**THESIS PROPOSAL**

**ON**

**The Mental Health Status (Depression, Anxiety & Stress) of Health Care Workers Serving the FDMN People During Covid-19 Pandemic**

**This thesis proposal is prepared for the partial fulfillment of the requirements of the Master of Public Health (MPH) Degree**

**of**

**North South University, Dhaka, Bangladesh**

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**MASTER OF PUBLIC HEALTH PROGRAM**

**DEPARTMENT OF PUBLIC HEALTH**

**SCHOOL OF HEALTH & LIFE SCIENCES**

**NORTH SOUTH UNIVERSITY**

**BASHUNDHARA, DHAKA**

**BANGLADESH**

**2021**

**The Mental Health Status (Depression, Anxiety & Stress) of Healthcare Workers Serving the FDMN People During Covid-19 Pandemic**

is submitted to the Department of Public Health, North South University for the partial fulfillment of the requirements of the degree of Master of Public (MPH)

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**NORTH SOUTH UNIVERSITY**

**DEPARTMENT OF PUBLIC HEALTH**

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We, the members of the Thesis Proposal Defense Committee have carefully evaluated the following thesis proposal and recommended to the Dean, School of Health & Life Sciences, for approval.

**THE Mental Health Status (Depression, Anxiety & Stress) of Healthcare Workers Serving the FDMN People During Covid-19 Pandemic**

Submitted by MD. Shariful Islam Khan, ID # 2035023680, for the partial fulfillment of the requirements of the degree of Master of Public Health at North South University.

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**EXECUTIVE SUMMARY**

The coronavirus diseases (COVID-19) has been extensively influencing the life and living of people of the world. Like many other countries Bangladesh imposed the lockdown strategy into effect to ensure ‘social distance’ through ‘home quarantine’ to curb the ‘spread’ among its population. However, most of the health workers have to come forward to deliver quality services and they have to work extra hour duty to increase workload. This unique experience of ‘home quarantine’ under lockdown with the uncertainty of transport, Use of PPE, fear of getting COVID-19 positive, fear of facing trouble with law enforcement members, isolation from the family members and the society, significant salary reduction, increased workload, losing job, bitter experience with house owners and society have various impacts on the mental health of the healthcare workers.

The aim of this study is to find out the prevalence of anxiety, depression and stress among healthcare workers serving the FDMN population during COVID-19. This study will also determine the factors associated with poor mental health status of healthcare workers.

An online based survey will be conducted with a google form after taking informed consent and cross-sectional study will be conducted among healthcare workers serving the FDMN population during COVID-19. The Depression, Anxiety and Stress Scale - 21 (DASS) will be used to determine the mental health status of the healthcare workers. An English version questionnaire in google form consisting of socio-demographic variables, work and lifestyle related variables will be used to collect data from the study participants.

The collected data will be entered in Microsoft Excel software. Data will be checked for completeness and consistency. Only completely collected interviews will be considered for the analysis. The collected data will be analyzed by SPSS/STATA software.

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**List of abbreviation**

HCW- Health Care Workers

FDMN- Forcefully Displaced Myanmar Nationals

HADS- Hospital Anxiety and Depression Scale

DASS-21: Depression, Anxiety and Stress Scale - 21

AOR: Adjusted odds ratios

BMI: Body mass index

CI: Confidence interval

LMICs: Low- and middle-income countries

UNICEF: United Nations Children’s Fund

WHO: World Health Organization

**CHAPTER I**

**INTRODUCTION**

* 1. **Introduction**

In December 2019, an outbreak of a cluster of pneumonia cases occurred in Wuhan, China. Later after study, it was found that this was an outbreak of a novel coronavirus disease. It has spread all over China within a short period([Carlos et al., 2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7195354/#bib0002); [Du Toit, 2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7195354/#bib0005); [Huang et al., 2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7195354/#bib0007)). This novel coronavirus is officially named as ‘SARS-CoV-2′ by the International Committee on Taxonomy of Viruses, and disease infected by this virus is termed as ‘COVID-19′([Zu et al., 2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7195354/" \l "bib0031)). Since the quick spread of this epidemic disease, China Government has quickly issued a public announcement on the prevention and treatment of the most serious infectious disease, which required that they determine efficacious and straightforward measures to prevent disease transmission. However, coronavirus pneumonia patients were found in almost all provinces across the whole world in a short time. The first case was diagnosed on 8th March, 2020 in Bangladesh. There was no doubt that the medical workforce played an indispensable role in this major public health emergency.

As generally known, this pandemic was more contagious than SARS and brought challenge and threat to global public health security ([Li et al., 2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7195354/#bib0012); [Nishiura et al., 2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7195354/#bib0017); [Phelan et al., 2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7195354/#bib0018)). As this disease was declared as pandemic, the whole world started to fight against it. Most of the HCW’s were exposed to stress both physical and psychological in response to this serious infectious public health event ([Chen et al., 2020a](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7195354/#bib0003); [Phelan et al., 2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7195354/#bib0018); [Zhang et al., 2020b](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7195354/#bib0029)). A study was conducted among 114 Bangladeshi physicians (https://www.frontiersin.org/articles/10.3389/fpubh.2021.592058/full). The prevalence of anxiety and depression were 32.5 and 34.2%, respectively. Findings revealed that marital status, work per day and current job location were the main risk factors for anxiety while sex, age, and marital status were the main risk factors for depression. Especially during the SARS-CoV-2 outbreak, the heavier workload and life-threatening medical workers were facing psychological pressure, even mental illness. Therefore, it is extremely important to realize the psychological status of the medical workforce.

**1.2 Justification of the Study**

COVID-19 has significantly impacted the mental health of healthcare workers. As a result of pandemic situation, preventive measures to minimize close contact among individuals include social and physical distancing through methods of quarantines, lockdown measures like travel restrictions, closure of educational institutions, workplaces and other crowded spaces. Apart from the possible fatal impact of COVID-19 on physical health, the continuation of lockdown induced a new wave of mental health issues due to loss of income, fear, bereavement, use of PPE, isolation from family members, quarantine etc. Besides, COVID-19 infection itself can lead to neurological and mental health complications, such as delirium, agitation, and stroke.

Hence, the consequences of COVID-19 pandemic on mental health have received much attention among public health experts. Adverse impacts of epidemics and/or pandemics on mental health is well-established in the literature. In the context of COVID-19, evidence regarding increasing prevalence of depression, anxiety and stress symptoms has been found by several studies

Owing to the vulnerability of healthcare workers during lockdown, a few studies have also specifically focused on the impact of COVID-19 on the mental health of healthcare workers. Given that the increase amount of workload, isolation, quarantine, job loss, trouble with law enforcement members, issue with transport, social stigma during lockdown, their mental health can be affected in several ways: i) losing job, ii) uncertainty of career path iii) fear and stress due to possibility of getting infected iv) reduction of salary, v) Use of PPE vi) Isolation, vi) quarantine period vii) Transportation.

Since the very beginning of the pandemic situation, most of the health workers have no vacation to enjoy. Their workload increased a lot. A couple of studies during the pandemic targeting Bangladeshi health care workers observed higher prevalence rates of both depression, anxiety and stress symptoms compared to studies conducted before COVID-19

However, no study has not been conducted focusing their socio-demographic limitation and limitation on the availability of PPE. Against this backdrop, this paper sought to identify the prevalence of depression, anxiety and stress symptoms among health care workers serving the FDMN population internationally recognized and validated screening tools.

**1.3 Operational Definitions**

**Depression**

Depression (major depressive disorder) is a common and serious medical illness that negatively affects how you feel, the way you think and how you act.

**Anxiety**

Anxiety is a normal and often healthy emotion. However, when a person regularly feels disproportionate levels of anxiety, it might become a medical disorder.

**Stress**

Stress can be defined as any type of change that causes physical, emotional, or psychological strain. Stress is your body's response to anything that requires attention or action.

**1.4 Research Question (s)**

What is the prevalence of anxiety and depression and stress and their associated factors among healthcare workers serving the FDMN population during COVID-19 pandemic?

**CHAPTER II**

**LITERATURE REVIEW**

**2.2 Study Objectives**

**2.2.1 General Objective**

To determine the mental health status (Depression, Anxiety & Stress) of healthcare workers serving the FDMN population during COVID-19.

**2.2.2 Specific Objectives:**

* To determine the prevalence of anxiety, depression & stress among healthcare workers.
* To describe the socio-demographic status, service related variables and lifestyle related variables of healthcare workers.
* To determine socio-demographic variables associated with anxiety, depression & stress.
* To determine service related variables associated with anxiety, depression & stress.
* To determine lifestyle related variables associated with anxiety, depression & stress.

**CHAPTER III**

**RESEARCH METHODOLOGY**

**3.1 Study Design**

This would be an online based cross-sectional study among HCW’s serving the FDMN population during COVID-19 pandemic. The Depression, Anxiety and Stress Scale - 21 (DASS-21) will be used to determine the mental health status of the HCW’s. The Depression, Anxiety and Stress Scale - 21 Items (DASS-21) is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient. Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items.

Recommended cut-off scores for conventional severity labels (normal, moderate, severe) are as follows:

**NB:** Scores on the DASS-21 will need to be multiplied by 2 to calculate the final score.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Depression | Anxiety | **Stress** |
| Normal | 0-9 | 0-7 | 0-14 |
| Mild | 10-13 | 8-9 | 15-18 |
| Moderate | 14-20 | 10-14 | 19-25 |
| Severe | 21-27 | 15-19 | 26-33 |
| Extremely Severe | 28+ | 20+ | 34+ |

**3.2 Target Population, Sample Population, and Study Population**

The study will be conducted among the healthcare workers serving the FDMN population during COVID-19 pandemic.

The sample size will be determined by using the following formula

n =

=

= 382.77

= 383

Thus, required sample size is 383

Where,

n= number of desired sample size.

Z= Standard normal deviation, usually set as considering 1.96

P= Proportion of particular characteristics of the target population =53%=0.53

q=1-p = 0.47

d=Allowable error in the study (considered as 5%)

**3.3 Study Site & Area**

2 Upazilas of Cox’s Bazar District- Sadar & Ukhia

**3.4 Conceptual Framework**

**Dependent Variables**

**Independent Variables**

**Socio-Demographic Variables:**

Age, Sex, Marital Status, Religion, Family Income, Residence, Living with, Family Member, Dependents

**Work Related Variables:** Working Place, Working Hour, Working Experience, Availability of PPE, Salary, Mode of Transportation, Transport Facility from Employer, Work from Home Benefits, Isolation from family members.

**Mental Health Status**

**Life Style, Food Habit & Behavioral Factors:** Physical Exercise, Smoking, Sedentary Hours, Alcohol, Sleep Duration, Day Time Sleeping, Dietary Pattern, Fatty Diet, Sugar Intake, Extra Salt Intake, Vegetable Consumption, Fruit Consumption

Depression

Anxiety

Stress

**3.5 Study Period**

Study Period will be November 2021 to April 2021

**3.6 Sample Size**

383 healthcare workers serving the FDMN people

**3.7 Inclusion Criteria**

* Healthcare workers
* Serving the FDMN population during COVID-19 Pandemic
* Ability to follow simple instructions and be able to respond.

**3.8 Exclusion Criteria**

* Don’t provide consent.
* Unable to follow instruction

**3.9 Sampling Technique**

* Data will be collected through online interview by google form.
* The samples will be selected by convenient sampling technique procedure.

**3.10 Data Collection Tools**

Data related to mental health status will be collected using The Depression, Anxiety and Stress Scale - 21 (DASS-21). An English version questionnaire consist of socio-demographic, work related and lifestyle related variables will be used to collect data from the study participants.

**3.11 Data management and analysis plan**

After collection of the data, they will be entered in Microsoft excel. The data will be analyzed using SPSS version23 statistical package software. Descriptive statistics, like frequencies and proportions, will be used to summarize the data. Bivariate and multivariate analyses will be carried out using logistic regression. Adjusted and unadjusted odds ratios (OR) and their 95% confidence intervals (CIs) will be used as indicators of the strength of association.

**3.12 Quality Control & Quality Assurance**

The following measures will be adapted for quality control and assurance.

* A standard research protocol of the Department of Public Health, North South University will be implemented.
* Regular help and guidance will be taken from the Supervisor and Co-Supervisor(s).
* The Field Supervisor (FS) will oversee and monitor all field activities.
* The designed questionnaire will be pretested or piloted, translated, and simplified.
* The data will be checked and rechecked for validity and reliability. The supervisor will recheck at least 5% of the collected data to monitor the data quality.
* Manipulation of data will be strictly prohibited. The data will be closely monitored, maintained confidentially, and stored on a password-protected device. However, only the research team will have access to the data.
* The data should be inspected manually to assure the data accuracy during coding and cleaning,
* The researchers will perform the data collection, analysis, and report writing.

**3.13 Ethical Considerations**

* Ethical clearance will be obtained from the Institutional Review Board (IRB)/Ethical Review Committee (ERC)/the Department of Public Health, North South University, with the Department Chair's signature for this study.
* The authorities of the respective study sites will be approached for permission to proceed with the data collection.
* Each participant will be briefed about the study's objectives before data collection. We will ensure the privacy and confidentiality of the participants.
* Informed written/verbal consent will be attained before the data collection.
* Since participation in this study will be voluntary, the participants can withdraw from the interview at any moment.
* Confidentiality of the information given by the participant will be preserved.
* The moral principles set down in the 1964 Declaration of Helsinki and its last changes will be observed.

**3.14 Expected Outcomes**

The expected outcomes of this study would be the status of mental health or prevalence anxiety, depression and stress among health care workers serving the FDMN population during pandemic COVID-19. We would also be able determine the association between presence of anxiety, depression and stress with socio-demographic as well as work related factors. The study will also find out life style related factors associated with anxiety, depression and stress.

**3.15 Work plan**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Activity** | **November 2021** | **December**  **2021** | **January 2022** | **February 2022** | **March 2022** | **April 2022** |
| **Literature review** |  |  |  |  |  |  |
| **Proposal development** |  |  |  |  |  |  |
| **Data collection** |  |  |  |  |  |  |
| **Data entry, analysis** |  |  |  |  |  |  |
| **Report writing** |  |  |  |  |  |  |
| **Dissemination** |  |  |  |  |  |  |

**References**

**Annexure**