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**AN ANALYTICAL STUDY ON COVID-19 PANDEMIC PSYCHO  
SOCIOLOGICAL LEVELS OF QUARANTINE PERSONNEL'S AT  
VARIOUS QUARANTINE CENTERS IN TIGRAY REGION-  
ETHIOPIA**

**Dr. Kesatie Legesse Habtemariam<sup>1</sup> & Dr.D.Mathivanan<sup>2</sup>**

**<sup>1</sup>Associate Professor. in Sports psychology, Department of sports science, Mekelle  
University.**

**<sup>2</sup>Assistant Professor, Department of sports science, Mekelle University, Ethiopia  
Corresponding Author: Dr. Kesatie Legesse Habtemariam.**

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**Introduction:**

Coronavirus disease (COVID-19) is an infectious disease caused by the severe acute respiratory syndrome coronavirus 2 (CORONO VIRUS-CoV-2), which was first detected in December 2019 in the city of Wuhan, China.<sup>1–3</sup> Currently, this pandemic has infected more than **25** million people in nearly 210 countries around the world resulting in nearly 900,000 deaths. A pandemic of this scale has never been seen since the Spanish Influenza during WWI, and has already created dramatic challenges all over the world in terms of economy, social interactions, and individual lifestyles. Corona viruses are one of the largest (27–34 kilo base) positive-stranded non-segmented RNA viruses, named after the ~120 nm diameter envelop (resembles of solar corona) around the nucleic acid-protein complex. The foremost damage of the virus is on human health, including direct injury to the respiratory system, compromise of the immune system,

exacerbation of the underlying medical conditions, and eventually systematic failure and death.<sup>4</sup> Due to the COVID-19 attack, tens of thousands of patients have been hospitalized, with additional thousands of millions of people forced to stay in limited space. Conceivably, this dramatic change in lifestyle, resulting from immobilization (hospitalization and bed rest), quarantine, and physical inactivity can cause a second-wave attack on the health and wellbeing of the infected as well as general population. Thus, the goal of this article is three-fold: 1) to highlight the COVID-19 threats and damages to the various human physiological systems; 2) to address the harm of physical inactivity associated with the virus outbreak to the body; and 3) to recommend some practical strategies to mitigate the potential damage.

During the covid-19 pandemic, physical distancing measures (also called social distancing) have been implemented in many countries to interrupt viral transmission and delay the spread of infection. These measures range from mandatory quarantine to voluntary self isolation and have come at a cost of socially isolating many people, putting their mental and emotional health at risk. Key areas of social interaction, connection, and support have been affected by the closure of pubs, restaurants, libraries, sports facilities, and community centers for the elderly, in addition to the cancellation of sporting events, weddings, and funerals. The World Health Organization have issued guidance on the management of mental health aspects of covid-19.<sup>1</sup>

### **Objectives:**

The primary objective of this study was to Analyze on covid-19 pandemic Psycho sociological levels of quarantine personnel's at various quarantine centers in tigray region and their psychological responses during quarantine further the study will help in early identification and intervention to those that are vulnerable to developing psychological problems after the quarantine period. Hence the need for this study that aimed at: (1) assessing the level of knowledge about COVID-19 pandemic among quarantined inmates (2) determining the level of psychological distress among quarantined inmates (3) evaluating the relationship between level of Knowledge about COVID-19 and psychological distress (4) and to evaluate the relationship between COVID-19 knowledge and demographic variables.

### **Statement of the problem:**

Quarantine is often an unpleasant experience for those who undergo it. Separation from loved ones, the loss of freedom, uncertainty over disease status, and boredom that could increases the stress level and the creating a feel of distressed among the quarantine personnels therefore the researcher is interested to undergo for an analytical study on covid-19 pandemic Psycho sociological levels of quarantine personnel's at various quarantine centers in tigray region, Ethiopia.

### **Research Questions:**

1. Are the quarantine personnel's psychological level is strong or week
2. Do the quarantine personnel's psychologically prepare for physical activity?
3. Do the quarantine personnel' mingle with the other quarantine personals at the quarantine centers

## Methods:

### Ethical considerations:

Permission and approval for this study was obtained from the Mekelle University research and community Service to conduct the study in Mekelle university quarantine centre and quiha quarantine centre. The objectives of the study were explained to all the participants, and they were assured of confidentiality of their information. They were made to understand that they could withdraw from participation in the study at any time without being victimized. They were then asked to provide their answers voluntarily after giving their consent.

### Study design and setting:

This was a cross-sectional study conducted in Mekelle university quarantine centre and quiha quarantine centre. The quarantine personnel's were came to mekelle a capital city of tigray region for their personal and official work. Once they arrived they were observed and taken to quarantine centers based on the availability of facilities, hence it is mandatory to all passengers travelled by road or air from the period of September 15 to September 30,2020 all procedures in handling the travelers' were treated according to the guidelines of Tigray health bureau official instruction. The self made The Depression Questionnaire (DQ) is a culturally oriented questionnaire for screening potential cases of depression in the community. In addition, the DQ was validated by the Beck or Hamilton depression scales, and was found to be comparable to these existing measures. With consideration for cultural bias in case of identification

### Participants:

The researcher randomly selected quarantine personnel's (50 from each center the total population of the study is 100. The age of 20 50 yrs were taken as samples for this study. the psycho social questionnaire were self made and set as a standardized the Questions. The research questionnaire look at the following: 1) knowledge and understanding the reasons low in psychological level, (2) pre screening for involve them in physical activity (3) understanding the relationship level among the family and friends during quarantine.

### Statistical analysis:

Data analyses were done using the Statistical Package for Social Sciences (SPSS) statistical software, version 20. Results were presented in frequency table; an independent t-test was used to determine the difference in COVID-19 Knowledge depression Questionnaire mean score between the independent variables. The significant value was set at  $p < 0.05$ .

**Table 1: Demographic characteristics of quarantine personnel's during the first phase of pandemic**

S.no	Characteristic	N=100	% of respondents
1	Sex	100	
	Male	72	72%
	Female	38	38%

<b>2</b>	<b>Age,yrs</b>	N=100	
	< 30	25	25%
	30-39	40	40%
	40-49	24	24%
	≥ 50	11	11%
<b>3.</b>	<b>Education</b>	N=100	
	High school or less	38	38%
	Undergraduate	58	58%
	Post graduate	14	14%
<b>4</b>	<b>Self-rated health</b>	N=100	
	Very poor to fair	49	49%
	Good to excellent	51	51%

**Table 2: Comparisons of depression level, neighborhood relationships and self-perceived health condition of Quiha quarantine Centre personnel's and Mekelle quarantine Centre personnel's**

variables	Quiha quarantine Centre	Mekelle quarantine Centre	t	P
Depression level	22.91 ± 8.01	21.42 ± 4.78	7.95	<0.001
Neighborhood relationships	13.20 ± 2.74	13.20 ± 2.52	3.59	<0.001
Interested in Physical activity	9.67 ± 1.73	10.05 ± 1.54	3.02	0.003

The comparison for depressive level, neighborhood relationships, and self-perceived health condition between the 'Quiha quarantine Centre personnel's and 'Mekelle quarantine Centre personnel's as showed in Table 2. Levels of depression are significantly higher in the 'Quiha quarantine Centre personnel's' ( $t = 7.95$ ,  $P < 0.001$ ). The neighborhood relationships and Interested in Physical activity are significantly poorer. The result revealed that there is a greater psychological impact

### **Discussion:**

All respondents described a sense of isolation. The mandated lack of social and, especially, the lack of any physical contact with family members were identified as particularly difficult. Confinement within the home or between work and home, not being able to see friends, not being able to shop for basic necessities of everyday life, and not being able to purchase thermometers and prescribed medications enhanced their feeling of distance from the outside world.

Persons placed in quarantine have their freedom restricted to contain transmissible diseases. This takes a considerable toll on the person. In relation to the recent global outbreak of CORONO VIRUS, considerable time has been spent discussing the specifics of quarantine and how to promote adherence to infection control measures. Little, if any, analysis has focused on the effect of quarantine on the well-being of the quarantined person. The objective of the study survey was

to capture a range of experiences of quarantined persons to better understand their needs and concerns. This knowledge is critical if modern quarantine is to be an effective disease-containment strategy. To our knowledge, a consideration of the adverse effects of quarantine, including psychological effects, has not previously been systematically attempted.

Our results show that a substantial proportion of quarantined persons are distressed, as evidenced by the proportion that displays symptoms of depression as measured by validated scales.

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