks were carried out, the outcome measures had not been validated formally in the study setting. Finally, linked to the above problem, is the fact that, one of the three domains (CY) was excluded from analysis because of the low internal consistency.

Conclusion

Providing mental health services did not appear to have a significant short term negative effect on the level of burnout and professional satisfaction of primary HCWs.

The results of this study can be used as baseline information to develop an intervention aimed at improving primary HCWs wellbeing in Ethiopia. It can also be used as a signal of the existence of burnout for policy makers and healthcare managers. Further studies are needed to assess HCWs wellbeing in a holistic manner and its effect on the health service, patient satisfaction and outcome. Intervention to enhance wellbeing should give priority to community healthcare workers given the higher level of burnout and nature of their job.

References

1. WHO. The Kampala Declaration and Agenda for Global Action. Geneva: 2008.

2. Chen L, Evans T, Anand S, Boufford J, Brown H, Chowdhury M, et al. Human resources for health: overcoming the crisis. Lancet 2004;364:1984-90.
3. Belita A, Mbindyo P., English M. Absenteeism amongst health workers – developing a typology to support empiric work in low-income countries and characterizing reported associations. BMC Human Resources for Health 2013;11.
4. Fieno VJ, Dambisya MY, George G, Benson K. A political economy analysis of human resources for health (HRH) in Africa. Human Resources for Health. 2016;14(44).
5. Kinfu Y, Dal Poz RM, Mercerb H, Evans BD. The health worker shortage in Africa: are enough physicians and nurses being trained? Bull World Health Organ. 2009 (87):225–30.
6. Dal Poz M, Kinfu Y, Dräger S, Kunjumen T. Counting health workers: definitions, data, methods and global results. World Health Organization: Department of Human Resources for Health. 2007.
7. Buykx P, Humphreys J, Wakerman J, Pashen D. Systematic review of effective retention incentives for health workers in rural and remote areas: Towards evidence-based policy. Australian Journal of Rural Health. 2010;18(3):102-9.
8. Haq Z, Iqbal Z, A. R. Job stress among community health workers: a multi-method study from Pakistan. International journal of mental health systems. 2008;2(15):1-6.
9. Lasebikan VO, Oyetunde MO. Burnout among nurses in a Nigerian general hospital: Prevalence and associated factors. ISRN nursing. 2012;2012.
10. Aloulou J, Damak R, Masmoudi F, Sidhom O, Amami O. Burn out in health care providers: a Tunisian study about 142 nurses. La Tunisie Medicale. 2013;91(1):44-9.
11. Crabbe J, Bowley D, Boffard K, Alexander DA, Klein S. Are health professionals getting caught in the crossfire? The personal implications of caring for trauma victims. Emergency Medicine Journal. 2004;21(5):568-72.
12. Bonenberger M, Aikins M, Akweongo P, Wyss K. The effects of health worker motivation and job satisfaction on turnover intention in Ghana: a cross-sectional study. Human Resources for Health 2014;12:43.
13. Graveling R, Crawford J, Cowie H, Amati C, Vohra S. A Review of Workplace Interventions that Promote Mental Wellbeing in the Workplace IOM. 2008.
14. Mateen F, Dorji C. Health-care worker burnout and the mental health imperative. wwwthelancetcom. 2009;374
15. Organization WH. Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies: World Health Organization; 2010.
16. Alhassan RK, Spieker N, van Ostenberg P, Ogink A, Nketiah-Amponsah E, de Wit TFR. Association between health worker motivation and healthcare quality efforts in Ghana. Human resources for health. 2013;11(1):37.
17. Wickramasinghe V. The mediating effect of job stress in the relationship between work-related dimensions and career commitment. J Health Organ Manag. 2016 May 16;30(3):408-20. PubMed PMID: 27119394.
18. Dovlo D. Wastage in the health workforce: some perspectives from African countries. Human resources for health. 2005 Aug 10;3:6. PubMed PMID: 16092964. Pubmed Central PMCID: 1198245.
19. Jensen N. The Health Worker Crisis: an analysis of the issues and main international responses. UK: Health poverty action 2013.
20. (WHO) WHO. Working Together for health Geneva: WHO, 2006.
21. Hall HL, Johnson J, Watt I, Tsipa A, O'Connor BD. Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review. PLoS ONE. 2016.
22. UNDP. SUSTAINABLE DEVELOPMENT GOALS 2016 [accessed on 1 April 2017]. Available from: http://www.undp.org/content/undp/en/home/sustainable-development-goals.html.

23. WHO. Global Strategy on human resources for health: workforce 2030. Draft resolution World Health Organisation 2016 Contract No.: EB138/CONF./5.
24. WHO. WHO Global Code of Practice on the International Recruitment of Health Personnel. World Health Organisation 2010 Contract No.: WHA63.16.
25. Leka S, Jain A, Organization WH. Health impact of psychosocial hazards at work: an overview. 2010.
26. Jaafarpour M, Khani A. Evaluation of the nurses' job satisfaction, and its association with their moral sensitivities and well-being. Journal of clinical and diagnostic research: JCDR. 2012;6(10):1761.
27. Boran A, Shawaheen M, Khader Y, Amarin Z, Hill Rice V. Work-related stress among health professionals in northern Jordan. Occupational Medicine. 2011;62(2):145-7.
28. Dagget T, Molla A, Belachew T. Job related stress among nurses working in Jimma Zone public hospitals, South West Ethiopia: a cross sectional study. BMC nursing. 2016;15(1):39.
29. Freudenberger HJ. Staff burn-out. Journal of social issues. 1974;30(1):159-65.
30. Worley JA, Vassar M, Wheeler DL, Barnes LL. Factor structure of scores from the Maslach Burnout Inventory: A review and meta-analysis of 45 exploratory and confirmatory factor-analytic studies. Educational and Psychological Measurement. 2008;68(5):797-823.
31. Maslach C. Burned-out. Can J Psychiatr Nurs. 1979 Nov-Dec;20(6):5-9. PubMed PMID: 260904.
32. Maslach C, Schaufeli WB, Leiter MP. Job burnout. Annual review of psychology. 2001;52(1):397-422.
33. Abdulla L, Al-Qahtani DM, Al-Kuwari MG. Prevalence and determinants of burnout syndrome among primary healthcare physicians in Qatar. South African Family Practice. 2011;53(4):380-3.
34. Abdulghafour Y, Bo-hamra A, Al-Randi M, Kamel M, El-Shazly M. Burnout syndrome among physicians working in primary health care centers in Kuwait. Alexandria Journal of Medicine 2011;47:351-7.
35. Johnson S, Osborn DP, Araya R, Wearn E, Paul M, Stafford M, et al. Morale in the English mental health workforce: questionnaire survey. The British Journal of Psychiatry. 2012;201(3):239-46.
36. Asrat. B, Girma. E, Soboka. M, K T. Mental Distress and Associated Factors among Health Professionals Working In Tertiary Teaching Hospital, South West Ethiopia. . J Depress Anxiety 2015;4(192).
37. Biksegn A, Kenfe T, Matiwos S, Eshetu G. Burnout Status at Work among Health Care Professionals in aTertiary Hospital. Ethiopian journal of health sciences. 2016;26(2):101-8.
38. Kabir MJ, Heidari A, Etemad K, Gashti AB, Jafari N, Honarvar MR, et al. Job Burnout, Job Satisfaction, and Related Factors among Health Care Workers in Golestan Province, Iran. Stress and health : journal of the International Society for the Investigation of Stress. 2016 Sep;8(9):2924-30. PubMed PMID: 27790345. Pubmed Central PMCID: Pmc5074751. Epub 2016/10/30. eng.
39. Bakker AB, Schaufeli WB, Demerouti E, Janssen PP, Van Der Hulst R, Brouwer J. Using equity theory to examine the difference between burnout and depression. 2000.
40. Bianchi R, Schonfeld IS, Laurent E. Is burnout separable from depression in cluster analysis? A longitudinal study. Social psychiatry and psychiatric epidemiology. 2015;50(6):1005-11.
41. Fong TC, Ho RT, Au-Yeung FS, Sing C, Law K, Lee L, et al. The relationships of change in work climate with changes in burnout and depression: a 2-year longitudinal study of Chinese mental health care workers. Psychology, health & medicine. 2016;21(4):401-12.
42. Jackson ER, Shanafelt TD, Hasan O, Satele DV, Dyrbye LN. Burnout and Alcohol Abuse/Dependence Among U.S. Medical Students. Academic Medicine. 2016;91(9):1251-6. PubMed PMID: 00001888-201609000-00025.

43. Dewa CS, Loong D, Bonato S, Trojanowski L, Rea M. The relationship between resident burnout and safety-related and acceptability-related quality of healthcare: a systematic literature review. BMC Medical Education. 2017 November 09;17(1):195.
44. Dyrbye LN, Shanafelt TD, Sinsky CA, Cipriano PF, Bhatt J, Ommaya A, et al. Burnout among health care professionals: A call to explore and address this underrecognized threat to safe, high-quality care. NAM (National Academy of Medicine) Perspective. 2017.
45. Dall'Ora C, Griffiths P, Ball J, Simon M, Aiken LH. Association of 12 h shifts and nurses' job satisfaction, burnout and intention to leave: findings from a cross-sectional study of 12 European countries. BMJ open. 2015;5(9):e008331.
46. Engelbrecht S. Motivation and burnout in human service work: The case of midwifery in Denmark: Roskilde University, Faculty of Psychology, Philosophy and Science Studies; 2005.
47. Arslan Yurumezoglu H, Kocaman G. Predictors of nurses' intentions to leave the organisation and the profession in Turkey. Journal of nursing management. 2016 Mar;24(2):235-43. PubMed PMID: 25900394. Epub 2015/04/23. eng.
48. Mitchel JA, Antoniak S, Lee JH, Kim SH, McGill M, Kasahara DI, et al. IL-13 Augments Compressive Stress-induced Tissue Factor Expression in Human Airway Epithelial Cells. Am J Respir Cell Mol Biol. 2015 Sep 25. PubMed PMID: 26407210.
49. Ratanawongsa N, Roter D, Beach MC, Laird SL, Larson SM, Carson KA, et al. Physician burnout and patient-physician communication during primary care encounters. Journal of general internal medicine. 2008;23(10):1581.
50. Chao M, Shih CT, Hsu SF. Nurse occupational burnout and patient-rated quality of care: The boundary conditions of emotional intelligence and demographic profiles. Japan journal of nursing science : JJNS. 2016 Jan;13(1):156-65. PubMed PMID: 26542752. Epub 2015/11/07. eng.
51. Nantsupawat A, Nantsupawat R, Kunaviktikul W, Turale S, Poghosyan L. Nurse Burnout, Nurse-Reported Quality of Care, and Patient Outcomes in Thai Hospitals. Journal of nursing scholarship : an official publication of Sigma Theta Tau International Honor Society of Nursing. 2016 Jan;48(1):83-90. PubMed PMID: 26650339. Epub 2015/12/10. eng.
52. van der Doef M, Mbazzi FB, Verhoeven C. Job conditions, job satisfaction, somatic complaints and burnout among East African nurses. Journal of Clinical Nursing. 2012;21(11-12):1763-75.
53. Delobelle P, Rawlinson JL, Ntuli S, Malatsi I, Decock R, Depoorter AM. Job satisfaction and turnover intent of primary healthcare nurses in rural South Africa: a questionnaire survey. Journal of advanced nursing. 2011;67(2):371-83.
54. Blaauw D, Ditlopo P, Maseko F, Chirwa M, Mwisongo A, Bidwell P, et al. Comparing the job satisfaction and intention to leave of different categories of health workers in Tanzania, Malawi, and South Africa. Global health action. 2013;6(1):19287.
55. Dugani S, Afari H, Hirschhorn LR, Ratcliffe H, Veillard J, Martin G, et al. Prevalence and factors associated with burnout among frontline primary health care providers in low-and middle-income countries: A systematic review. Gates Open Research. 2018;2.
56. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. The milbank quarterly. 2005;83(3):457-502.
57. Frenk J. Leading the way towards universal health coverage: a call to action. The Lancet. 2015;385(9975):1352-8.
58. Frenk J. Reinventing primary health care: the need for systems integration. The Lancet. 2009;374(9684):170-3.
59. WHO/AFRO. African Health Workforce Observatory website 2012. Available from: http://www.hrh-observatory.afro.who.int/en/home.html. .
60. FMOH. Health Policy of the Transitional Government of Ethiopia. Policy 1993.

61. Girma S, G/Yohannes A, Kitaw Y, Ye-Ebiyo Y, Seyoum A, Desta H, et al. Human Resource Development for Health in Ethiopia: Challenges of Achieving the Millennium development Goals. Ethiopian Journal of Health Development 2007;21(3):216-31.
62. FMOH. Health Sector Development Program IV 2010/11 – 2014/15 FINAL DRAFT. Policy. 2010.
63. El-Saharty S, Kebede S, Olango P, Siadat B. Health, Nutrition and Population (HNP) Discussion Paper Ethiopia: Improving Health Service Delivery. World Bank. 2009.
64. FMOH. National Health Sector Transformation Plan. In: Health Mo, editor. Addis Ababa2015.
65. Demyttenaere K, Bruffaerts R, Posada-Villa J, Gasquet I, Kovess V, Lepine J, et al. Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. Jama. 2004;291(21):2581-90.
66. Keynejad RC, Dua T, Barbui C, Thornicroft G. WHO Mental Health Gap Action Programme (mhGAP) Intervention Guide: a systematic review of evidence from low and middle-income countries. Evid Based Ment Health. 2017.
67. Organization WH. The World Health Report 2001: Mental health: new understanding, new hope: World Health Organization; 2001.
68. Joshi R, Alim M, Kengne AP, Jan S, Maulik PK, Peiris D, et al. Task shifting for non-communicable disease management in low and middle income countries–a systematic review. PloS one. 2014;9(8):e103754.
69. Organization WH. Integrating mental health into primary care: a global perspective. 2008.
70. National Mental Health Strategy 2012/13-2015/16, (2012).
71. Karsavuran S, Kaya S. The relationship between burnout and mobbing among hospital managers. Nurs Ethics. 2015 Sep 8. PubMed PMID: 26350707.
72. Kazmi R, Amjad S, Khan D. Occupational stress and its effect on job performance a case study of medical house officers of district Abbottabad. J Ayub Med Coll Abbottabad 2008;20(3).
73. Ashtari Z, Farhady Y, Khodaee M. Relationship between job burnout and work performance in a sample of Iranian mental health staff. African journal of psychiatry. 2009;12(1):71-4.
74. Abdulla L, Al-Qahtani D, Al-Kuwari M. Prevalence and determinants of burnout sydnrome among primary health care physicans in Quatar. South African Family Practice. 2011;53(4):380-3.
75. Broussard L, Myers R. School nurse resilience: experiences after multiple natural disasters. The Journal of school nursing : the official publication of the National Association of School Nurses. 2010 Jun;26(3):203-11. PubMed PMID: 20065101.
76. Faye A, Fournier P, Diop I, Philibert A, Morestin F, Dumont A. Developing a tool to measure satisfaction among health professionals in sub-Saharan Africa. Human Resources for Health 2013. 2013;11:30.
77. Halbesleben J, Buckleu M. Burnout in Organisational Life. Journal of Management. 2004;30(6):859-79.
78. Niu S. ILO list of occupational diseases and health care workers. Afr Newslett on Occup Health and Safety 2010;20(3):4-9.
79. Abera E, Yitayal M, Gebreslassie M. Turnover Intention and Associated Factors Among Health Professionals in University of Gondar Referral Hospital, Northwest Ethiopia. International Journal of Economics & Management Sciences. 2014.
80. Alhassan KR, Spieker N, Ostenberg P, Ogink A, Nketiah-Amponsah E, Rinke de Wit FT. Association between health worker motivation and healthcare quality efforts in Ghana. Human Resources for Health. 2013;11.
81. Altaras R, Nuwa A, Agaba B, Streat E, Tibenderana KJ, Martin S, et al. How Do Patients and Health Workers Interact around Malaria Rapid Diagnostic Testing, and How Are the Tests Experienced by Patients in Practice? A Qualitative Study in Western Uganda. PLoS ONE. 2016;11(8).
82. Maslach C, Jackson ES, Leiter PM. Maslach Burnout Inventory Manual Mind Garden 1996.
83. Cranwell-Ward J, Abbey A. Organisational Stress. Great Britain: Palgrave Macmillan; 2005.

84. Maslach C. Burnout and engagement in the workplace: new perspective. The European Health Psychologist 2011;13(3):44-7.
85. Backe E, Latza U. Comment on "Relationship between components of the metabolic syndrome and job strain using a brief job stress questionnaire (BJSQ)" by Kawada. International archives of occupational and environmental health. 2013 Apr 14. PubMed PMID: 23584234.
86. Kitaoka K, Masuda S. Academic report on burnout among Japanese nurses. Jpn J Nurs Sci. 2013 Dec;10(2):273-9. PubMed PMID: 24373450.
87. Peters M, Godfrey C, McInerney P, Soares C, Khalil H, Parker D. The joanna briggs institute reviewers' manual 2015: methodology for JBI scoping reviews. 2015.
88. Lyubomirsky S, King L, Diener E. The benefits of frequent positive affect: Does happiness lead to success? Psychological bulletin. 2005;131(6):803.
89. Tinubu BM, Mbada CE, Oyeyemi AL, Fabunmi AA. Work-related musculoskeletal disorders among nurses in Ibadan, South-west Nigeria: a cross-sectional survey. BMC musculoskeletal disorders. 2010 Jan 20;11:12. PubMed PMID: 20089139. Pubmed Central PMCID: PMC2823665. Epub 2010/01/22. eng.
90. Kuo WY, Huang CC, Weng SF, Lin HJ, Su SB, Wang JJ, et al. Higher migraine risk in healthcare professionals than in general population: a nationwide population-based cohort study in Taiwan. The journal of headache and pain. 2015;16:102. PubMed PMID: 26631235. Pubmed Central PMCID: PMC4668247. Epub 2015/12/04. eng.
91. Soutter AK, O'Steen B, Gilmore A. The student well-being model: A conceptual framework for the development of student well-being indicators. International Journal of Adolescence and Youth. 2014;19(4):496-520.
92. Diener E, Lucas R, Helliwell JF, Helliwell J, Schimmack U. Well-being for public policy: Series in Positive Psychology; 2009.
93. James G. Well-Being Its Meaning, Measurement and Moral Importance. book. 1988:299.
94. Andrews G. A Glossary of Terms for community health care and Services for older persons WHO Document. 2004.
95. Organization WH. Constitution of the world health organization. 1995.
96. Manderscheid R, Ryff C, Freeman E, McKnight-Eily L, Dhingra S, Strine T. Evolving definitions of mental illness and wellness. Preventing chronic disease. 2010;7(1):A19.
97. Control CfD, Prevention. Well-being concepts. Health-Related Quality of Life (HRQOL). 2013.
98. FMOH. NATIONAL MENTAL HEALTH STRATEGY 2012/13 - 2015/16. 2012.
99. Puig A, Baggs A, Mixon K, Park Y, Kim B, Lee S. Relationship between Job burnout and Personal Wellness in Mental Health Professionals. Journal of Employment Counseling. 2012;49:98-109.
100. Maben J, Peccei R, Adams M, Robert G, Richardson A, Murrells T, et al. Exploring the relationship between patients experiances of care and the influence of staff motivation, affect and wellbeing. NIHR service delivery and organisation programme. 2012;Final Report.
101. Jonge J, Bomsa H, Peter R, Siegrist J. Job strain, effort-reward imbalance and employee well-being: a large-scale cross-sectional study. Social Science & Medicine. 2000;50:1317-27.
102. Rodriguez I, Bravo J, Peiro J, Schaufeli W. The Demands-Control-Support model, locus of control and job satsfaction: a longitudnal study Department of Management, University of Missouri-Columbia, Columbia, Missouri 65211–6100, USA. 2001;15(2):97-114.
103. Demerouti E, Bakker A, Nachreiner F, Schaufeli W. The Job Demands-Resources Model of Burnout. Journal of Applied Psychology. 2001;86(3):499-512. Cupyright 2001 by the American Psychological Association, Inc. 002I-9010/01/S5.QG.
104. Karasek R. Low social control and physiological deregulation—the stress–disequilibrium theory, towards a new demand–control model. SJWEH Suppl 2008;6:117-35.

105. Schaufeli W, Bakker A. Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. Published online in Wiley InterScience (wwwintersciencewileycom). 2004;25:293-315.
106. Bernal D, Campos-Serna J, Tobias A, Vargas-Prada S, Benavides FG, Serra C. Work-related psychosocial risk factors and musculoskeletal disorders in hospital nurses and nursing aides: a systematic review and meta-analysis. International journal of nursing studies. 2015;52(2):635-48.
107. Keyes C. Social Well-Being. Social Psychology Quarterly. 1998;61(2):121-40.
108. Wells I. PSYCHOLOGICAL WELL-BEING:PSYCHOLOGY OF EMOTIONS, MOTIVATIONS AND ACTIONS. 2010. Nova Science Publishers, Inc. New York.
109. Schaufeli W, Enzmann D. The burnout companion to study and practice: A critical analysis: CRC press; 1998.
110. Silva AA, Souza JM, Borges FN, Fischer FM. Health-related quality of life and working conditions among nursing providers. Revista de saude publica. 2010 Aug;44(4):718-25. PubMed PMID: 20676562. Epub 2010/08/03. eng.
111. Obadeji A, Oluwole LO, Dada MU, Oshatimi MA. Alcohol use and psychological wellbeing of health workers in a Nigerian Hospital: An exploratory study. Malawi medical journal : the journal of Medical Association of Malawi. 2018 Mar;30(1):31-6. PubMed PMID: 29868157. Pubmed Central PMCID: PMC5974384. Epub 2018/06/06. eng.
112. Rout U, Rout J. Stress Management for Primary Health Care Professionals. Book. 2002. KLUWER ACADEMIC PUBLISHERS.
113. Cooper C. From stress to wellbeing volume 1: the theory and research on occupational stress and wellbeing: Springer; 2013.
114. Lloyd C, King R, Chenoweth L. Social work, stress and burnout: A review. Journal of mental health. 2002;11(3):255-65.
115. COMMISSION NOHAS. The NOHSC Symposium on the OHS Implications of Stress. 2001.
116. Maslach C, Leiter M. Early Predictors of Job Burnout and Engagement. Journal of Applied Psychology. 2008;93(3):498-512.
117. health Cws. EXPOSURE TO STRESS Occupational Hazards in Hospitals. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

National Institute for Occupational Safety and Health. 2008
118. Stranks J. Stress at Work Management and Prevention. Book. 2005.
119. Yu J, Ren X, Wang Q, He L, Wang J, Jin Y, et al. The role of social support on occupational stress among hospital nurses. International journal of clinical and experimental medicine. 2014;7(9):3000-4. PubMed PMID: 25356174. Pubmed Central PMCID: PMC4211824. Epub 2014/10/31. eng.
120. Cheng CY, Liou SR, Tsai HM, Chang CH. Job stress and job satisfaction among new graduate nurses during the first year of employment in Taiwan. International journal of nursing practice. 2015 Aug;21(4):410-8. PubMed PMID: 24666722. Epub 2014/03/29. eng.
121. Chao MC, Jou RC, Liao CC, Kuo CW. Workplace stress, job satisfaction, job performance, and turnover intention of health care workers in rural Taiwan. Asia-Pacific journal of public health. 2015 Mar;27(2):NP1827-36. PubMed PMID: 24174390. Epub 2013/11/01. eng.
122. Oh H, Uhm DC, Yoon YJ. Workplace Bullying, Job Stress, Intent to Leave, and Nurses' Perceptions of Patient Safety in South Korean Hospitals. Nursing research. 2016 Sep-Oct;65(5):380-8. PubMed PMID: 27579505. Epub 2016/09/01. eng.
123. Bahrami-Ahmadi A, Mortazavi SA, Soleimani R, Nassiri-Kashani MH. The effect of work-related stress on development of neck and shoulder complaints among nurses in one tertiary hospital in Iran. Medical journal of the Islamic Republic of Iran. 2016;30:471. PubMed PMID: 28491846. Pubmed Central PMCID: PMC5419226. Epub 2017/05/12. eng.

124. Lin TC, Lin HS, Cheng SF, Wu LM, Ou-Yang MC. Work stress, occupational burnout and depression levels: a clinical study of paediatric intensive care unit nurses in Taiwan. Journal of clinical nursing. 2016 Apr;25(7-8):1120-30. PubMed PMID: 26914523. Epub 2016/02/26. eng.
125. Atanes AC, Andreoni S, Hirayama MS, Montero-Marin J, Barros VV, Ronzani TM, et al. Mindfulness, perceived stress, and subjective well-being: a correlational study in primary care health professionals. BMC complementary and alternative medicine. 2015;15(1):303.
126. Uzun O, Sevinc S. The relationship between cultural sensitivity and perceived stress among nurses working with foreign patients. Journal of clinical nursing. 2015 Dec;24(23-24):3400-8. PubMed PMID: 26449280. Epub 2015/10/10. eng.
127. Lasebikan V, Oyetunde M. Burnout among Nurses in a Nigerian General Hospital: Prevalence and Associated Factors. International Scholarly Research Network ISRN Nursing. 2012:6
128. Maslach C, Schaufeli W, Leiter P. Job Burnout. Annual Review of Psychology. 2001;52:397-422.
129. Felton J. Burnout as a clinical entity its importance for health care workers. occupMed. 1998;48(4):237-50.
130. Association AP. Diagnostic and statistical manual of mental disorders (DSM-5®): American Psychiatric Pub; 2013.
131. Van Der Klink JJ, Van Dijk FJ. Dutch practice guidelines for managing adjustment disorders in occupational and primary health care. Scandinavian journal of work, environment & health. 2003:478-87.
132. Abdo S, El-Sallamy R, El-Sherbiny A, Kabbash I. Burnout among physicians and nursing staff working in the emergency hospital of Tanta University, Egypt. Eastern Mediterranean Health Journal. 2015;21(12).
133. Houkes I, Winants Y, Twellaar M, Verdonk P. Development of burnout over time and the causal order of the three dimensions of burnout among male and female GPs. A three-wave panel study. BMC Public health. 2011;11(1):240.
134. Organization WH. Gender and health workforce statistics. World Health Organization Accessed April. 2008;5:2016.
135. Go¨ rgens-Ekermans G, Brand T. Emotional intelligence as a moderator in the stress–burnout relationship: a questionnaire study on nurses. Journal of clinical nursing. 2012;21:2275–85.
136. Wang Y, Chang Y, Fu J, Wang L. Work-family conflict and burnout among Chinese female nurses: the mediating effect of psychological capital. BMC public health. 2012;12:915.
137. Jaafarpour M, Khanilt A. Evaluation of the Nurses' Job Satisfaction, and Its Association with Their Moral Sensitivities and Well-being. Journal of Clinical and Diagnostic Research. 2012;6(10):1761-4.
138. French H, Du Plessis E, Scrooby B. The emotional well-being of the nurse within the multi-skill setting. Health SA Gesondheld. 2011;16(1): 9.
139. Khamisa N, Oldenburg B, Peltzer K, Ilic D. Work related stress, burnout, job satisfaction and general health of nurses. Int J Environ Res Public Health. 2015 Jan;12(1):652-66. PubMed PMID: 25588157. Pubmed Central PMCID: 4306884.
140. Brand SL, Coon JT, Fleming LE, Carroll L, Bethel A, Wyatt K. Whole-system approaches to improving the health and wellbeing of healthcare workers: A systematic review. PloS one. 2017;12(12):e0188418.
141. Aloulou J, Damak R, Masmoudi F, Sidhom O, Amami O. Burn out in health care providers: A Tunisian study about 142 nurses. LA TUNISIE MEDICALE 2013;91(01):44-9.
142. Leiter M. A Two Process Model of Burnout and Work Engagement: Distinct Implications of Demands and Values. Supplemento A, Psicologica. 2008;30(A52-A58).
143. Lasalvia A, Bonetto C, Bertani M, Bissoli S, Cristofalo D, Marrella G, et al. Influence of perceived organisational factors on job burnout: survey of community mental health staff. The British Journal of Psychiatry 2009;195:537-44.

144. Kabir MJ, Heidari A, Etemad K, Gashti AB, Jafari N, Honarvar MR, et al. Job burnout, job satisfaction, and related factors among health care workers in Golestan Province, Iran. Electronic physician. 2016;8(9):2924.
145. Guo YF, Luo YH, Lam L, Cross W, Plummer V, Zhang JP. Burnout and its association with resilience in nurses: A cross-sectional study. Journal of clinical nursing. 2018 Jan;27(1-2):441-9. PubMed PMID: 28677270. Epub 2017/07/06. eng.
146. Shi Y, Guo H, Zhang S, Xie F, Wang J, Sun Z, et al. Impact of workplace incivility against new nurses on job burn-out: a cross-sectional study in China. BMJ open. 2018 Apr 5;8(4):e020461. PubMed PMID: 29626049. Pubmed Central PMCID: PMC5892738. Epub 2018/04/08. eng.
147. Park S-A, Ahn S-H. Relation of compassionate competence to burnout, job stress, turnover intention, job satisfaction and organizational commitment for oncology nurses in Korea. Asian Pac J Cancer Prev. 2015;16(13):5463-9.
148. Karsavuran S, Kaya S. The relationship between burnout and mobbing among hospital managers. Nursing ethics. 2017 May;24(3):337-48. PubMed PMID: 26350707. Epub 2015/09/10. eng.
149. Nie Z, Jin Y, He L, Chen Y, Ren X, Yu J, et al. Correlation of burnout with social support in hospital nurses. International journal of clinical and experimental medicine. 2015;8(10):19144-9. PubMed PMID: 26770546. Pubmed Central PMCID: PMC4694446. Epub 2016/01/16. eng.
150. Sun JW, Bai HY, Li JH, Lin PZ, Zhang HH, Cao FL. Predictors of occupational burnout among nurses: a dominance analysis of job stressors. Journal of clinical nursing. 2017 Dec;26(23-24):4286-92. PubMed PMID: 28177546. Epub 2017/02/09. eng.
151. Wisetborisut A, Angkurawaranon C, Jiraporncharoen W, Uaphanthasath R, Wiwatanadate P. Shift work and burnout among health care workers. Occupational medicine (Oxford, England). 2014 Jun;64(4):279-86. PubMed PMID: 24550196.
152. Kim MH, Mazenga AC, Simon K, Yu X, Ahmed S, Nyasulu P, et al. Burnout and self-reported suboptimal patient care amongst health care workers providing HIV care in Malawi. PloS one. 2018;13(2):e0192983. PubMed PMID: 29466443. Pubmed Central PMCID: PMC5821338. Epub 2018/02/22. eng.
153. Abdulghafour YA, Bo-Hamra AM, Al-Randi MS, Kamel MI, El-Shazly MK. Burnout syndrome among physicians working in primary health care centers in Kuwait. Alexandria Journal of Medicine. 2011;47(4).
154. Cañadas-De la Fuente GA, Vargas C, San Luis C, García I, Cañadas GR, Emilia I. Risk factors and prevalence of burnout syndrome in the nursing profession. International journal of nursing studies. 2015;52(1):240-9.
155. Choi S, Park Y, Yoo J, Kim G. Occupational Stress and Physical Symptoms among Family Medicine Residents. Journal of Koran Family Medicine 2013;34:49-57.
156. Cares A, Pace E, Denious J, Crane LA. Substance use and mental illness among nurses: workplace warning signs and barriers to seeking assistance. Substance abuse. 2015;36(1):59-66.
157. Weldegebriel Z, Ejigu Y, Weldegebreal F, Woldie M. Motivation of health workers and associated factors in public hospitals of West Amhara, Northwest Ethiopia. Patient preference and adherence. 2016;10:159.
158. Alhassan R, Spieker N, Ostenberg P, Ogink A, Nketiah-Amponsah E, F de Wit T. Association between health worker motivation and healthcare quality efforts in Ghana. Human Resources for Health BMC. 2013;11(37).
159. Welp A, Meier LL, Manser T. The interplay between teamwork, clinicians' emotional exhaustion, and clinician-rated patient safety: a longitudinal study. Critical Care. 2016;20(1):110.
160. Hall LH, Johnson J, Watt I, Tsipa A, O'Connor DB. Healthcare staff wellbeing, burnout, and patient safety: a systematic review. PloS one. 2016;11(7):e0159015.
161. Ratanawongsa N, Roter D, Beach M, Laird S, Larson S, Carson K, et al. Physician Burnout and Patient -Physician Communication During Primary Care Encounter. Journal of general internal medicine. 2008;23(10):1581-8.

162. Dollard M, Winefield H, Winefield AH, Jong J. Psychosocial job strain and productivity in human service workers: A test of the demand-control-support model journal of organizational psychology. 2000;73:501-10.
163. Michie S, Williams S. Reducing work related psychological ill health and sickness absence: a systematic literature review. Occup Environ Med 2003;60:3-9.
164. Toppinen-Tanner S. Process of burnout: structure, antecedents, and consequences. People and WorkResearch Reports 93. 2011;Research report.
165. Johnson S, Osborn DP, Araya R, Wearn E, Paul M, Stafford M, et al. Morale in the English mental health workforce: questionnaire survey. The British journal of psychiatry : the journal of mental science. 2012 Sep;201(3):239-46. PubMed PMID: 22790677. Epub 2012/07/14. eng.
166. Alma-Ata Do. Declaration of Alma-Ata International Conference on Primary Health Care, Alma-Ata, USSR, 6-12

WHO report. 1978.
167. International Conference on Primary Health Care and Health Systems in Africa: Towards the Achievement of the Health Millennium Development Goals. WHO report. 2008.
168. Workie NW, Ramana GN. The health extension program in Ethiopia. 2013.
169. Stride C, Wall T, Catley N. MEASURES OF JOB SATISFACTION, ORGANISATIONAL COMMITMENT, MENTAL HEALTH AND JOB-RELATED WELL-BEING: A Benchmarking Manual. England: John Wiley & Sons Ltd; 2007.
170. Heritage B, Pollock C, Roberts LD. Confirmatory Factor Analysis of Warr, Cook, and Wall's (1979) Job Satisfaction Scale. Australian Psychologist. 2015;50(2):122-9.
171. Li L, Hu H, Zhou H, He C, Fan L, Liu X, et al. Work stress, work motivation and their effects on job satisfaction in community health workers: a cross-sectional survey in China. BMJ open. 2014 Jun 5;4(6):e004897. PubMed PMID: 24902730. Pubmed Central PMCID: PMC4054641. Epub 2014/06/07. eng.
172. Alharbi J, Wilson R, Woods C, Usher K. The factors influencing burnout and job satisfaction among critical care nurses: a study of Saudi critical care nurses. Journal of nursing management. 2016;24(6):708-17.
173. Alsaqabi BF, Aldousari A, Ismail EA, El-Shazly M. JOB SATISFACTION AMONG PHYSICIANS IN AL-SABAH HOSPITAL, KUWAIT.

. Alexanderia bulletin 2010;2(46):83-90.
174. Folkman S, Lazarus R, Dunkel-Schetter C, De-Longeis A, Gruen R. Dynamics of Stressful Encounter: Cognitive Appraisal, Coping and Encounter Outcomes. Journal of personality and social psychology. 1986;50(5):992-1003.
175. McCann C, Beddoe E, McCormick K, Kedge P, Adamson C, Huggard J. Resilience in the health professions: A review of recent literature. International Journal of Wellbeing, . 2013;3(1):60-81
176. Schuster R, Hammitt W, Moore D. Stress Appraisal and Coping Response to Hassles Experienced in Outdoor Recreation Settings. Copyright C Taylor & Francis Group, LLC. 2006;28:97-113.
177. Adriaenssens J, De Gucht V, Maes S. Determinants and prevalence of burnout in emergency nurses: A systematic review of 25 years of research. International journal of nursing studies. 2015;52(2):649-61.
178. Tadese T, Mohamed A, Mengistie A. Assessment of factors influencing job satisfaction among health care providers, federal police referral hospital, Addis Ababa, Ethiopia. The Ethiopian Journal of Health Development (EJHD). 2016;29(2).
179. Asegid A, Belachew T, Yimam E. Factors influencing job satisfaction and anticipated turnover among nurses in Sidama zone public health facilities, South Ethiopia. Nursing research and practice. 2014;2014.

180. Ahmed SM, Tolera M, Angamo MT. Assessment of job satisfaction among pharmacy professionals in south-west Ethiopia. International Journal of Pharmaceutical Sciences and Research. 2013;4(6):2351.
181. Manyazewal T, Matlakala MC. Beyond patient care: the impact of healthcare reform on job satisfaction in the Ethiopian public healthcare sector. Human resources for health. 2017;15(1):10.
182. Semachew A, Belachew T, Tesfaye T, Adinew YM. Predictors of job satisfaction among nurses working in Ethiopian public hospitals, 2014: institution-based cross-sectional study. Human resources for health. 2017;15(1):31.
183. Agency CS. Population size and characterstics. 2015.
184. Fekadu A, Hanlon C, Medhin G, Alem A, Selamu M, W. Giorgis T, et al. Development of a scalable mental healthcare plan for a rural district in Ethiopia. The British Journal of Psychiatry. 2015;s1-s9.
185. Lund C, Tomlinson M, De Silva M, Fekadu A, Shidhaye R, Jordans M, et al. PRIME: A Programme to Reduce the Treatment Gap for Mental Disorders in Five Low- and Middle-Income Countries. PLoS Med 2012;9(12): e1001359.
186. Hanlon C., Luitel NP, Kathree T, Murhar V, Shrivasta S, Medhin G, et al. Challenges and Opportunities for Implementing Integrated Mental Health Care: A District Level Situation Analysis from Five Low- and Middle-Income Countries. PLoS ONE 2014;9(2).
187. Organization WH. mhGAP intervention guide. Geneva: World Health Organization. 2010.
188. Lund C, De Silva M, Plagerson S, Cooper S, Chisholm D, Das J, et al. Poverty and mental disorders: breaking the cycle in low-income and middle income countries. The Lancet, . 2011.
189. Petersen I. Comprehensive integrated primary mental health care for South Africa. Pipedream or Possibility. Social Science & Medicine. 2000; 51(3):321-34
190. Fekadu A, Hanlon C, Medhin G, Alem A, Selamu M, Giorgis TW, et al. Development of a scalable mental healthcare plan for a rural district in Ethiopia. The British journal of psychiatry. 2016;208(s56):s4-s12.
191. Selamu M, Asher L, Hanlon C, Medhin G, Hailemariam M, Patel V, et al. Beyond the biomedical: community resources for mental health care in rural Ethiopia. PloS one. 2015;10(5):e0126666.
192. Organization WH. mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings. Cancer. 2017.
193. Cresswell J. Qualitative inquiry and research design: Choosing among five approaches. Book. 2007;second edition Sage publication.
194. Battling AIDS through home care in Uganda and Zambia. Caring : National Association for Home Care magazine. 1992 Oct;11(10):56-70. PubMed PMID: 10121240.
195. Creswell JW, Creswell JD. Research design: Qualitative, quantitative, and mixed methods approaches: Sage publications; 2017.
196. Boyce C, Neale P. Conducting in-depth interviews: A guide for designing and conducting in-depth interviews for evaluation input. 2006.
197. Darlington Y, scott D. Qualitative Research in Practice Stories from the Field. Australia: Allen and Unwin; 2002.
198. Mack N, Woodsong C, MacQueen K, Guest G, Namey E. Qualitative Research Methods: A Data Collectors Field Guide. Family Health International 2005.
199. Sandelowski M. Focus on Qualitative Methods Sample Size in Qualitative Research. Research in Nursing & Health. 1995; 18:179-1 83.
200. Vaismoradi M, Turunen H, Bondas T. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. Nursing and Health Sciences 2013;15:398-405.
201. Berg B. QUALITATIVE RESEARCH METHODS FOR THE SOCIAL SCIENCES. Printed in the United States of America2001.

202. Bordens K, Abbott B. Research Design and Methods A Process Approach. Americas, New York: The McGraw-Hill Companies,; 2011.
203. Cohen L, Manion L, Morrison K. Research Methods in Education. USA: Taylor & Francis 2007.
204. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Education Today. 2004;24:105-12.
205. NVivo. NVivo qualitative data analysis software. Version 9. QSR International Pty Ltd. 2010.
206. Rolfe G. Validity, trustworthiness and rigour: quality and the idea of qualitative research. Journal of Advanced Nursing 2004;53(3):304-10.
207. Sharts-Hopko CN. Assessing Rigor in Qualitative Research. JOURNAL OF THE ASSOCIATION OF NURSES IN AIDS CARE. 2002;13(4):84-6.
208. Knudsen H, Vazquez-Barquero J, Welcher B, Gaite L, Becker T, Chisholm D, et al. Translation and cross-cultural adaptation of outcome measurements for schizophrenia: EPSILON Study 2. British Journal of Psychiatry. 2000.
209. WHO. WHO Process of translation and adaptation of instrument: WHO; 2013 [cited 2013 October 25]. Available from: http://www.who.int/substance_abuse/research_tools/translation/en/.
210. Prince M. Measurement Validity in Cross-cultural Comparative Research Epidemiologia e Psichiatria Sociale, . 2008;17(3).
211. Chávez LM, Canino G. Toolkit on translating and adapting instruments. Availiable at: http://www hsri org/files/uploads/publications/PN54_Translating_and_Adapting pdf. 2005.
212. Poghosyan L, Aiken LH, Sloane DM. Factor structure of the Maslach Burnout Inventory: An analysis of data from large scale cross-sectional surveys of nurses from eight countries. Int J Nurs Stud 2009;46(7):894-902.
213. SCHAUFELI W, GREENGLASS E. INTRODUCTION TO SPECIAL ISSUE ON BURNOUT AND HEALTH. Psychology and Health. 2001;16:501-10. © 2001 OPA (Overseas Publishers Association) N.V.
214. Kalliath T, O'Driscoll M, Gillespie D, Bluedorn A. A test of the Maslach Burnout Inventory in three samples of healthcare professionals. Department of Management, University of Missouri-Columbia, Columbia, Missouri 65211–6100, USA. 2000;14(1):35-50.
215. NAUDÉ J, ROTHMANN S. THE VALIDATION OF THE MASLACH BURNOUT INVENTORY – HUMAN SERVICES SURVEY FOR EMERGENCY MEDICAL TECHNICIANS IN GAUTENG. SA Journal of Industrial Psychology. 2004;30(3):21-8.
216. Leka S, Jain A. Health Impact of Psychosocial Hazards at Work: An Overview

WHO document: Institute of Work, Health & Organisations, University of Nottingham. 2010.
217. Theorell T, Hammarström A, Aronsson G, Träskman Bendz L, Grape T, Hogstedt C, et al. A systematic review including meta-analysis of work environment and depressive symptoms. BMC Public Health. 2015 August 01;15(1):738.
218. Kroenke K, Spitzer R, JBW. W. The PHQ-15: validity of a new measure for evaluating the severity of somatic symptoms. . Psychosomatic Medicine 2002;64:258-66.
219. Hanlon C, Medhin G, Selamu M, Breuer E, Worku B, Hailemariam M, et al. Validity of brief screening questionnaires to detect depression in primary care in Ethiopia. Journal of affective disorders. 2015 (186):32-9.
220. Abiola T, Udofia O, M. Z. Psychometric properties of the 3-item Oslo Social Support Scale among Clinical students of Bayero University, Kano, Nigeria. . MJP Online. 2013;22(2):23-7.
221. Fekadu A, Rane LJ, Wooderson SC, Markopoulou K, Poon L, Cleare AJ. Prediction of longer-term outcome of treatment-resistant depression in tertiary care. The British Journal of Psychiatry. 2012;201(5):369-75.
222. Kroll L, Lampert T. Unemployment, Social Support and Health Problems. Dtsch Arztebl Int: Medicine. 2011;108(4):47-52.

223. Brugha T, Bebbington P, Tennant C, Hurry J. The List of Threatening Experiences: a subset of 12 life event categories with considerable long-term contextual threat. Psychological Medicine. 1985;15:189-94.
224. Motrico E, Moreno-Kustner B, de Dios Luna J, Torres-Gonzalez F, King M, Nazareth I, et al. Psychometric properties of the List of Threatening Experiences--LTE and its association with psychosocial factors and mental disorders according to different scoring methods. Journal of affective disorders. 2013 Sep 25;150(3):931-40. PubMed PMID: 23726778. Epub 2013/06/04. eng.
225. Rosmalen J, Bos E, De Jonge P. Validation of the Long-term Difficulties Inventory (LDI) and the List of Threatening Experiences (LTE) as measures of stress in epidemiological population-based cohort studies. Psychological Medicine. 2012;42(12):2599-608.
226. Babor T, Higgins-Biddle J, Saunders J, Monteiro M. A U D I T: The Alcohol Use Disorders Identification Test Guidelines for Use in Primary Care: World Health Organization; 2001.
227. Worley AJ, Vassar M, Wheeler LD, Barnes LBL. Factor Structure of Scores From the Maslach Burnout Inventory A Review and Meta-Analysis of 45 Exploratory and Confirmatory Factor-Analytic Studies. Educational and psychological measurement 2008;68(5):797-823.
228. Selamu M, Thornicroft G, Fekadu A, Hanlon C. Conceptualisation of job-related wellbeing, stress and burnout among healthcare workers in rural Ethiopia: a qualitative study. BMC Health Services Research. 2017;17, 412.
229. Gelaye B, Williams MA, Lemma S, Deyessa N, Bahretibeb Y, Shibre T, et al. Validity of the patient health questionnaire-9 for depression screening and diagnosis in East Africa. Psychiatry research. 2013;210(2):653-61.
230. Kroenke K, Spitzer RL, Williams JB, Löwe B. The patient health questionnaire somatic, anxiety, and depressive symptom scales: a systematic review. General hospital psychiatry. 2010;32(4):345-59.
231. Liang K-Y, Zeger SL. Longitudinal data analysis using generalized linear models. Biometrika. 1986;73(1):13-22.
232. StataCorp. Statistics/Data Analysis 4905 Lakeway Drive Special Edition College Station, Texas 77845 USA. 1984-2009.
233. Association WM. World Medical Association Declaration of Helsinki: ethical principles for medical research involving human subjects. http://www wma net/e/policy/b3 htm. 2008.
234. Polit D, Beck C. Nursing Research Principles and Methods 2003.
235. Diener E. Assessing well-being: The collected works of Ed Diener: Springer Science & Business Media; 2009.
236. Kazmi R, Amjad S, Khan D. OCCUPATIONAL STRESS AND ITS EFFECT ON JOB PERFORMANCE A CASE STUDY OF MEDICAL HOUSE OFFICERS OF DISTRICT ABBOTTABAD. Journal of Ayub Medical College, Abbottabad : JAMC. 2008;20(3):135-9.
237. Totman J, Hundt LG, Wearn E, Paul M, Johnson S. Factors affecting staff morale on inpatient mental health wards in England: a qualitative investigation. BMC Psychiatry 2011;11(68).
238. Rodríguez I, Bravo MJ, Peiró JM, Schaufeli W. The Demands-Control-Support model, locus of control and job dissatisfaction: a longitudinal study. Work & stress. 2001;15(2):97-114.
239. Burch. J, Tom. J, Zahi. Y, Criswell. L, Leo. E, K. O. Shiftwork impacts and adaptation among health care workers. Occupational medicine. 2009;59:159-66.
240. Shin YS, Lee GS. Effects of Hospital Workers' Friendship Networks on Job Stress. PLoS ONE. 2016.
241. Hamaideh SH. Burnout, social support, and job satisfaction among Jordanian mental health nurses. Issues in Mental Health Nursing. 2011;32(4):234-42.
242. Nie Z, Jin Y, He L, Chen Y, Ren X, Yu J, et al. Correlation of burnout with social support in hospital nurses. International journal of clinical and experimental medicine. 2015;8(10):19144.

243. Lasebikan VO, Oyetunde MO. Burnout among Nurses in a Nigerian General Hospital: Prevalence and Associated Factors. ISRN nursing. 2012;2012:402157. PubMed PMID: 22619733. Pubmed Central PMCID: 3350958.
244. Győrffy Z, Dweik D, Girasek E. Workload, mental health and burnout indicators among female physicians. Human Resources for Health. 2016;14(12).
245. Bianchi R, Schonfeld IS, Schonfled S, Laurent E. Burnout does not help predict depression among French school teachers. Scandinavian journal of work, environment & health. 2015:565-8.
246. Bianchi R, Schonfeld IS, Laurent E. Burnout-depression overlap: a review. Clinical psychology review. 2015 Mar;36:28-41. PubMed PMID: 25638755. Epub 2015/02/02. eng.
247. Mutale W, Ayles H, Bond V, Mwanamwenge TM, Balabanova D. Measuring health workers' motivation in rural health facilities: baseline results from three study districts in Zambia. Human Resources for Health. 2013.
248. Hultell D, Bo Melin J, Gustavsson P. Getting personal with teacher burnout: A longitudinal study on the development of burnout using a person-based approach. Teaching and Teacher Education. 2013;32:75-86.
249. Cardozo BL, Crawford CG, Eriksson C, Zhu J, Sabin M, Ager A, et al. Psychological distress, depression, anxiety, and burnout among international humanitarian aid workers: a longitudinal study. PloS one. 2012;7(9):e44948.
250. Correia da Silva AT, Menezes PR. Burnout syndrome and common mental disorders among community-based health agents. Rev Saúde Pública 2008;42(5):1-8.
251. Deriba BK, Sinke SO, Ereso BM, Badacho AS. Health professionals' job satisfaction and associated factors at public health centers in West Ethiopia. Human resources for health. 2017 May 30;15(1):36. PubMed PMID: 28558840. Pubmed Central PMCID: PMC5450336. Epub 2017/06/01. eng.
252. Fekadu A, Medhin G, Selamu M, Giorgis TW, Lund C, Alem A, et al. Recognition of depression by primary care clinicians in rural Ethiopia. BMC family practice. 2017;18(1):56.
253. Keynejad RC, Dua T, Barbui C, Thornicroft G. WHO Mental Health Gap Action Programme (mhGAP) Intervention Guide: a systematic review of evidence from low and middle-income countries. Evidence-Based Mental Health. 2017:ebmental-2017-102750.
254. Vesel L, Waller K, Dowden J, Fotso CJ. Psychosocial support and resilience building among health workers in Sierra Leone: interrelations between coping skills, stress levels, and interpersonal relationships. BMC Health Services Research. 2015;15.
255. English M, Irimu G, Agweyu A, Gathara D, Oliwa J, Ayieko P, et al. Building Learning Health Systems to Accelerate Research and Improve Outcomes of Clinical Care in Low- and Middle-Income Countries. PLoS Medicine 2016;13(4).
256. Shibre T, Negash A, Kullgren G, Kebede D, Alem A, Fekadu A, et al. Perception of stigma among family members of individuals with schizophrenia and major affective disorders in rural Ethiopia. Social Psychiatry and Psychiatric Epidemiology. 2001;36(6):299-303.
257. Maslach C, Leiter PM. Understanding the burnout experience: recent research and its implications for psychiatry. World Psychiatry. 2016;15:103-11.
258. office Srh. Health Facility lists 2015. Available from: http://www.snnprhb.gov.et/.
259. Boran A, Shawaheen M, Khader Y, Amarin Z, Hill Rice V. Work-related stress among health professionals in northern Jordan. occupational medicine 2012;62:145-7.
260. Dall'Ora C, Griffiths P, Ball J, Simon M, Aiken HL. Association of 12 h shifts and nurses' job satisfaction, burnout and intention to leave: findings from a cross-sectional study of 12 European countries. BMJ Open. 2015.
261. Maslach C, Schaufeli WB, Leiter MP. Job burnout. Annu Rev Psychol. 2001;52:397-422. PubMed PMID: 11148311.
262. Johnson S, Osborn D, Araya R, Wearn E, Paul M, Stafford M ea. Morale in the English mental health workforce: questionnaire survey British Journal of Psyciatry 2012;201:239-46.

263. Ashtari. Z, Farhady. Y, Khodaee. MR. Relationship between burnout and work performance in a sample of Iranian mental health professionals. African Journal of Psychiary 2009.
264. Alarcon GM. A meta-analysis of burnout with job demands, resources, and attitudes. Journal of Vocational Behavior. 2011;79(2):549-62.
265. Fekadu A, Medhin G, Selamu M, Hailemariam M, Alem A, Giorgis T, et al. Population level mental distress in rural Ethiopia BMC Psychiatry 2014;14(194).
266. Organization WH. Mental Health Global Action Programme (mhGAP): World Health Organization; 2002.
267. Aluttis C, Bishaw T, Frank MW. The workforce for health in a globalized context–global shortages and international migration. Global health action. 2014;7(1):23611.
268. Dussault G, Franceschini MC. Not enough there, too many here: understanding geographical imbalances in the distribution of the health workforce. Human resources for health. 2006;4(1):12.
269. Mills A. Health care systems in low-and middle-income countries. New England Journal of Medicine. 2014;370(6):552-7.
270. Organization WH. Working together for health: the World health report 2006: policy briefs. 2006.
271. Rose D, Seidler A, Nübling M, Latza U, Brähler E, Klein E, et al. Associations of fatigue to work-related stress, mental and physical health in an employed community sample. BMC psychiatry. 2017;17(1):167.
272. Melamed S, Kushnir T, Shirom A. Burnout and risk factors for cardiovascular diseases. Behavioral medicine. 1992;18(2):53-60.
273. Abdulla L, Al-Qahtani D, Al-Kuwari M. Prevalence and determinants of burnout syndrome among primary healthcare physicians in Qatar. South Africa Family Practice 2011;53(4):380-3.
274. Ashtari Z, Farhady Y, Khodaee M. Relationship between job burnout and work performance among Iranian mental health professionals. African Journal of Psychiatry 2009.
275. Selamu M, Thornicroft G, Fekadu A, Hanlon C. Conceptualisation of job-related wellbeing, stress and burnout among healthcare workers in rural Ethiopia: a qualitative study. BMC health services research. 2017;17(1):412.
276. Selamu M, Hanlon C, Medhin G, Thornicroft G, Fekadu A. Burnout and professional satisfaction of primary healthcare workers in rural Ethiopia (In press). BMC Public Health. 2018.
277. Schaufeli WB, Enzmann D, Girault N. Measurement of burnout: A review. Professional burnout: Recent developments in theory and research. 1993:199-215.
278. Maslach C, Jackson S. Leiter MP Maslach burnout inventory manual. Palo alto. California: Consulting Psychological Press, Inc; 1996.
279. Stride C, Wall TD, Catley N. Measures of job satisfaction, organisational commitment, mental health and job related well-being: a benchmarking manual: John Wiley & Sons; 2008.