Review Paper

Community Medicine

IMPACT OF COVID-19 PANDEMIC ON MENTAL HEALTH IN INDIA: A SYSTEMATIC REVIEW

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ABSTRACT

Background: - Novel Coronavirus was originated from the Wuhan city of china in late December 2019. It arises as a burden of inexplicable instance having Pneumonia like symptoms. It is formally called COVID-19 by the World Health Organization. **Objectives: -** To review the literature of mental health problems of last 11 months of COVID-19 by the World Health Organization. **Objectives: -** To review the literature of mental health problems of last 11 months of COVID-19 pandemic and also to suggest suitable recommendation to control mental health problems in future disastrous situations. **Methodology: -** A Systematic Review was conducted on Stress related disorders in Indian Population (subdivided into General Population and Health Care Workers) during COVID 19 Pandemic by following PRISMA guidelines, Joanna Briggs Institute's Check list and STROBE SCALE and 12 studies were selected to conduct review. **Result and Discussion: -** In selected literature, it has found that the Prevalence of depression ranged from 11.4% to 61.9%, prevalence of anxiety ranged from 17.7% to 37.2% while prevalence of stress ranged from 9.5 to 69.28%.

KEYWORDS : Impact, COVID-19, Mental Health

INTRODUCTION

Novel Coronavirus was originated from the Wuhan city of china in late December 2019. It arises as a burden of inexplicable instance having Pneumonia like symptoms. It is formally called COVID-19 by the World Health Organization.[1] It became pandemic affecting the globe, leading to a public health emergency. For the 21st century, Infectious Diseases becomes the crucial warning across the sphere.[2]

The world is presently scuffling with the coronavirus disease 2019 (COVID-19) pandemic, caused by severe acute respiratory syndrome coronavirus 2 (SARS CoV-2). Cases and death are progressively increasing as the days are passing by.[3]

From March 23 midnight, India has gone in complete lockdown, with only essential services being functional. Most of the companies have encouraged their employees to "work from home"; however, no such provisions were offered to healthcare workers (HCWs). As a result, HCWs are encountering occupational hazards owing to high risk of exposure to coronavirus infection. It requires a lot of courage to work in potentially infectious environments that can impact the psychological health of HCWs. Among physicians, the primary risk factors of work-related conditions, lifestyles and physical health account for their anxiety and depressive symptoms.[4]

However, there is lacking in quantifiable information about the increase in mental health problems in General Population and Health Care workers due to COVID 19 Pandemic. So, there is need to attract to policy makers that in COVID 19 Pandemic, the mental health problems have increased in general population and Health Care workers. So, this review was conducted to provide combined data of mental health problems due to COVID 19 Pandemic.

OBJECTIVES

1. To review the literature of mental health problems of 1 year in Health Care workers & General Public during COVID-19 pandemic.
2. To suggest suitable recommendation to control mental health problems in future disastrous situations.

METHODOLOGY

A Systematic Review was conducted on Mental health during COVID 19 Pandemic in Indians by following **PRISMA guidelines** and it has divided into **General Population and Health Care Workers**.

To conduct the systematic study, Studies were searched from **GOOGLE Scholar** databases, **PubMed Central**, **MEDLINE** databases by keeping in mind of Inclusion and Exclusion Criteria. The keyword was used by following **BOOLEAN QUERY** which included Stress related disorders AND Indian population, Stress related disorders OR Indian population, Stress related disorders AND Indian population AND COVID 19, Coronavirus OR COVID-19 OR Severe acute respiratory syndrome AND Healthcare workers OR General Indian Public.

The **Inclusion Criteria** of studies was based on Studies was conducted on Indian Population with comprising Health Care Workers and General Public, Studies conducted by Cross Sectional Observational Study, Studies in English Language, Passed in Quality assessment criteria. The **Exclusion Criteria** of studies was based on those studies was excluded like Letter to Editor, Case Reports, Case Series and Interventional study.

To asses quality of the study, each study was evaluated using the **Joanna Briggs Institute's Check list** for the critical appraisal. Jonna Brig Institute is an international research organisation based in the Faculty of Health and Medical Sciences at the University of Adelaide, South Australia. Jonna Brig Institute develops and delivers unique evidence-based information, software, education and training designed to improve healthcare practice and health outcomes. The purpose of this appraisal is to assess the methodological quality of a study and to determine the extent to which a study has addressed the possibility of bias in its design, conduct and analysis.[5]

Jonna Brig Institute's Check list has following items: Were the criteria for inclusion in the sample clearly defined? Were the study subjects and the setting described in detail? Were data analysis used to identify the sample? Were the study participants recruited appropriately? Were Objectives and standard criteria used to measure the condition? Were important confounders identified or considered?
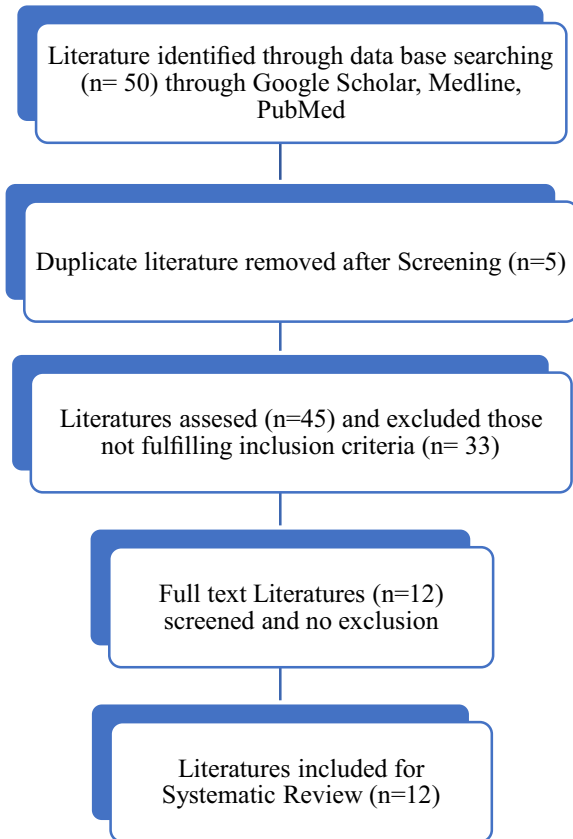
Another Methodological quality assessment tool were used to

assess the quality of study, **STROBE Scale**[6] (Strengthening the reporting of observational studies in epidemiology) version 4 published in Oct/Nov 2007. It has 22 items to assess the quality of Cross-Sectional Observational type of studies. After assessing the studies for quality, the data were extracted by the following information such as author names, study design, sampling methods, result of the studies and then tabulated in Microsoft Excel sheet.

Table 1: - Reviewed studies and their salient features

S. No.	Authors	Study Population/ Sample Size	Assessment tools	Result	
				Prevalence	Associated Risk factors
1.	A. S. Prasad, 2020[4]	Health Care Workers 1124 Sample Size	Hospital Anxiety and Depression Scale	Anxiety 37.2%, Depression 31.4%	Anxiety- young age group (20 to 35 years), females, Unmarried Marital Status and Doctors, working duration of 0 to 10 years. Depression- Young age group (20 to 35 years), doctors, working duration of 0 to 10 years, primary care hospital.
2.	Rajmohan Velayudhan, 2020[7]	General Population 298 Sample Size	Perceived Stress Scale	Upset- Moderate to Severe-48.3% Extreme- 3.1% Stress levels- Moderate to Severe- 39.5% Anxiety- 36.1%	Females, Physical Activity, Fear of Job loss and getting COVID-19, Urban areas population
3.	Absar Ahmad,[8] 2020	General Population 392 Sample Size	Generalized Anxiety disorder Scale-7	Anxiety- 25.3 %	Males, Muslims, Self-employed, Unmarried
4.	Anusa AM,[9] 2020	Health Care workers 586 Sample Size	Perceived stress scale	Moderate Stress 69.28% Severe Stress- 10.75%	Females, Doctors, Young age group (< 25 years and 25 to 35 years), 5 years work experience
5.	Aliya Mufti,[10] 2020	General population 847 Sample Size	World Health Organization Quality of life and DASS-21	Psychological Problems like Depression, Anxiety and Stress- 61.9% Poor Quality of life- 36.1%	WHOQL- Gender, Age, Educational level, Occupation and Religion. DASS-21- Gender, Age, Educational level, Occupation and Religion
6.	Shankey Verma,[11] 2020	General Population 171 Sample Size	DASS-21	Depression- 25.1% Anxious- 28% Stress- 11.6%	Depression- Employment Status, Binge drinking (those study participants were employed and binge drinking both they were two times more depressed) than other study participants. Anxious- Gender, Employment Status and Binge Drinking Stress- binge Drinking
7.	Jeffrey Pradeep Raj,[12] 2020	Health Care Workers 350 Sample Size	GAD-7 PHQ-9 PSS-10	High-level stress 3.7% Depressive symptoms requiring treatment- 11.4% Anxiety symptoms- 17.7%	Female, Hostel/temporary Accommodation,
8.	Anusa Arunachalam Mohandoss,[13] 2020	General Population 2317 Sample Size	Peritraumatic Stress Index (CPDI)	Significant Stress- 22.8% Mild to Moderate Stress- 20.2% Severe Stress- 2.7%	Young Age group (below 25 years, 25-34 years, 35-44 years, 45-54 years), Marital Status (Separated), Annual Income (2.5 to 3 lakhs)
9.	Ridhima Sharma,[14] 2020	Health Care Workers 200 Sample Size	DASS-21	Anxiety- 56.7% Stress- 54.1% Depression- 48%	Staying away from family, Children <5 years or elderly >60 years at home, Fear of infecting the family members, Frequent weight changes (weight loss more common), Gastritis, headache, and worsening of previous health Problems.
10.	Surabhi Mathur,[15] 2020	Health Care Workers 200 Sample Size	ADNM-6 DASS-21	Stress- 9.5% Depression- 17% Anxiety- 19.5	Stress- Age, Females, Married Marital Status, Occupation Anxiety- Age, Married Marital Status, Occupation Depression- Married Marital Status, Comorbid Conditions (HTN, Diabetes, Heart Disease)
11.	Sandeep Grover,[16] 2020	General Population 1871 Sample Size (891 Non HCWs and 794 HCWs)	PSS-10 GAD-7 PHQ-9	GAD-7- 40% (Non HCWs), 36.1% (HCWs) PHQ-9- 11.8% (Non HCWs), 9.1% (HCWs)	
12.	Usama Rehman,[17] 2020	General Public 403 Sample Size	DASS-21		Daily essentials availability during lockdown, Profession

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│ Literature identified through data   │
│ base searching (n= 50) through       │
│ Google Scholar, Medline, PubMed      │
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│ Duplicate literature removed after   │
│ Screening (n=5)                      │
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│ Literatures assesed (n=45) and       │
│ excluded those not fulfilling        │
│ inclusion criteria (n= 33)           │
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         ┌────────────────────────────┐
         │ Full text Literatures       │
         │ (n=12) screened and no      │
         │ exclusion                   │
         └────────────────────────────┘
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         ┌────────────────────────────┐
         │ Literatures included for    │
         │ Systematic Review (n=12)    │
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RESULT AND DISCUSSION

After selecting twelve literature for review for Indian Population with comprising two groups Health Care Workers and General Public have Cross Sectional Study Design. In twelve studies, one study assessed Anxiety, another one study assessed Anxiety and Stress, two studies assessed Stress, one study assessed Anxiety and Depression and studies assessed Stress, Anxiety and Depression. In these studies, Data were collected through online like Social Media, Survey Monkey. These literatures were reviewed thoroughly. So, in these literatures it was found that All studies sample size was between 121 and 2317.

Prevalence of Mental Health Problems due to COVID-19 Pandemic

In selected literature, it has found that the Prevalence of depression ranged from 11.4% to 61.9%, prevalence of anxiety ranged from 17.7% to 37.2% while prevalence of stress ranged from 9.5 to 69.28%.[4,7,8,9,10,11,12] The wide variation in the prevalence of Mental health problems may be due to variations in factors like Demographic factors like Occupation, Gender, Age.

Association of Demographic Factors and Mental Health Problems due to COVID-19 Pandemic

In Demographic Factors of Health Care Workers, some studies like **A S Prasad et al**[4], **Anusa AM et al**[9], **Surabhi Mathur et al**[15] showed that Mental health Problems were common in Young age group Health care Workers. So, this is may be due to some health care workers were experiencing of fear to get infected from COVID 19, because This age group health care workers were working as a front line workers that's why they were suffering from Mental Health Problems while in General Population, **Anusa Arunachalam Mohandoss et al**[13] showed that Mental health problems were also common in Young age group. This age group were also com mon as Healthcare workers because they have also a fear to get infected from COVID 19 and they were experiencing first time Lockdown in country which is causing job insecurity, unavailability of daily need essentials. Some studies like **A S Prasad et al**[4], **Anusa AM et al**[9], **Jeffrey Pradeep Raj**[12], **Surabhi Mathur et al**[15] showed that Mental health problems were also common in Females as compared Males Health Care workers. This is due to healthcare workers are frontline workers and female healthcare worker are in fear to get infected to themselves during COVID-19 isolation and screening duties while In General Public, **Rajmohan Velayudhan et al**[7], **Absar Ahmad et al**[8], **Aliya Mufti et al**[10], **Shankey Verma et al**[11] showed that Mental health problems is common in females, this is because Females were more religious than males in fear of COVID-19 Pandemic. Further, In **A S Prasad et al**[4], **Surabhi Mathur et al**[15] showed that Mental health problems are common in Unmarried Health Care Workers because Unmarried Health care workers living alone in their residence and after COVID 19 duties they were in fear of infected so it causes Anxiety, Stress related Mental Health problems while in **Absar Ahmad et al**[8], **Anusa Arunachalam Mohandoss et al**[13] showed that Unmarried and Separated population are more prone to get mental health problems because lockdown caused mobility restriction, reduced time spent outside in different activities such as the office, parks, and shopping malls and lockdown influence the general public to stay at home which alter their time of awakening and sleeping and time of a meal, resulting mental health problem.

In **Usama Rehman et al**[17] showed that Mental health problems is also common in those general population who were not getting daily essentials during lockdown because some of population lost their job results financial crisis so this factor caused in difficulty in getting their daily essentials to live their quality of life which results mental health problem in general population.

This is the first time in this century that Indian's were under complete lockdown and the people were not prepared, leading to more mental trauma, Anxiety, Depression, stress.[10]

RECOMMENDATIONS

The Government should run programs and policies to control mental health problems in future disastrous situations because these disastrous situations cause more mental health problems. During disastrous situations, rumours take place which make population more concern, stressful and it can increase mental health problems. So, to control mental health problems, there should start awareness programs by using mass media and also regular counselling sessions should be establish in every city. In disastrous situation, media also play a vital role in passing the information. So, Government should instruct media persons to pass only verified information from the health department and other agencies. As seen in COVID 19 situations, Health care workers also suffered from mental health problems. So, there is need to provide proper counselling to healthcare workers during these types of situations. There should be full support of actively participating health care workers families because it has seen in some literatures that some health care workers were also stressful for their families to get infected from COVID 19 and Health Care workers play a vital role in controlling these types of situations.

STRENGTH AND LIMITATION

The strength of the study has maintained through following guidelines like **PRISMA Guidelines, Jonna Brig's Checklist and Strobe Scale**. To reduce Multiple Publication Bias, we used PRISMA Guidelines, in this we excluded duplicate literatures. To reduce Selection Bias, we selected those literatures who were fulfilling our defined inclusion criteria otherwise we excluded from our records.

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