



“A DESCRIPTIVE STUDY TO ASSESS THE IMPACT REGARDING COVID- 19 PANDEMIC ON MENTAL HEALTH AMONG THE GENERAL POPULATION IN THE SELECTED RURAL AREAS AT NAGPUR DISTRICT.”

RESEARCH ABSTRACT

PROBLEM STATEMENT

A descriptive study to assess the impact regarding COVID-19 pandemic on mental health among the general population in the selected rural areas at Nagpur district.

OBJECTIVES

- 1) To assess the impact regarding covid -19 pandemic on mental health among the general population in the selected rural areas at Nagpur District.
- 2) To associate the impact guarding covid-19 pandemic on mental health among the general population in the selected rural areas at Nagpur district with selected demographic variable.

MODEL

The conceptual framework of the study was based on modified

“**Roy’s Adaptation Theory**” open system model.

This study was based on descriptive research approach the population was general population the subjects consisted of 100 samples of general population.

The sampling technique used in the study was non-probability convenient sampling technique. The tool was self-structured impact checklist. This technique was adopted for self- reporting.

The content validity of the tool was done by 9 experts. The reliability of the questionnaire was done by split half coefficient.

The pilot study was conducted from 25 January 2022 as per laid down criteria 10 samples were selected from rural area at Nagpur district using non probability convenient sampling technique.

The data gathering process began from 25 January 2022. The investigator visited to Beltorodi Nagpur in advance and obtained the necessary permission from Gram Panchayat Beltorodi Nagpur

The sample fulfilling the inclusion criteria were selected for the study. The sampling technique used non probability convenient sample technique. The data was collected by using the self-structured checklist. The obtained data was analysed by using descriptive statistics.

Based on the objective and the data were analysed by using various statistical test such as frequency, percentage, mean and standard deviation. The level of significance set for testing the assumption was at 0.05.

There is association between Age, Gender, occupation, family, education, religion had impact regarding covid-19 pandemic on mental health. Had previous impact of covid-19 pandemic on mental health The overall findings of the study assess the impact regarding COVID-19 pandemic among general population. After completion of study we found that the impact of covid-19 pandemic on mental health among general population have average impact.

NURSING IMPLICATIONS OF THE STUDY

The study can be implicated to nursing research, nursing education, nursing administration and nursing process.

NURSING ADMINISTRATION:-

- The study will help to assess the impact and give property training to staff nurses and internship students regarding impact of covid-19 on the mental health on general population in selected rural areas at Nagpur District.
- Develop new knowledge regarding management and administration skills.
- Testing different administrative models.

NURSING EDUCATION

- This study will help to update the impact of covid-19 on mental health among the general population in selected rural areas at Nagpur district.
- This study will help to give small brief idea about the impact of covid -19 on the mental health of the general population corresponding to a subject.
- This study will help to get transparent impact about covid-19 on mental health of the general population in selected rural area at Nagpur District.

NURSING RESEARCH

- The nurse researcher can use the findings of this study as baseline data to conduct further national research to identify level of impact and to determine the association of other demographic variables as with the impact regarding COVID- 19 on mental health of the general population in the selected rural areas at Nagpur District.

- This as help to do further research on the state and national level to know the impact of COVID-19 on the mental health of general population of selected rural area at Nagpur District.

PERSONAL EXPERIENCE

The entire study gave an enriching experience to the investigator. It helped to develop skill in critical thinking and analysis and realize the importance of effective communication with the respondent.

The entire study was varied and had rich learning experience, which enabled the investigator to develop his skills in dealing with different personalities. The concept clarity about research as a whole was increased. At every stage the investigator received guidance and support from his guide. This boosted confidence to go ahead and carry out the planned activities. The cooperation from study sample was remarkable. The research was a great learning opportunity for the investigator.

RECOMMENDATIONS

- An effectiveness of information booklet can be asses on knowledge regarding covid- 19 and its impact on mental health.
- A comparative study can be to assess the impact regarding covid-19 pandemic on mental health among the general population.
- These chapters deal with the major finding suggestion and conclusion, implication and recommendation of the study.

TABLE OF CONTENTS

SR. NO	CHAPTERS	PAGE NO.
1	Introduction	2-10
	Background of Study	4
	Need of Study	6
	Problem Statement	7
	Objective	7
	Operational Definition	7
	Assumption	8
	Ethical Aspect	9
	Conceptual Framework	10
	Summary	10
2	Review of literature	12-20
3	Research methodology	22-29
	Research Approach	22
	Research Design	23
	Setting of study	24
	Population	24
	Variable	24
	Sample	25
	Sample size	25
	Sample Technique	25
	Criteria for sample selection	25
	Tool preparation	26
	Validity	26
	Reliability	26
	Feasibility of study	27
	Pilot study	27
	Method of Data collection	27
	Summary	28
4	Data analysis and interpretation of data.	31-39
5	Summary, finding, conclusion, implication and recommendation.	41-45
6	Bibliography	47-48
7	Annexures	50-65

LIST OF TABLES

TABLE NO.	TITLES	PAGE NO
1	Schematic presentation of the research design	23
2	Frequency and percentage distribution of nursing students according to demographic variable	32
3	Frequency and percentage score of impact regarding COVID -19 pandemic of mental health	36
4	Description of frequency, mean, percentage and standard deviation	37

➤ LIST OF FIGURES

FIGURES NO	TITLE	PAGE NO.
1.	Fig no. 1: Schematic presentation of the conceptual framework.	10
2.	Fig no. 2: - Bar diagram showing distribution of impact regarding covid-19 on the basis of age.	33
3.	Fig no. 3: - Bar diagram showing the distribution of impact regarding covid-19 on the basis of gender	33
4.	Fig no. 4: - Bar diagram showing the distribution of impact on the basis of occupation	34
5.	Fig no. 5: - Bar diagram showing the distribution of impact regarding covid -19 on the basis of education	34
6.	Fig no. 6: - Bar diagram showing distribution of impact regarding covid-19 on the basis of family	35
7.	Fig no. 7: - Bar diagram showing distribution of impact regarding covid -19 on the basis of religion .	35
8.	Fig no. 8: - Pia diagram showing frequency and percentage score of impact regarding covid -19.	36

➤ LIST OF ANNEXURES

ANNEXURES NO.	TITLE
1.	Letter seeking permission to conduct the research study.
2.	Letter seeking permission to conduct pilot study
3.	Confirmation letter for conducted pilot study
4.	Letter seeking permission to conduct main study
5.	Confirmation letter for conducted main study
6.	Letter requesting validation of tool
7.	Consent forms the participant
8.	Tool to assess the impact regarding Covid-19 pandemic among the general population.
9.	Answer key
0.	Master sheet

NAME OF THE EXPERT WHO WILL VALID THE TOOL

SR. NO.	NAME OF EXPERT
1.	Mrs. Mercy Anjore Professor Cum Principal Suretech College Nursing, Nagpur
2.	Ms. Savita Dhoble (MSC Nursing) Associate Lecturer (MSN) Suretech College Of Nursing, Nagpur.
3.	Mr. Hanokh Chakranarayan (MSC. Nursing) Associate professor (CHN) Suretech College of nursing, Nagpur
4.	Ms. Susan Thalapally MSC Nursing) Associate Professor (MSN) Suretech College Of Nursing, Nagpur.
5.	Ms. Priyanka Pothare (MSC Nursing) Lecturer (CHN) Suretech College Of Nursing, Nagpur.
6.	Mr. Sandip Rangari (MSC Nursing) Assistant professor (MSN) Suretech College Of Nursin , Nagpur.

7.	Ms. Anshul Vishwkarma (MSC Nursing) Lecturer (CHN) Suretech College Of Nursing, Nagpur.
8.	Ms. Roshani Dhale (Guide) (MSC Nursing) Lecture (MHN) Suretech College Of Nursing, Nagpur.
9.	Ms. Vidya Raut (MSC Nursing) Lecture (CHN) Suretech Collrgr of Nursing, Nagpur.
10	Mr. Rinkush Sukhdan (Guide) (MSC Nursing) Lecture (MHN) Suretech College Of Nursing, Nagpur.

CHAPTER – I INTRODUCTION

INTRODUCTION

“IF WE DO NOT PLANT AKNOWLEDGE WHEN YOUNG, IT WILL GIVE US NO SHADE WHEN WE ARE OLD.”

- Lord Chesterfield.

In December 2019, a cluster of typical cases of pneumonia was reported in Wuhan, China. Which was later designated as corona virus disease 2019 by the world health organisation on 11 February 2020.

The causative virus SARS- COV-2 was identified as a novel strain of corona virus that share 79% genetic similarity with SARS-COV from outbreak of 2003.

On 11 march 2020 the WHO declared the outbreak a global pandemic. The rapidly evolving situation has drastically altered people’s live as well as multiple aspects of the global , public ,private, economic decline in agriculture and finance including industries owing to COVID19 outbreak are reported.⁽¹⁾

The uncertainties and fear associated with the virus outbreak, along with mass lockdown and economic recession are predicted to lead to increase in suicide as well as mental disorders.

For example it is reported to have projected increases from 418 to 2114 in Canadian suicidal case and the foregoing result that is raising trajectory of suicide was also reported in the Pakistan, India, and France.⁽²⁾

The objective of this systematic review is to summarize extant literature the reported on the prevalence of symptoms, of depressive, anxiety, PTSD and other forms of psychological distressing the general population during the COVID-19 pandemic. An additional objective was identify factor that are associated with psychological distress⁽³⁾

Former infectious disease outbreaks have significantly affected individuals’ mental health along with the expected physical health outcomes (Lau et al. 2010). The novel Coronavirus disease (COVID-19) is by far the most concerning outbreak of atypical pneumonia since the far less detrimental 2003 outbreak of severe acute

respiratory syndrome (SARS) (Hawryluck et al. 2004). The COVID-19 pandemic has been declared an international public health emergency by the World Health Organization (WHO) (WHO 2020a). As of July 1st 2020, the COVID-19 pandemic has infected over ten million people across the world, causing more than 5,00,000 deaths (WHO 2020b). Experts are still uncertain of the trajectory of the COVID-19 pandemic, the projected number of cases and deaths, or to what extent quarantine measures will disrupt daily life (Zandifar & Badrfam 2020). The unpredictable nature of this situation and uncertainty regarding COVID-19 can often trigger psychological distress and mental illness, including depression, anxiety, and traumatic stress (Cheung et al. 2008; Bao et al. 2020; Zandifar & Badrfam 2020). A recent survey by the Indian Psychiatric Society shows a twenty percent increase in mental illnesses since the coronavirus outbreak in India (Loiwal 2020). The COVID-19 situation in Bangladesh is worsening day by day. The Government of Bangladesh closed all educational institutions and both public and private offices on March 16th 2020 in an effort to contain the outbreak. Public gatherings were also banned (WHO 2020c), and travel from countries with high transmission risk, such as China, Iran, and Italy, was suspended (Anadolu 2020). Despite these efforts, COVID-19 has reached all 64 administrative districts in Bangladesh by July 1st 2020, causing over 145,000 cases and 1,874 deaths thus far (IEDCR 2020). High population density, poor personal hygiene practices, and poor economic conditions make the majority of the Bangladeshi population particularly vulnerable to this virus. Fear of becoming sick, the isolation of lockdown, the financial necessity to work, and the inability to avoid venturing out in public for essential items such as food may increase psychiatric problems within the general population. Recent publications suggest mental health during the COVID-19 pandemic is associated with gender, socioeconomic status, occupation, having COVID-19-like symptoms, perceptions of COVID-19 impacts, interpersonal conflicts, social media use, and social support (Mowbray 2020; Wang et al. 2020a). Older adults and individuals with low incomes are at increased risk for poor mental health (Holmes et al. 2020). There is no information yet on mental health associations with or during this COVID-19 pandemic in the general population of Bangladesh. Exploratory studies of mental health conditions and associated factors during this time are essential to mitigate future negative mental health outcomes. We hypothesize that the prevalence of mental health distress is high among Bangladeshi residents during this pandemic. This study estimates the prevalence of and identifies the risk factors for depressive and anxiety symptoms during the COVID-19 pandemic among the adult population in Bangladesh. Symptoms of psychological stress are also explored in a similar manner.⁽⁴⁾

Method:-

BACKGROUND OF STUDY

A cross sectional study web survey was conducted in Kerala Thiruvananthapuram (India) between 11 May 2020 and 15 June 2020 the sample was drawn from Kerala region minimum 100 participants.⁽⁵⁾
Result:-

Impact of event scale –revised scoring (IES-R) :- The overall mean IES-R score was 29.3+-14.8 reflecting a mild stressful impact of COVID -19 pandemic on the surveyed participant ⁽⁶⁾.

Impact on social and family support :- The results showed that 42.1% of the participants reported receiving increased support from family members, 24.3% received increases support from friends, and 48.1% stated increased shared feelings with their family member during the pandemic⁽⁷⁾.

Mental health – related lifestyle changes:- About 41 % of the participants reported paying more attention to their mental health since the pandemic started . Additionally over 40% of the participants reported spending more time to rest and relax. The impact of COVID -19 on mental health:- In the early stages of COVID -19 pandemic , researchers highlighted the importance of monitoring the rates of the depression , anxiety disorder , self –harm and suicidal behaviour across general and vulnerable population , including front – line health care workers⁽⁸⁾.

The coronavirus disease (COVID-19) pandemic has impacted the economy, livelihood, and physical and mental well-being of people worldwide. This study aimed to compare the mental health status during the pandemic in the general population of seven middle income countries (MICs) in Asia (China, Iran, Malaysia, Pakistan, Philippines, Thailand, and Vietnam). All the countries used the Impact of Event Scale– Revised (IES-R) and Depression, Anxiety and Stress Scale (DASS-21) to measure mental health. There were 4479 Asians completed the questionnaire with demographic characteristics, physical symptoms and health service utilization, contact history, knowledge and concern, precautionary measure, and rated their mental health with the IES-R and DASS-21. Descriptive statistics, One-Way analysis of variance (ANOVA), and linear regression were used to identify protective and risk factors associated with mental health parameters. There were significant differences in IES-R and DASS-21 scores between 7 MICs ($p < 0.05$). Thailand had all the highest scores of IES-R, DASS-

21

stress, anxiety, and depression scores whereas Vietnam had all the lowest scores. The risk factors for adverse mental health during the COVID-19 pandemic include age < 30 years, high education background, single and separated status, discrimination by other countries and contact with people with COVID-19 ($p < 0.05$). The protective factors for mental health include male gender, staying with children or more than 6 people in the same household, employment, confidence in doctors, high perceived likelihood of survival, and spending less time on health information ($p < 0.05$). This comparative study among 7 MICs enhanced the understanding of mental health in the general population during the COVID-19 pandemic⁽⁹⁾.

NEED OF THE STUDY

As watching the condition of the people during COVID -19 from 2019 – 2021 people are suffering huge losses which are affecting their mental state.

India is the 2nd highest country worst affected by COVID -19 pandemic.

The respondent who are more likely to be distress are in the age group of 21-35 yr. are female working on site, 1.884 do not have health insurance policy in COVID -19, 2.3% and 17.1% of people under lower and higher distress respectively with respect to logistic regression⁽¹⁰⁾.

Relatively high rate of symptom of anxiety 6.33% - 50.9% depression 14.6% - 48.3% stress 8.1%- 81.9% psychological distress 34.43% - 38%.

We are doing this survey by questionnaire method we will able to assess the constructive / deficit growth in mental state and problem faced by the sample population. There can be many problems such as financial crisis, unemployment, illiteracy, agriculture etc, which is affecting the population.

The need for doing this study is to apply a whole of society approach to promote, protect and care for mental health⁽¹¹⁾.

Insure widespread availability of emergency mental health and psychological support. Support recovery from COVID -19 by building mental health services for the future. Preliminary evidence suggest that symptoms of anxiety and depression 16-28% and self-reported stress 8% are common psychological reaction to the covid 19 and associated with disturbed sleep, over 60% of individual 21 -30 were estimate risk of anxiety and depression and considering suicide during pandemic⁽¹²⁾.

As a major virus outbreak in the 21st century, the Coronavirus disease 2019 (COVID-19) pandemic has led to unprecedented hazards to mental health globally. While psychological support is being provided to patients and healthcare workers, the general public's mental health requires significant attention as well. This systematic review aims to synthesize extant literature that reports on the effects of COVID-19 on psychological outcomes of the general population and its associated risk factors⁽¹³⁾.

TITTLE OF STUDY

The impact regarding COVID-19 pandemic on mental health among the general population in the selected rural areas at Nagpur district.

PROMBLEM STATEMENT

A descriptive study to assess the impact regarding COVID-19 pandemic on mental health among the general population in the selected rural areas at Nagpur district.

OBJECTIVES

- 1) To assess the impact regarding covid -19 pandemic on mental health among the general population in the selected rural areas at Nagpur District.
- 2) To associate the impact regarding covid-19 pandemic on mental health among the general population in the selected rural areas at Nagpur district with selected demographic variables.

OPERATIONAL DEFINATIONS

1. STUDY :-

➤ **According to Oxford Dictionary :-**

Study is the activity of learning or gaining knowledge either from books or by examining things in the world .

➤ **In the study :-**

Study is the detailed investigation and analysis of subject or situation.

2. ASSESS :-

➤ **According to Oxford Dictionary :-**

Assess refer to make a judgment about nature or quality of something .

➤ **In the study :-**

Asses refer to gathering information regarding knowledge of COVID -19 among general population.

3. IMPACT :-

➤ **According to Oxford Dictionary :-**

The impact is action of one object coming forcibly into contact with other.

➤ **In the study :-**

To affect or influence someone or something.

4. COVID- 19 :-

➤ **According to Oxford Dictionary :-**

Coronavirus disease (COVID -19) is an infection disease caused the Sara. Cov -2 virus.

➤ **In the study :-**It is largest category for RNA virus coronavirus can cause pneumonia and like other respiratory infection it has an incubation of between 1 to 14.

5. PANDEMIC :-

➤ **According to Oxford Dictionary :-**

The disease that spread over a whole country or whole world .

➤ **In the study:-**

Prevent over the whole country or the world.

6. MENTAL HEALTH :-

➤ **According to Oxford Dictionary:-**

Mental health is the state of health of somebody mind.

➤ **In the study:-**

A person condition with regarding to their psychological and emotional wellbeing.

7. GENERAL POPULATION :-

➤ **According to Oxford Dictionary:-**

General population are all the people who live in a particular area ,city or country the total number of people who live these one third of the world's population consume two- third of worlds resources.

➤ **In the study :-**

The general population is the entire population of individual with a characteristic of interest such as a particular disease or condition of clinical concern. It is differentiated from that population for a particular study.

ASSUMPTIONS:-

1. Impact regarding covid-19 pandemic on mental health among general population may varies according to the age.
2. Impact regarding covid-19 may vary according to their demographic variables.
3. General population may have impact regarding covid-19 pandemic on mental health.

ETHICAL ASPECTS:-

1. Prior permission will be obtained from Gram panchayat.
2. Prior permission will be obtained from the medical officer from PHC and UPHC
3. Prior permission will be obtained from head of the family.

CONCEPTUAL FRAMEWORK

Roy's Adaptation Theory

Roy's theory explained that adaptation occur when people when people respond positive to environment change , and it is the process outcome of individual and group who use conscious awareness self-reflection and choices to create human and environment . Roy's theory see the individual as a set of interrelated system .The individual strives to maintain a balance between these systems and the outside world, but there is no absolute level off balance .¹⁸

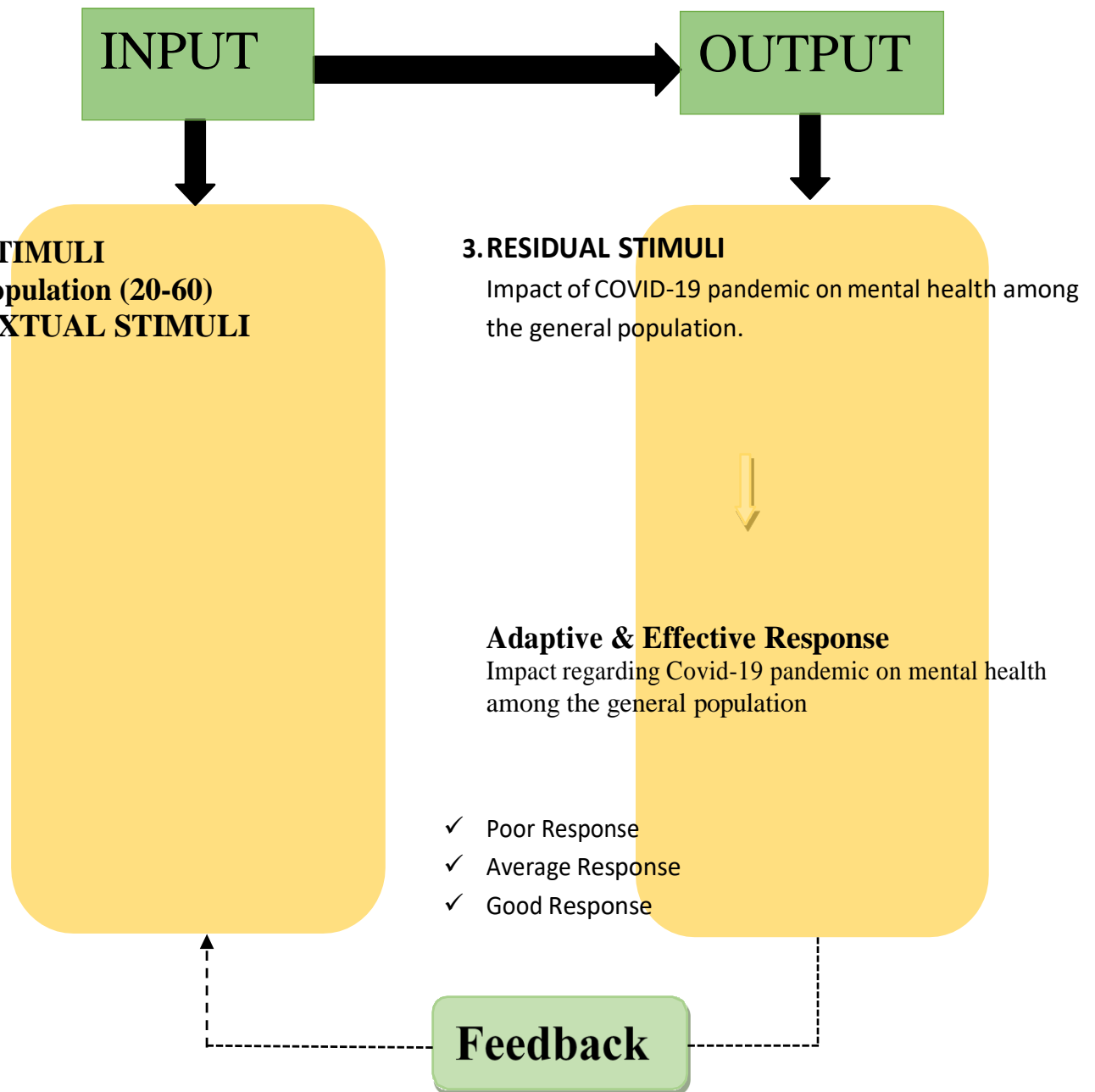


Fig 1.1 :Input is stimuli adaptation level including control process and effectors Throughput is not applicable for this study ,output is adaptive and effective response.

CHAPTER– II

REVIEW OF LITERATURE

“OUR REVIEW OF LITERATURE SAYS, LITERATURE IS THE ART OF DISCOVERING SOMETHING EXTRAORDINARY ABOUT ORDINARY PEOPLE, AND SAYING WITH ORDINARY WORDS SOMETHING EXTRAORDINARY”.

-BOGIS PASTERNAK

The chapter present review of literature related to the present study. The role of the literature review is to formulae and clarify the research problem to ascertain what is already known in relation to problem of interest for developing a broad conceptual contest, facilitate accumulation of scientific knowledge for interpreting the result of the study. Literature review provide a practical guide to a particular topic it also provide a solid background for a research study. It helps in the discovery of unanswered questions about subjects, concept or problem and also describe the strength and weakness of design/methods of injury and instruments used in earlier research work. It point a way forward for the research and place one’s original work in contest of existing literature. A literature review may consist of simply a summary of key sources, but in the social sciences, a literature review usually has an organizational pattern and combines both summary and synthesis, often within specific conceptual categories.

DEFINITION:

“ A literature review is an account of what has been already established or published on a particular research topic by accredited scholars and researchers.

(University of Toronto, 2001)

The review of literature is carried out under the following headings:-

1. Literature related to impact of covid 19 pandemic among the general population regarding physical health
2. Literature related to impact of covid 19 pandemic among the general population regarding stress, anxiety, depression
3. Literature related to impact of covid 19 pandemic among the general population regarding behavior
4. Literature related to impact of covid 19 pandemic among the general population regarding social health
5. Literature related to impact of covid 19 pandemic among the general population regarding cognitive health
6. Literature related to impact of covid 19 pandemic among the general population regarding spiritual health

1) Literature related to impact of covid 19 pandemic among the general population regarding physical health

Jianhui Dai & his colleague, conducted study to asses Influence of COVID- 19 Pandemic on Physical Health–Psychological Health, Physical Activity, and Overall Well-Being on 16 August 2021 in china. **Method:** An online survey was conducted, a total of 2,200 respondents data were analyzed through appropriate statistical techniques. **Results:** The study results indicate that CP was found significantly and negatively related to PH ($\beta = -0.157, t = 9.444, p < 0.001$). A significant relationship was found between CP and PsH ($\beta = 0.779, t = 45.013, p < 0.001$). The third prediction revealed a significant negative relationship between the CP and OW ($\beta = -0.080, t = 5.261, p < 0.001$). The CP and PA had a significant negative relationship ($\beta = -0.047, t = 3.351, p < 0.001$). **Conclusion:** The PH, PsH, and OW of the Chinese people were affected due to the CP and lockdown measures.

Natasha Shaukat etal, was conducted a study to asses the physical and mental health impacts of covid-19 on health workers on 20 july 2020. **Methods:** They used Arksey O'Malley framework , 154 studies, and out of which 10 met their criteria and collected information and divided all research articles into two domains: physical and mental health impact. **Results:** They reviewed a total of 154 articles (126) and (28), of which 58 were found to be duplicate articles and were excluded. Of the remaining 96 articles, 82 were excluded after screening for eligibility, and 4 articles did not have available full texts. **Conclusion:** The frontline healthcare workers are at risk of physical and mental consequences directly as the result of providing care to patients with COVID-19.^[2]

Oliver W. A. Wilsonetal, was conducted a study to assess impact of the pandemic on college students' PA, perceived stress, and depressive symptoms 2020.**Methods:** From 2015 through 2020, data were collected at the an online survey assessing student demographics, PA, perceived stress, and depressive symptoms. **Results:** Participants (n = 1019) were women and non-Hispanic white. There was a significant decline in PA and an increase in perceived stress under COVID-19. **Conclusions:** There is decline in PA and mental health among college students occurred under COVID-19 circumstances, and PA did not appear to protect against deterioration in mental health.^[19]

2. Literature related to impact of covid 19 pandemic among the general population regarding stress, anxiety, depression

Chisholm Detal, was conducted a study to assess the Global prevalence and burden of depressive and anxiety disorder in 204 countries and territories in 2020 due to the COVID-19 pandemic. **Methods:** They used meta-regression to estimate change in the prevalence of major depressive disorder and anxiety disorder between Jan 1- 2020s. **Results :** out of 5683 , 1674 remained following title and abstract screening. In total, 46 studies met inclusion criteria for major depressive disorder and 27 for anxiety disorder. **Conclusion:** human mobility and daily SARS-CoV-2 infection rate, daily excess mortality rate was not associated with the change in prevalence for either major depressive disorder or anxiety disorders.^[3]

Nader Salari etal, was conducted a study to assess the prevalence of stress, anxiety ,depression among the general population during the COVID-19 pandemic ,06

July 2020 **Method:** Data analysis was conducted using the Comprehensive Meta-Analysis

(CMA) software. **Results:** The prevalence of stress in 5 studies with a total sample size of 9074 is obtained as 29.6% the prevalence of anxiety in 17 studies with a sample size of 63,439 as 31.9% , and the prevalence of depression in 14 studies with a sample size of 44,531 people as 33.7%. **Conclusion:** COVID-19 not only causes physical health concer but also results in a number of psychological disorders. The spread of the new coronavirus can impact the mental health of people in different communities.^[4]

Anupam Das etal, was conducted study to Evaluate Depression and Perceived Stress Among Frontline Indian Doctors Combating the COVID-19 Pandemic ,June 6, 2020to. **Methods:** online questionnaire was used were 9-item Patient Health Questionnaire and the Perceived Stress Scale were used to assess depression and perceived stress. **Results:** The results of 422 responses revealed a 63.5% and 45% prevalence of symptoms of depression and stress, respectively, among frontline COVID-19 doctors. Postgraduate (45.5%). Moderately severe and severe depression was noted in 14.2% and 3.8% . Moderate and severe stress was noted in 37.4% and 7.6.6%. **Conclusions:** Regular screening of medical personnel involved in the diagnosis and treatment of patients with COVID-19 should be conducted to evaluate for stress, anxiety, and depression.^[5]

Liadh Timminsetal , was conducted study to assess the psychological impact of the COVID-19 pandemic on women during pregnancy and the first year postpartum 2019.**Method:** Pubmed, Scopus, WOS-web of science, PsycInfo and Google Scholar. Out of the total of 116 initially selected papers, 17 have been included in the final work, according to the inclusion criteria. **Results:** The reviewed contributions report a moderate to severe impact of the COVID-19 outbreak on the mental health of pregnant women, mainly in the form of a significant increase in depression-up to 58% in Spain- and anxiety symptoms-up to 72% in Canada. **Conclusions:** study suggests that it is essential to provide appropriate psychological support to pregnant women during the

emergency in order to protect their mental health and to minimize the risks of long-term effects on child development.^[18]

3. Literature related to impact of covid 19 pandemic among the general population regarding behavior and social health

Dimple Rawat et al, was conducted a study to assess Impact of COVID-19 outbreak on lifestyle behaviour 2021, **Methods:** They used PubMed and Google Scholar from inception till October 2020 to identify all relevant studies. **Results:** A total of 11 studies consisting of 1 hospital and 10 community based, were included. A change in lifestyle behaviour was observed due to COVID-19. Weight gain and decline in physical activity were also observed. Not only sleep quantity but sleep quality was also found to be affected due to COVID-19. **Conclusion:** The present review indicates the need for lifestyle behaviour programmes via using the platform of E-media and also for the dissemination of health education.

Jay J. Van Baveletal, was conducted a study to assess social and behavioural science to support COVID-19 pandemic response, May 2020, in wuhan china, **Result;** Within three months, the virus had spread to more than 118,000 cases and caused 4,291 deaths in 114 countries, **Conclusion:** They argued three main factors: (i) people do not appreciate the risks they run, (ii) it goes against human nature for people to shut themselves up in rigid isolation as a means of protecting others, and (iii) people often unconsciously act as a continuing danger to themselves and others.

Andrew T. Glosteretal, conducted a study to assess the Impact of COVID-19 pandemic on mental health 31 december 2020. **Methods:** They surveyed n = 9,565 people from 78 countries and 18 languages. Outcomes assessed were stress, depression, affect, and wellbeing. **Results:** Results indicated that on average about 10% of the sample was languishing from low levels of mental health and about 50% had only moderate mental health. **Conclusions:** These results suggest that whole, were moderately mentally healthy at the time of a population-wide lockdown. The highest level of mental health difficulties were found in approximately 10% of the population.

Changwon Son et al, was conducted a study to assess Effects of COVID-19 on College Students' Mental Health in the United States 2019. **Methods:** They conducted interview surveys with 195 students to understand the effects of the pandemic on their mental health and well-being through quantitative and qualitative methods. **Results:** Of the 195 students, 138 (71%) indicated increased stress and anxiety. These included fear and worry (177/195, 91% reported negative impacts of the pandemic), difficulty in concentrating (173/195, 89%), disruptions to sleeping patterns (168/195, 86%), decreased social interactions due to physical distancing (167/195,

86%), and increased concerns on academic performance (159/195, 82%). **Conclusions:** Due to the long- lasting pandemic situation and onerous measures such as lockdown and stay-at-home orders, the COVID-19 pandemic brings negative impacts on higher education..

Maria Elizabeth et al, was conducted a study to assess to impact of covid-19 on the mental health of widespread social isolation march 29,2020 **Method:** For this rapid review, we searched MEDLINE, PsycInfo, and Web of Science for articles published between January 1, 1946, and March 29, 2020. **Results:** A total of 83 articles (80 studies) met inclusion criteria. Of these, 63 studies reported on the impact of social isolation and loneliness on the mental health (n = 51,576; mean age 15.3 years). **Conclusion:** They experience probably more likely to experience high rates of depression and most likely anxiety during and after enforced isolation ends.

Marialaura Di Tella et al, was conducted a study to asses the psychological impact of the COVID-19 outbreak on Italian healthcare workers. **Methods:** The responses of 145 healthcare workers used Visual Analogue Scales. **Results:** A comparison between healthcare professionals working in COVID-19 wards and other units revealed that the former reported higher levels of both depressive symptoms and PTSS. **Conclusions:** The current findings suggest that specific predisposing factors could identify healthcare workers who are at high risk of developing mental health symptoms when faced with COVID-19 patients.^[20]

4. **Literature related to impact of covid 19 pandemic among the general population regarding cognitive health.**

Schäfer S.K, Soppetal, was conducted study to assess the Impact of COVID-19 on Public Mental Health and the Buffering Effect of Sense of Coherence. **Methods:** This study assessed psychopathological symptoms sample (n =1,591) Bivariate latent change score (BLCS) modeling was used to analyze pre- to post- outbreak changes in psychopathological symptoms . **Results:** Overall, an individual level, 10% experienced a clin increase in psychopathological symptoms and 15% met cut-off criteria for COVID-19-related traumatic distress. **Conclusions:** Although mental health was stable in most respondents, a small group of respondents characterized by low levels of SOC experienced increased psychopathological symptoms from pre- to post-outbreak.^[10]

Jingyu Cui et al, was conducted a study to assess the COVID-19 impact on mental health 2022. **Methods:** online survey study was , conducted over 12 consecutive weeks from April 23, 2020 to July 21, 2020. examining the risk factors that have a significant impact on mental health as well as in their estimated effects over time. **Results:** Their analysis shows that risk predictors for an individual to experience where the individual resides, age, gender, race, marital status, health conditions, the number of household members, employment status, the level of confidence of the future food affordability, availability of health insurance, mortgage status, and the information of kids enrolling in school. **Conclusions:** The analysis results unveil evidence-based findings to

identify the groups who are psychologically vulnerable to the COVID-19 pandemic, provides helpful evidence for assisting healthcare providers.^[11]

atherine Porteretal, was conducted study to assess Impact of the COVID-19 pandemic on anxiety and depression symptoms of young people 2020.**Methods:** A phone survey administered between August and October 2020 to participants of a population. We use logistic regressions to examine associations between mental health and measured at younger ages. **Results:** Rates of symptoms of at least mild anxiety (depression) were highest in Peru at 41% (32%) (95% CI 38.63% to 43.12%; (29.49–33.74)), and lowest in Vietnam at 9% (9%) (95% CI 8.16% to 10.58%; (8.33– 10.77)).**Conclusion:** Pandemic-related health, economic and social stress present significant risks to the mental health of young people in LMICs where mental health support is limited, but urgently needed to prevent long-term consequences.

Chakraborty, Kaustavetal, was conducted study to assess the Psychological impact of COVID-19 pandemic on general population in West Bengal June 2020
Methods: It was an online survey which was conducted using Google Forms with link sent using WhatsApp. A 38-item self-designed questionnaire was used for the study. The survey questionnaire would take around 5–7 min to complete. Total 507 responses were received by the stipulated time. **Results:** Near about five-seventh (71.8%) and one-fifth (24.7%) of worried and depressed, Half of the (52.1%) were preoccupied with the idea of contracting COVID-19 and one-fifth (21.1%) were repeatedly thinking of getting themselves tested for the presence of COVID-19 despite having no symptoms. **Conclusion:** The index survey suggested that worry and sleep disturbances were common among the respondents in the past 2 weeks.^[13]

5. Literature related to impact of covid 19 pandemic among the general population regarding spiritual health

Giancarlo Lucchetti etal, was conducted study to assess the Spirituality, religiosity and the mental health consequences of social isolation during Covid-19 pandemic November 2 2020 **Methods:** Online surveys were carried out , Adjusted regression models were used. **Results:** A total of 485 participants were included from all regions of Brazil. (OR = 0.466, CI 95%: 0.307–0.706), religious attendance (OR = 0.587, CI 95%: 0.395–0.871), spiritual growth (OR = 0.667, CI 95%: 0.448–0.993) and with an increase in religious activities (OR = 0.660, CI 95%: 0.442–0.986); lower levels of fear were associated with greater private religious activities (OR = 0.632, CI 95%: 0.422–0.949) and spiritual growth (OR = 0.588, CI 95%: 0.392–0.882)
Conclusions: The relief of suffering, having an influence on health outcomes and minimizing the consequences of social isolation.^[14]

Mei-Chung Chang et al, was conducted study to assess Psychological Resilience in Healthcare Workers During the Coronavirus Disease 2019 Pandemic march 2020. Methods: All participants filled out the 20-item Toronto Alexithymia Scale, five-item Brief-Symptom Rating Scale, and the Chinese Oxford Happiness Questionnaire. Results:12.3% of frontline healthcare workers in general hospitals reported having mental distress and perceived lower social adaptation status compared with those working in psychiatric hospitals. Conclusions: Collectivism and individualism in the cultural context are discussed with regard to alexithymic trait and Buddhist/Taoist and Christian/Catholic religious faiths.

Huma Fatima et al, was conducted a study to assess the Religious coping in the time of COVID-19 Pandic in India and Nigeria December 27 2020:.Method:online survey. The sample was collected using a snowball sampling technique , started on 22 April 2020 and was closed on 28 May 2020. Results:A total of 647 individuals (360 from Nigeria and 287 from India) participated in the survey. A total of 188 (65.5%) participants in India reported no change in their religious activities since they heard about COVID-19, while, 160 (44.4%) in Nigeria. Conclusion: percentages of people after the COVID-19 pandemic took religious coping steps to overcome their problem.

CHAPTER- III RESEARCH METHODOLOGY

RESEARCH METHODOLOGY

“Methodology is applied ideology.”

-Mason Cooley

It refers to controlled investigation of the way of obtaining, organizing and analyzing data. For any research work, the methodology of the investigation is of vital importance. Research methodology is a way to systematically solve research problems. It includes the steps, procedures and strategies for gathering and analyzing the data in a research investigation.

This chapter deals with methodology adopting “**A descriptive study to assess the impact regarding COVID- 19 pandemic on mental health among the general population in the selected rural areas at Nagpur District.**”

The methodology of the study includes research design, research approach, setting of the study,

population, sample, sampling technique, content validity of the tool, pilot study, data collection process and plan for data analysis.

RESEARCH APPROACH

Research approach indicates the basic procedure for conducting research. The choice of the appropriate approach depends on the purpose of the study. The main objective of the study was to find out the association between the impact of covid -19 on mental health among the general population about and selected demographic variables. Hence the descriptive approach was adopted in this study.

Descriptive approach is a non-experimental study in which the researcher investigates a community. Surveys are not intended at discovering the cause of a phenomenon but are intended to provide accurate quantitative description.

RESEARCH DESIGN

Research design is the master plan specifying the methods and procedures for collecting and analysing the needed information in a research study. It is a plan of how, when and where data are to be collected and analysed. Research design refers to the plan, structure and the strategy of investigation of answering the research question in overall plan or blueprint that researcher selected to carry out the study.

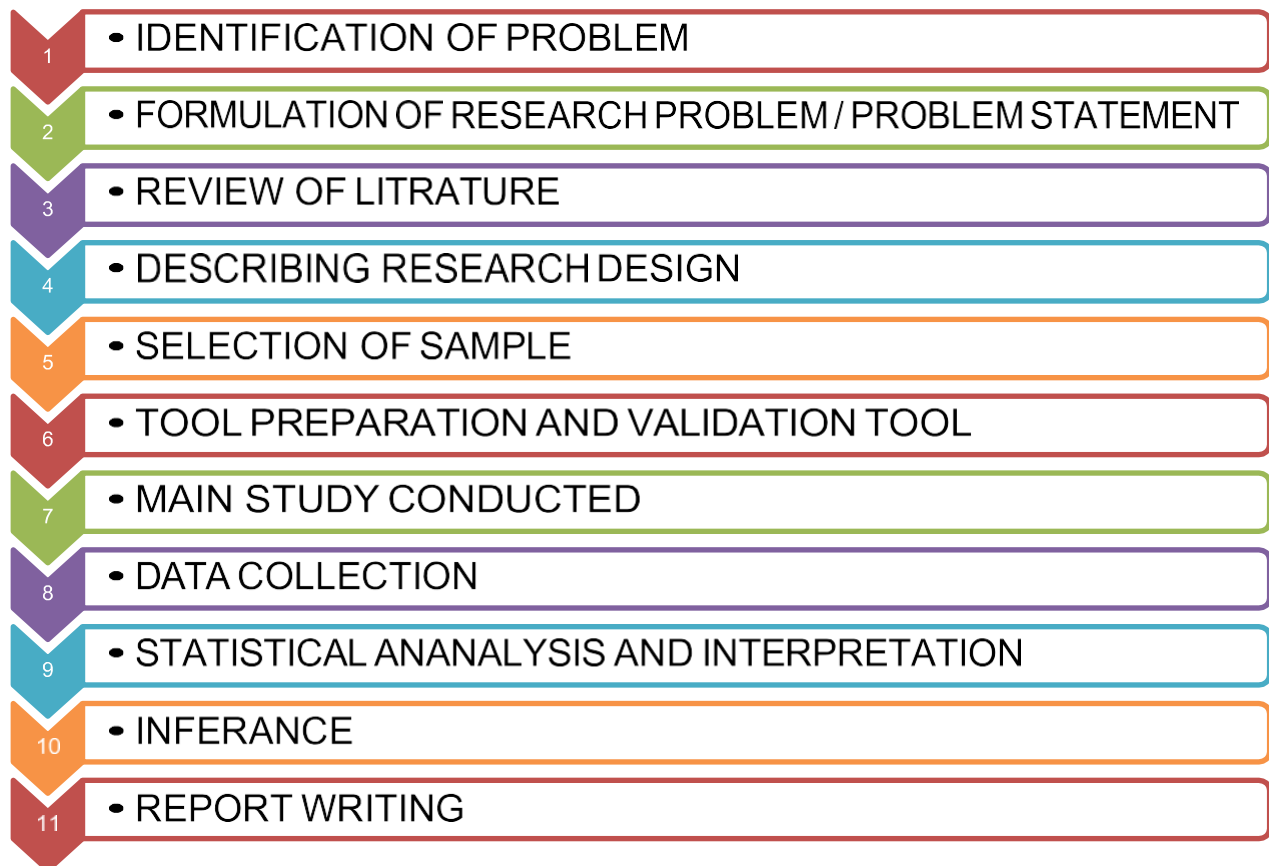


Table no.2: Schematic representation of study design used for the present study.

❖ RESEARCH VARIABLES

❖ VARIABLES

A variable is defined as anything that has quality or quantity that varies. It is a measurable or potentially measurable component of an event that may fluctuate in quantity or quality. Variables are the focus of the study and reflect the empirical aspect so the concept being studied.

Research variables refer to the qualities, attributes, properties or characteristics that are observed or measured in a natural setting without manipulating and establishing cause-and-effect relationships.

In this study, the research variable is the impact of COVID-19 on mental health on the general population in the selected rural areas of Nagpur District.

❖ DEMOGRAPHIC VARIABLES

In most of the research studies, researchers make the attempt to study the sample characteristics and present them in research findings. In addition, sometimes researchers even try to establish relationships between demographic variables and research variables. These characteristics and attributes of the study subjects are considered as demographic variables.

In this study, demographic variables are Age, Gender, Religion, Occupation, Education, Family.

❖ SETTING OF THE STUDY

The study setting is the location in which the research is conducted and data collection takes place. The researchers or investigators need to decide where the data will be collected.

This study was performed in the selected rural areas at Nagpur District.

- To get the adequate number of samples.
- To get cooperation from the general population of selected rural areas at Nagpur District.

❖ POPULATION

“A local group of organisms sharing a common Gene pool.”
-King (1968), 2002

In this study, the population was the general population of selected rural areas at Nagpur District.

❖ TARGET POPULATION

Target population is the entire group, a researcher is interested in the group about which the researcher wishes to draw conclusion.

In this study target population is general population of selected rural areas at Nagpur District.

❖ ACCESSIBLE POPULATION

The population of subjects available for a particular study, often a non-random sub set of the general population.

In this study accessible population general population of selected rural areas at Nagpur District those fulfilled set designed criteria and available for the study.

❖ SAMPLE

“A sample is a part or subset of population selected to participate in research study. Sample refers to set of elements that make up the population to represent the entire population.”

In this study, the general population of selected rural areas at Nagpur District.

❖ SAMPLING TECHNIQUE

Sampling technique is the name or other identification of the specific process by which the entities of the sample have been selected.

The subjects were selected by using non probability convenient sampling technique.

❖ CRITERIA FOR SAMPLE SELECTION

Sampling criteria is the list of characteristics of the element that we have determined before and that are essential for eligibility to form part of the sample.

A. INCLUSION CRITERIA

Inclusion criterions are the characteristics that the prospective subject must have if they are to be including the study. Following are the inclusion criteria of the study.

➤ the study include 20-60 yr. who willing to participate in study.

- General population who able to read, write and understand Hindi, English and Marathi language .

B. EXCLUSION CRITERIA

Exclusion criterions are those characteristics that disqualified prospective subject from inclusion in the study. Following are the exclusion criteria of the study.

- General population with age group below 20 and above 60.
- General population who are not able to understand Hindi ,English and Marathi

❖ PLAN FOR TOOL PREPARATION

The tool used to gather relevant data is structured checklist which are used to assess impact regarding COVID 19 pandemic on mental health among the general population in the selected rural areas at Nagpur District.

❖ DEVELOPMENT OF TOOL

Review of literature; previous research study from book; journal articles and internet were referred.

❖ DESCRIPTION OF THE TOOL

- Section A : Socio-demographic variables

It contains socio-demographic variable like age, gender, family education religion occupation residents, impact regarding covid -19 pandemic on mental health among the general population .

- Section B : Consist of self structured checklist .

It consists of 30 question regarding impact of covid -19 pandemic on mental health among the general population .

❖ SCORING PROCEDURE

- Section A : There was no any scoring procedure for section A as it is baseline data.
- Section B: Scoring procedure for impact regarding COVID-19 pandemic on mental health among the general population .
 1. **Score:** 0-10 is poor
 2. **Score:** 11-20 is average
 3. **Score:** 21-30 is goodMinimum score: 0 Maximum score:30

❖ FEASIBILITY OF THE STUDY

- It is the small-scale test to determine the feasibility of the large study.
- The researcher does not find the much difficulty in getting the subject because as assessable population and sample size was 100 with respective inclusion criteria.

❖ PILOT STUDY

The pilot study was conducted from 25 January 2022 as per laid down criteria 10 samples were selected from rural areas at Nagpur District (Beltarodi ,Nagpur) using Systematic probability convenient sampling technique.

The data gathering process began from 25 January 2022. Beltarodi, Nagpur The investigator visited at Beltarodi Nagpur in advance and obtained the necessary permission from Grampanchayat Officer of Beltarodi , Nagpur .

The sample fulfilling the inclusion criteria where selected for the study. The sampling technique used is systematic probability convenient sampling technique. The data was collected by using the self-structured impact checklist. The obtained data was analysed by using descriptive statistics.

Based on the objective and the data reveal that 1 (10%) of general population had poor impact, 9 (90%) of general population had average impact, 0 (0%) of general population had good impact and it's mean value is 15.3 and mean percentage 15.3% with standard deviation of 6.64.

Chi-square test is used to find out the association between demographic variables and impact regarding covid-19 pandemic on selected baseline variables at 0.05 level of significance.

❖ **RELIABILITY**

Reliability is the degree of consistency and accuracy with which an instrument measures the attribute for which it designed to measure.

In this study, the reliability of the tool was determined by administering the self structured checklist to 100 sample. Karl Pearson's correlation coefficient formula was used for reliability. The checklist was said to be reliable if the correlation coefficient was morethan0.8.

The correlation coefficient "r" of the checklist was 0.93 which is more than 0.8 hence questionnaires found to be reliable.

❖ **VALIDITY**

Validityrefertoaninstrumentortestactuallytestingwhatitsupposetobe testing.

The tool was given to 10 experts for the content validity; including HOD OF MHN subject (2)HOD of community health nursing(2), statistician (2) ,HOD of child health nursing(2), , HOD of medical surgical nursing(2).

DATA COLLECTION❖ **PILOT STUDY**

The prior permission of authority was obtained. The pilot study was conducted from25 January 2022 as per laid down criteria 10samples were selected from rural areas at Nagpur District (Beltarodi ,Nagpur) who were not included in main study and those who fulfilling criteria of the study.

❖ **MAIN STUDY**

The data collection procedure will be carried for 3 days, after obtaining formal permission for selected nursing colleges. The data collection will start with the written consent that will be taken from the study participants.

A total of 100 general population were selected by probability convenient sampling technique Data will be collected by using self structured checklist to identify the impact COVID-19 pandemic on mental health among the general population .

Data analysis is the process of organizing and synthesizing the data so as to answer research question. Data collection is followed by analysis and interpretation of

data where the collected data are analyzed an interpreted in accordance with study objective.

Descriptive inferential statistics is use for data analysis. To compute the data master sheet was prepared by the investigator.

❖ DESCRIPTIVE STATISTICS

Descriptive statistics is the term given to analysis of data that help to describe, show or summarize the data. Descriptive statistics do not allow us to make conclusion beyond the data is more meaningful way.

When we use descriptive statistics, it is useful to summarize group data by using a combination of tabulation or graphical description and statistical commentary (i.e discussion of result). Frequency and percentage distribution were used to analyze the demographic variable.

❖ INFERENTIAL STATISTICS

Chi-square test is use to find out the association between demographic variables and the impact COVID-19 pandemic on mental health among the general population .

❖ PROTECTION OF HUMAN SUBJECTS

Investigator obtained approval from research committee, and formal written permission from nursing colleges to conduct the study. Each individual subject was informed about purpose of the study and confidentiality was promised and ensured. Both verbal and written consent were obtained from all the study object and that are collected where are kept confidential .Autonomy was maintained throughout the study.

❖ SCOPE OF THE STUDY

NURSING ADMINISTRATION :-

- The study will help in to assess the impact and give property training to staff nurses and internship students regarding impact of covid-19on the mental health on general population in selected rural areas at Nagpur District.

- Develop new knowledge regarding management and administrative skills.
- Testing different administrative models.

NURSING EDUCATION

- This study will help to update the impact of covid-19 on mental health among the general population in selected rural areas at Nagpur district .
- This study will help to give small brief idea about the impact of covid -19 on the mental health of the general population corresponding to a subject.
- This study will help to get transparent impact about covid-19 on mental health of the general population in selected rural area at Nagpur District .

NURSING RESEARCH

- The nurse researcher can use the findings of this study as baseline data to conduct further national research to identify level of impact and to determine the association of other demographic variables as with the impact regarding COVID- 19 on mental health of the general population in the selected rural areas at Nagpur District.
- This also help to do further research on the state and national level to know the impact of COVID-19 on the mental health of general population of selected rural area at Nagpur District

Chapter IV

DATA ANALYSIS AND INTERPRETATION INTRODUCTION:

Analysis and interpretation of data is the most important phase of the research process which involves the calculation of the certain measures along with searching for pattern of relationship that exist among data groups. Data collection is followed by the analysis and interpretation of data, were collected are analyzed and interpreted accordance with study objectives.

DEFINITION:

Analysis is defined as “the process of systematically applying statistical and logical techniques to describe, summarize and compare data”.

PROBLEM STATEMENT

A descriptive study to assess the impact regarding COVID- 19 pandemic on mental health among the general population in the selected rural areas at Nagpur District.

OBJECTIVES:

1. To assess the impact regarding covid -19 pandemic on mental health among general population in the selected rural areas at Nagpur District.
2. To associated the impact regarding covid-19 pandemic on mental health among the general population in the selected rural areas at Nagpur district with selected demographic variable.

ORGANIZATION OF THE STUDY FINDING

The collected data is analyzed on the basis of the objectives of the study in following ways:

- **Section 1:** Description on frequency and percentage wise distribution of baseline data
- **Section 2:** Description of Impact of covid-19 on mental health
- **Section 3:**
 - a) Description on frequency mean and percentage of impact of covid-19 on mental health.
 - b) Chi-square test is used to find out the association between demographic variables and impact of covid-19 pandemic on mental health.

Name of method of analysis: Chi-square test is used

$$X^2 = \frac{\sum (O_i - E_i)^2}{E_i}$$

E_i

SECTION-I**DESCRIPTION OF SAMPLE ACCOURDING TO DEMOGRAPHIC CHARACTERISTICS**

Table no. 1: frequency and percentage distribution.

n=100

Sr.n o.	Questions	Frequenc y	Percenta ge
1	Age		
	a. 20-30 years	29	29%
	b. 31-40 years	36	36%
	c. 41-50 years	25	25%
	d. 51-60 years	10	10%

2	Gender		
	a. Male	42	42%
	b. Female	58	58%
	c. Other	0	0
3	Occupation		
	a. Private job	37	37%
	b. Government job	9	9%
	c. Business	25	25%
	d. Unemployed	29	29%
4	Education		
	a. Undergraduate	27	27%
	b. Graduate	44	44%
	c. Postgraduate	13	13%
	d. Uneducated	16	16%
5	Family		
	a. Joint family	45	45%
	b. Nuclear family	43	43%
	c. Extended family	12	12%
6	Religion		
	a. Hindu religion	80	80%
	b. Muslim religion	5	5%
	c. Buddhist religion	12	12%
	d. Others	3	3%

Table No.: 1 frequency and percentage distribution of sample according to their

demographic variable

1. AGE

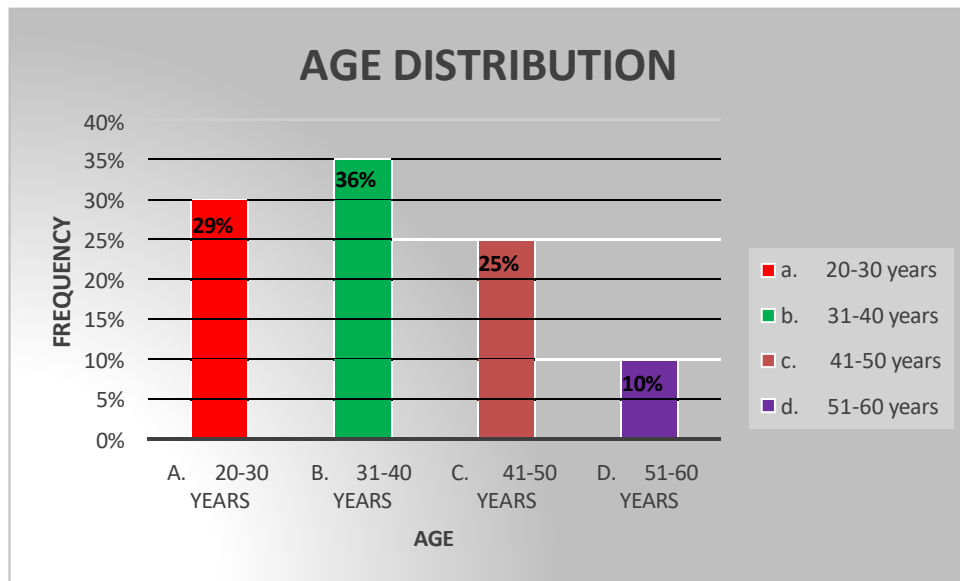


Figure 1: bar graph showing distribution impact regarding covid-19 pandemic on mental health among general population on the basis of age. Table no. 1 and figure 1 revealed that 29% (29) of general population were age 20-30 years 36% (36) general population were the age (31-40) years 25% (25) general population were age (41-50) years 10% (10) general population were the age (51-60) years

2.GENDER

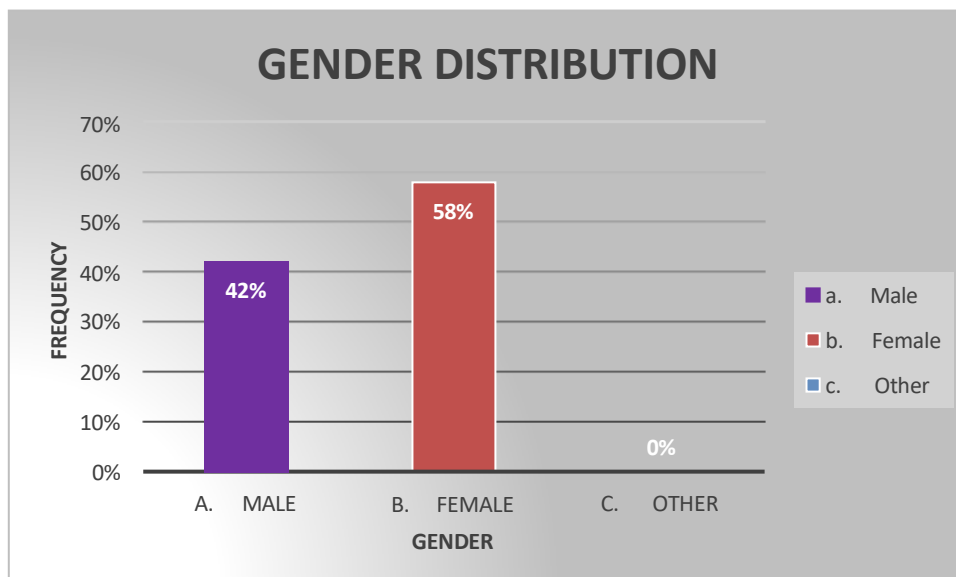


Figure 2: Bar diagram showing the distribution of impact regarding covid-19 pandemic on mental health among general population on the basis of gender.

Table no.2 Figure no. 2 shown that 42% (42) of general population were the male and 58% (58) of general population were the females and 0% (0) of general population were others.

3. OCCUPATION

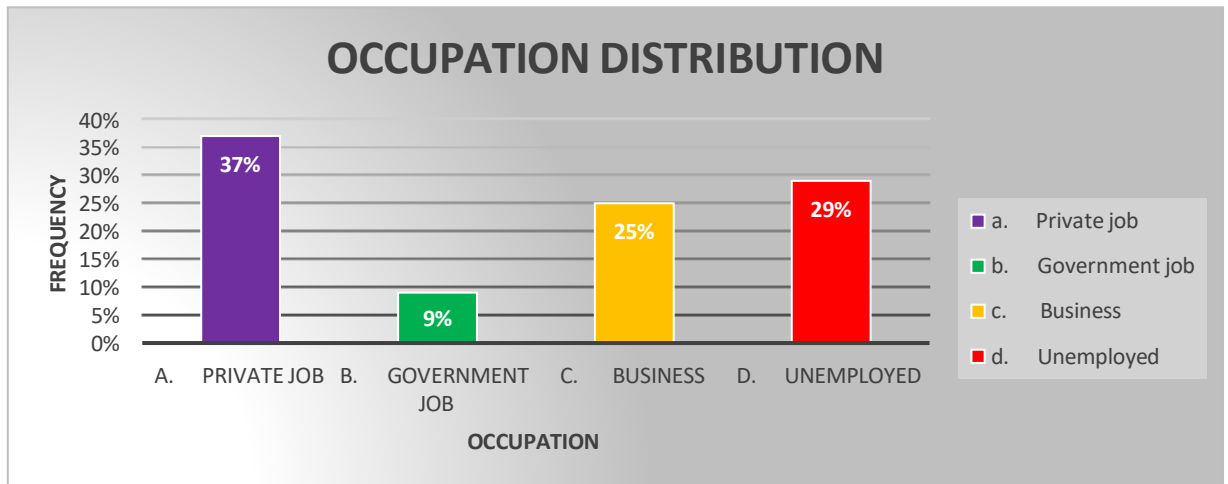


Figure no.3:- Bar diagram showing the distribution of impact regarding covid-19 pandemic on mental health among the general population on the basis of occupation . Table no.3 and Figure no.3 shown that 37% (37) of general population were the private job and 9% (9) of general population were the government job and 25% (25) of general population were the business and 29% (29) of general population were unemployee.

4. EDUCATION

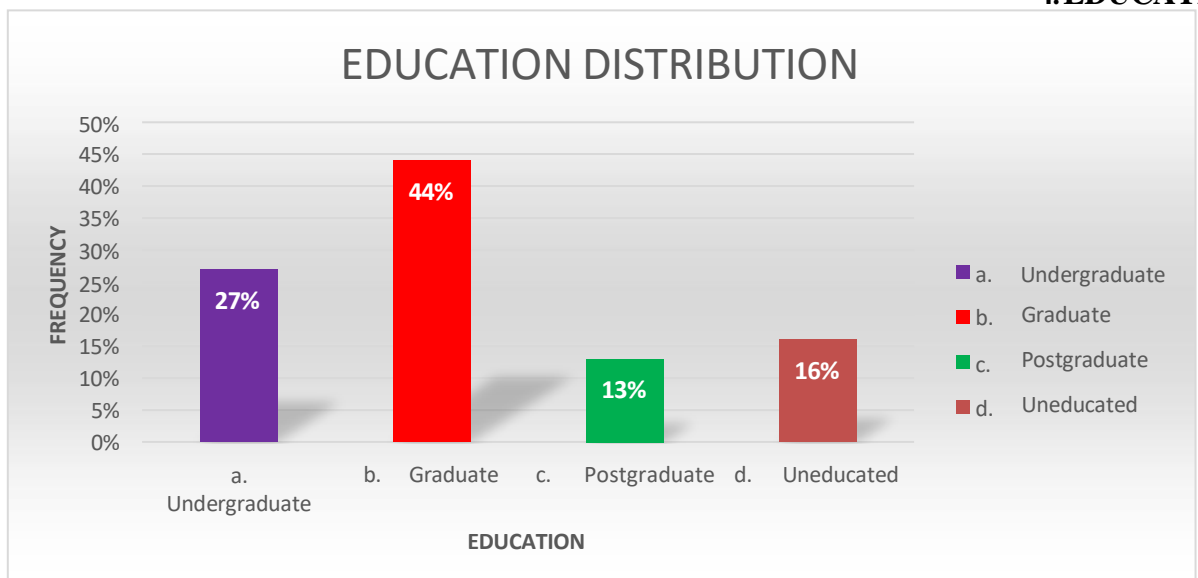


Figure no. 4:- Bar diagram showing the distribution of impact regarding covid -19 pandemic on mental health among the general population on the basis of education . Table no.4 and Figure no.4 shown that 27% (27) of general population were the undergraduate and 44% (44) of general population were the graduate and 13%(13) of general population were the post graduate and 16% (16) of general population were uneducated.

5. FAMILY

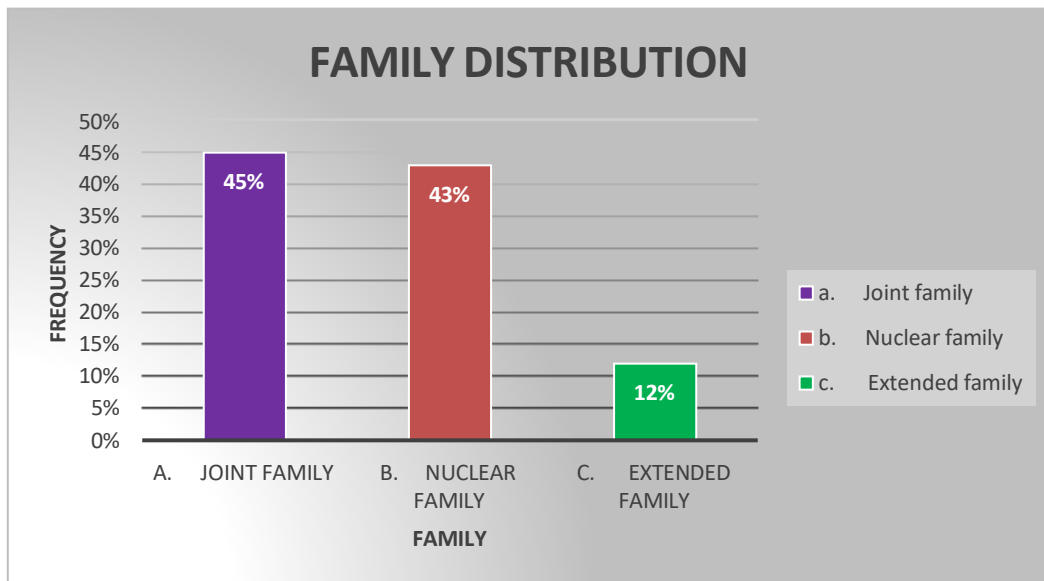


Figure no.5:- Bar diagram showing the distribution of impact regarding covid-19 pandemic on mental health among the general population on the basis of family .

Table no. 5 and Figure no. 5 shown that 45%(45) of general population were the joint family and 43%(43) of general population were the nuclear family and 12%(12) of general population were the extended family.

6. RELIGION

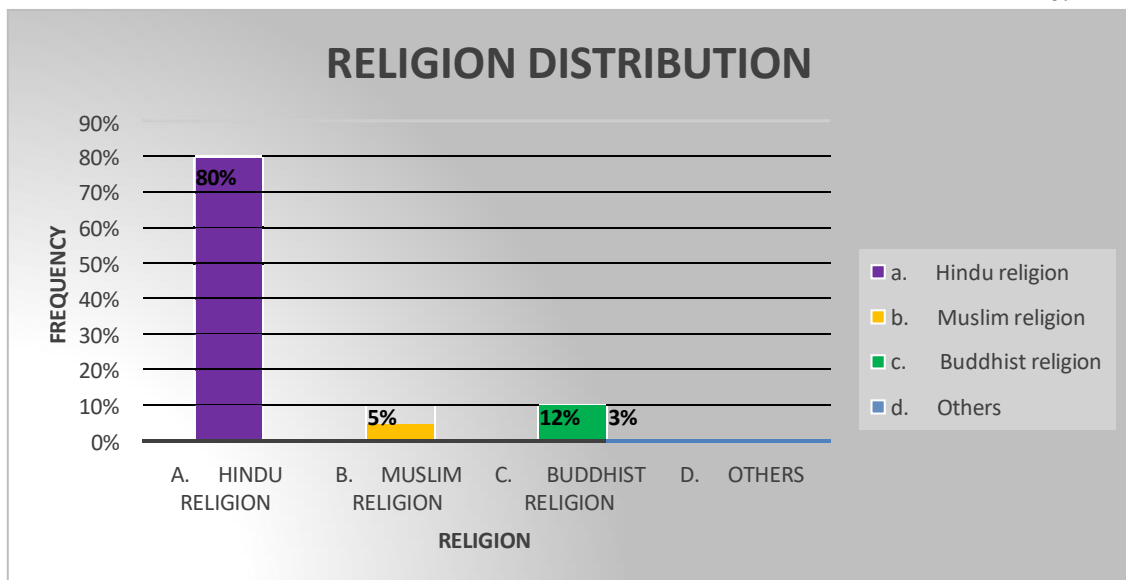


Figure no:6:- Bar daigram showing the distribution of impact regarding covid-19 pandemic on mental health among general population on the basis of religion .

Table no:6 and figure no. 6 :-shown that 80% (80) of general population were the hindu and 5% (5) of general population were muslim, 12%(12) of general population were the buddhist and 3% (3) of general population were the other.

SECTION -II

Discription of score of impact regarding covid-19 pandemic on mental health among the general population in the selected rural area at nagpur district

Impact regarding covid-19 pandemic on mental health	Frequency	Percentage
Poor	13	13%
Average	73	73%
Good	14	14%

Table no:2:- Frequency and percentage score of Impact regarding covid-19 pandemic on mental health.

The data in table 2 shown that frequency and percentage of impact regarding covid-19 pandemic on mental health in which 13 % (13) general population had poor impact 73%

(73) general population had average impact 14% (14) general population had good impact.

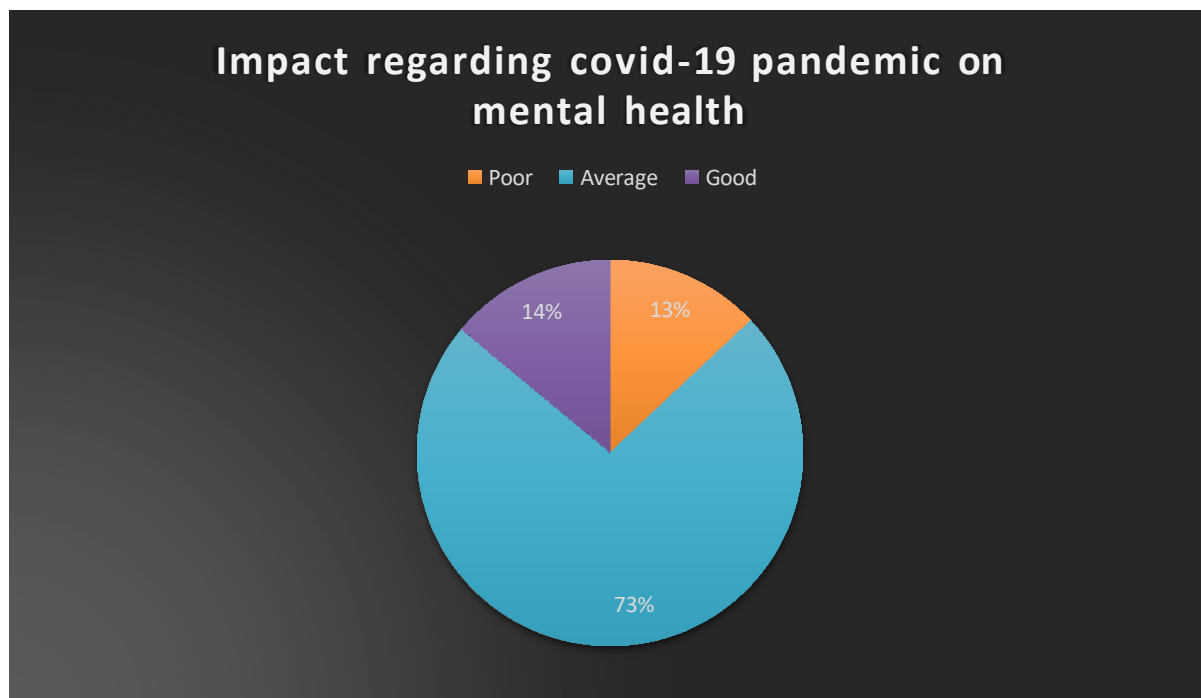


Figure no. 7: Pie diagram showing frequency and percentage score of impact regarding covid-19 pandemic on mental health

SECTION – 3 (A)

Description on frequency mean and percentage of impact regarding covid-19 pandemic on mental health.

Sr no.	Impact regarding covid-19 pandemic on mental health	Frequency	Percentage	Mean	Mean percentage	SD
	Poor	13	13%	15.74	15.74%	3.46
	Average	73	73%			
	Good	14	14 %			

Table no:3 :-The above table reveals that 13%(13) of general population had poor impact, 73%(73) of general population had average impact, 14% (14) of general population had good impact, and its mean value is 15.74 and mean percentage 15.74% with standard deviation of 5.23

SECTION -III (B)

Chi- square test is used to find out the association between demographic variables and impact regarding covid-19 pandemic on mental health.

	Question	Frequenc y	Poo r	Averag e	Good	DF	Chi-squar e	Table value P < 0.05	Significa nce
1	Age								
	20-30 years	29	3	18	8	6	10.941	12.59	Not significant
	31-40 years	36	8	26	2				
	41-50 years	25	1	21	3				
	51-60 years	10	1	8	1				
2	Gender								
	Male	42	8	25	9	4	6.693	9.49	Not significant
	Female	58	5	48	5				
	Others	0	0	0	0				
3	Occupatio n								
	Private job	37	5	29	3	6	2.864	12.59	Not significant
	Governme nt job	9	1	6	2				
	Business	25	4	16	5				
	Unemploy ment	29	3	22	4				
4	Education								
	Undergrad uate	27	2	22	3	6	11.619	12.59	Not significant
	Graduate	44	4	36	4				
	Post-graduate	13	4	5	4				
	Uneducate d	16	3	10	3				
5	Family								
	Joint family	45	5	36	4	4	18.447	9.49	Significa nt
	Nuclear family	43	5	34	4				
	Extended	12	3	3	6				

	family								
6	Religion								
	Hindu	80	5	68	7	6	32.343	12.59	Significant
	Muslim	5	2	1	2				
	Buddhist	12	4	4	4				
	Others	3	2	0	1				

Table no 4 : The above table describe the association between demographic variables and the impact regarding covid-19 pandemic on mental health by chi-square test so, there is significant association between family and religion, and there is nosignificant association between demographich variable that is age, gender, occupation, education.

CONCLUSION

The study was done by using the tool self structured checklist to assess the impact regarding covid-19 pandemic on mental health among the general population.

The study reveals that impact regarding covid-19 pandemic on mental health among the general population 13% general population had poor impact , 73% general population had average impact , 14% general population had good impact.

Chi- square test is used to asses the significant association between demographic variables age, gender, occupation , education, family, religion.

The chapter deal with the data analysis and interpretation in the terms of frequency, percentage and various other descriptive statsitics.

Chapter V

SUMMARY, FINDINGS, CONCLUSION, IMPLEMENTATION AND RECOMMENDATION

INTRODUCTION

The chapters deal with the summary of the study and its important findings. It also includes the discussion implication and recommendation for further study. The chapter mainly focus on the result of the main finding.

PROBLEM STATEMENT

A descriptive study to assess the impact regarding COVID - 19 pandemic on mental health among the general population in the selected rural areas at Nagpur district.

OBJECTIVE OF THE STUDY

1. To assess the impact regarding covid -19 pandemic on mental health among general population in the selected rural areas at Nagpur District.
2. To associated the impact regarding covid-19 pandemic on mental health among the general population in the selected rural areas at Nagpur district with selected demographic variable.

ASSUMPTIONS :-

1. Impact regarding covid -19 mental health among general population may varies according to age.
2. Impact regarding covid-19 may vary according to their demographic variables.
3. General population may have impact regarding covid-19 and mental health.

RESEARCH APPROACH AND DESIGN

In the present study non-experimental descriptive research design is used.

VALIDITY

Content validity of total done by 10 experts and their opinion was added.

DISCUSSION AND MAJOR FINDING OF THE STUDY MAJOR FINDING

1. Regarding Age

Distribution impact regrading covid-19 pandemic on mental health among general population on the basis of age. Table no. 1 and figure 1 revealed that 29% (29) of general population were age 20-30 years 36% (36) general population were the age (31-40) years 25% (25) general population were age (41-50) years 10% (10) general population were the age (51-60) years

2. Regarding gender

Distribution of impact regarding covid-19 pandemic on mental health among general population on the basis of gender shown that 42% (42) of general population were the male and 58% (58) of general population were the females and 0% (0) of general population were others.

3.Regarding occupation

Distribution of impact regarding covid-19 pandemic on mental health among the general population on the basis of occupation shown that 37% (37) of general population were the private job and 9% (9) of general population were the government job and 25% (25) of general population were the business and 29% (29) of general population were the unemployed.

4. Regarding education

Distribution of impact regarding covid 19 pandemic on mental health among the general population on the basis of education shown that 27% (27) of general population were the undergraduate and 44% (44) of general population were the graduate and 13%(13) of general population were the post graduate and 16% (16) of general population were uneducated.

5.Regarding family

Distribution of impact regarding covid-19 pandemic on mental health among the general population on the basis of family .

shown that 45%(45) of general population were the joint family and 43%(43) of general population were the nuclear family and 12%(12) of general population were the extended family.

6.Regarding religious

Distribution of impact regarding covid-19 pandemic on mental health among general population on the basis of religion .shown that 80% (80) of general population were the hindu and 5% (5) of general population were muslim, 12%(12) of general population were the buddhist and 3% (3) of general population were the other.

DISCUSSION

A descriptive study to assess the impact regarding COVID - 19 pandemic on mental health among the general population in the selected rural areas at Nagpur district.

The study reveals that impact regarding covid-19 pandemic on mental health among the general population 13% general population had poor impact , 73% general population had average impact , 14% general

population had good impact.

Finding supposed by study conducted at Bahadura, Nagpur the impact regarding covid 19 pandemic on mental health among the general population in the selected rural areas at Nagpur district. The study aims to assess the impact regarding covid 19 pandemic on mental health among the general population and the sample size was 100. To find out the association between impact regarding covid 19 pandemic on mental health among the general population with selected demographic variables.

The association between impact regarding covid 19 pandemic on mental health among the general population with selected demographic variables was calculated by using chi square test and it was found there is significant between demographic variables that is religion and family.

CONCLUSION

The study was done by using the tool self structured checklist to assess the impact regarding covid-19 pandemic on mental health among the general population.

The study reveals that impact regarding covid-19 pandemic on mental health among the general population 13% general population had poor impact , 73% general population had average impact , 14% general population had good impact.

IMPLICATION

The study can be implicated to nursing research, nursing education, nursing administration and nursing process.

NURSING RESEARCH

- This study will help others as are view for their study
- This study can be a baseline data for future studies and can be inspire by other investigator to carry out futher studies.

NURSING EDUCATION

- This study will help to update the impact of covid-19 on mental health among the general population in selected rural areas at Nagpur district .
- This study will help to give small brief idea about the impact of covid -19 on the mental health of the general population corresponding to a subject.
- This study will help to get transparent impact aboutcovid-19on mental health of the general population in selected rural area at Nagpur District .

NURSING ADMINISTRATION

- The study will help in to assess the impact and give property training to staff nurses and internship students regarding impact of covid-19 on the mental health on general population in selected rural areas at Nagpur District.
- Develop a new knowledge regarding management and administrative skills.

RECOMMENDATIONS

- An effectiveness of information booklet can be assess on knowledge regarding Covid-19 pandemic and its impact on mental health.
- A comparative study can be to assess the impact regarding covid-19 pandemic on mental health among the general population

CONCLUSION.

This chapters deal with the major finding suggestion and conclusion, implication and recommendation of the study.

BIBLIOGRAPHY**BIBLIOGRAPHY:**

1. 1.Basavan thappa BT. Nursing Research. Second edition. New Delhi: Jaypee Brothers
2. Medical Publishers(P)ltd;2010.
3. Dr. Bimla Kapoor. Psychiatric Nursing, Volume 2. Delhi: Kumar Publishing house;2008.
4. Gulani K. K. Community Health Nursing Principles and Practices. Delhi: Neelam Kumar Publishing House; 2012.
5. Mary .C. Townsend. Concepts of Care in Evidence Based Practice Psychiatric Mental Health Nursing .Fifth Edition .USA: Robert G MartonePublication;2011.
6. Neeraja. K. P. Essentials of Mental Health and Psychiatric Nursing. New Delhi:
7. Jaypee Brothers Medical Publishers (P) Itd; 2009.
8. Neclam Makhija. Introduction to Nursing Research. Delhi: A.P Jain and Co; 2010.
9. Niraj Ahuja . A short Textbook of Psychiatric. Seventh Edition. New Delhi:
10. Jaypee Brothers Medical Publishers (P) Itd; 2011.of Nursing. Sixth Edition. Indore:
11. Sr. Nancy. Principles and Practice N. R. Publishing House; 2011.
12. Suresh K Sharma. Nursing research and Statistics. Second Edition. New Delhi: Reed Elsevier India Private limited; 2014.
13. Suresh K Sharma. Nursing research and Statistics. Second Edition .New Delhi: Reed Elsevier India Private limited; 2013.

14. <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.667461/full>\
15. <https://intjem.biomedcentral.com/articles/10.1186/s12245-020-00299-5>
16. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)02143-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)02143-7/fulltext)
17. <https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-020-00589-w>
18. <https://www.psychiatrist.com/pcc/anxiety/covid-19-depression-and-stress-among-frontline-doctors/>
19. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7837201/>
20. <https://www.nature.com/articles/s41562-020-0884-z>
21. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0244809>
22. <https://www.jmir.org/2020/9/e21279/>
23. <https://www.karger.com/Article/FullText/510752>
24. <https://bmcmedresmethodol.biomedcentral.com/articles/10.1186/s12874-021-01411-w>
25. <https://bmjopen.bmj.com/content/11/4/e049653>
26. https://journals.lww.com/indianjpsychiatry/fulltext/2020/62030/psychological_impact_of_covid_19_pandemic_on.7.aspx
27. <https://journals.sagepub.com/doi/10.1177/0020764020970996>
28. <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.628894/full>
29. <https://journals.sagepub.com/doi/full/10.1177/0020764020984511>
30. <https://pubmed.ncbi.nlm.nih.gov/32504808/>
31. <https://pubmed.ncbi.nlm.nih.gov/34281049/>
32. <https://pubmed.ncbi.nlm.nih.gov/33601332/>
33. <https://pubmed.ncbi.nlm.nih.gov/32710481/#affiliation-1>.

ANNEXURES



Dnyanpath Bahu-Uddeshiya Shikshan Prasarak Mandal's
Regd.No. Mah.F-11020 (NAGPUR)

SURETECH COLLEGE OF NURSING



B.B.Sc. (N) (Affiliated to MUHS) College Code No. : 6515003

Address :120/2k, Ashokvan, National Highway No. 7, Wardha Road, Post Rui. Nagpur - 441 108

Phone No.: 8411911778, 8411911770 E-mail : suretechcon1@yahoo.in Website : suretechgroup.com

SCON/B.Sc(N)/ 483 /2022

Date: 11/04/22

From,

Ms. Sakshi Burade
Ms. Sakshi Waghmare
Ms. Pallavi Kullarkar
Ms. Shraddha Zode

To,

The Grampanchayat
officer, Jayhind Nagar
Bahadurwada futa, Nagpur

Subject:- Regarding the permission to conduct a main study.

Respected Sir/Madam,

As per above cited subject we, Group of Mental Health Nursing from 3rd Year Basic B.Sc. Nursing Student of Suretech College of Nursing, Nagpur For the partial fulfilment of Basic B.Sc. Nursing degree course under MUHS, Nashik, we have to conduct Research Project. So here by requesting you to permit us to conduct the main study in your esteemed area.

On general population at Jayhind Nagar Bahadurwada futa Nagpur.

on Research Title

“A DESCRIPTIVE STUDY TO ASSESS THE IMPACT REGARDING COVID -19 PANDEMIC ON MENTAL HEALTH AMONG THE GENERAL POPULATION IN SELECTED RURAL AREAS AT NAGPURDISTRICT.”

RESEARCH GUIDE



एजाज मो. हारुन घाणीवाला
उपसरपंच
गट ग्रामपंचायत, बहादुरवा

PRINCIPAL

Principal
Suretech College of Nursing
Nagpur.

Scanned with CamScanner



Dnyanpath Bahu-Uddeshiya Shikshan Prasarak Mandal's
Regd.No. Mah.F-11020 (NAGPUR)

SURETECH COLLEGE OF NURSING



B.B.Sc. (N) (Affiliated to MUHS) College Code No. : 6515003

Address :120/2k, Ashokvan, National Highway No. 7, Wardha Road, Post Rui. Nagpur - 441 108

Phone No.: 8411911778, 8411911770 E-mail : suretechcon1@yahoo.in Website : suretechgroup.com

SCON/B.Sc(N)/ 276/2022

Date: 24/01/22

From,

Ms. Sakshi Burade
Ms. Sakshi Waghmare
Ms. Pallavi Kullarkar
Ms. Shraddha Zode

To,

The Grampanchayat officers,
Beltarodi, Nagpur.
.....
.....

Subject:- Regarding the permission to conduct a pilot study.

Respected Sir/Madam,

As per above cited subject we, Group of Mental Health Nursing from 3rd Year Basic B.Sc. Nursing Student of Suretech College of Nursing, Nagpur For the partial fulfilment of Basic B.Sc. Nursing degree course under MUHS, Nashik, we have to conduct Research Project. So here by requesting you to permit us to conduct the pilot study in your esteemed area.

..... On the general population of Besa, Beltarodi Nagpur.
.....
.....

on Research Title

“A STUDY TO ASSESS THE IMPACT REGARDING COVID -19 PANDEMIC ON MENTAL HEALTH AMONG THE GENERAL POPULATION IN SELECTED RURAL AREAS AT NAGPUR DISTRICT.”

RESEARCH GUIDE

25/01/22 सरपंच
ग्राम पंचायत बेसा

PRINCIPAL

Principal
Suretech College of Nursing
Nagpur

To,

The Grampanchayat
.....
Beltarodi, Nagpur

Subject: Confirmation regarding completion of pilot study by students of Suretech College of Nursing.

Respected Madam/Sir,

As per the above mentioned subject, the Group of IIIrd year Basic B.Sc. Nursing students have completed their Pilot study on topic "A STUDY TO ASSESS THE IMPACT REGARDING COVID -19 ON MENTAL HEALTH AMONG THE GENERAL POPULATION IN THE SELECTED RURAL AREAS AT NAGPUR DISTRICT."

On dated 25/01/22 at B.S.A. Beltarodi.....in Nagpur.

Thanking You,

Covid-19
Relevant
Search completed

S. Samait
सरपंच
ग्राम पंचायत वेसा

S. Samait
सरपंच
ग्राम पंचायत वेसा
Competent Authority
with Stamp

To,

Ms. Sakshi Burade

Ms. Sakshi Waghmare

Ms. Pallavi Kullarkar

Ms. Shraddha Zode

Subject: Confirmation regarding completion of main study by students of Suretech College of Nursing.

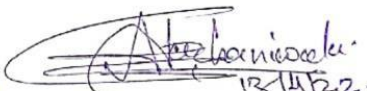
Respected Madam/Sir,

As per the above mentioned subject, the Group of IIIrd year Basic B.Sc. Nursing students have completed their Main study on topic "A STUDY TO ASSESS THE IMPACT REGARDING COVID -19 ON MENTAL HEALTH AMONG THE GENERAL POPULATION IN THE SELECTED RURAL AREAS AT NAGPUR DISTRICT."

On dated 13th April , 2022 in Jaihind Nagar Bahadura Fata at Nagpur.

Thanking You,




13/4/22.
Name & Signature of
मौ. एजि मो. हरिन घोर्णेवाला
Competent Authority
उपसरपंच
with Gramapal, Bahadur

Scanned with CamScanner

NAME OF THE EXPERT WHO WILL VALID THE TOOL

SR. NO.	NAME OF EXPERT
1.	Mrs. Mercy Anjore Associate professor cum Principal Suretech College Nursing, Nagpur
2.	Ms. Savita Dhoble (MSC Nursing) Associate Professor cum vice Principal (MSN) Suretech College Of Nursing , Nagpur.
3.	Mr Hanokh Chakranarayan Associate Professor Suretech College Of Nursing, Nagpur.
4.	Ms. Sussane Thallapally (MSC Nursing) Associate Professor (MSN) Suretech College Of Nursing, Nagpur.
5.	Ms. Priyanka Pothare (MSC Nursing) Lecturer (CHN) Suretech College Of Nursing, Nagpur.
6.	Mr Sandip Rangari (MSC Nursing) Lecturer (MSN) Suretech College Of Nursing, Nagpur.
7.	Ms. Anshul Vishwkarma (MSC Nursing) Lecturer (CHN) Suretech College Of Nursing, Nagpur.
8.	Ms. Roshani Dhale (Guide) (MSC Nursing) Lecture (MHN) Suretech College Of Nursing, Nagpur.

9.	Ms Vidya Raut (MSC Nursing) Lecture (CHN) Suretech College Of Nursing , Nagpur.
10.	Mr. Rinkush Sukhdan (Guide) (MSC Nursing) Lecture (MHN) Suretech College Of Nursing , Nagpur.

CERTIFICATE OF VALIDATION

This is to certify that research group of mental health nursing doing his /her bachelor of science in nursing at suretech college of nursing, has develop tool for topic entitled: "A descriptive study to assess the impact regarding COVID -19 pandemic on mental health among the general population in the selected rural areas areas at Nagpur district."

We have gone through the content of the proposed study and tool developed by the investigator and found the tool is valid.

Over all remark:

Best of luck -

Signature and designation with seal:

Date:

Place:

[Handwritten Signature]
13/01/22

CERTIFICATE OF VALIDATION

This is to certify that research group of mental health nursing doing his /her bachelor of science in nursing at suretech college of nursing, has develop tool for topic entitled: "A descriptive study to assess the impact regarding COVID -19 pandemic on mental health among the general population in the selected rural areas areas at Nagpur district."

We have gone through the content of the proposed study and tool developed by the investigator and found the tool is valid.

Over all remark:

_____ make the given observations

Pratik Jethava
Signature and designation with seal:

Date: 13/01/2022

Place: Nagpur

CERTIFICATE OF VALIDATION

This is to certify that research group of mental health nursing doing his /her bachelor of science in nursing at suretech college of nursing, has develop tool for topic entitled: "A descriptive study to assess the impact regarding COVID -19 pandemic on mental health among the general population in the selected rural areas areas at Nagpur district."

We have gone through the content of the proposed study and tool developed by the investigator and found the tool is valid.

Over all remark:

plz write instructions, scoring, topics, & written scale
on the top of the scale 9 typed



Signature and designation with seal:

Date: 4/1/22

Place: Nagpur

CERTIFICATE OF VALIDATION

This is to certify that research group of mental health nursing doing his /her bachelor of science in nursing at suretech college of nursing, has develop tool for topic entitled: "A descriptive study to assess the impact regarding COVID -19 pandemic on mental health among the general population in the selected rural areas areas at Nagpur district."

We have gone through the content of the proposed study and tool developed by the investigator and found the tool is valid.

Over all remark:

Do some changes in some questions.

[Signature]
13/10/2022
Signature and designation with seal:

Date:

Lecturer

Place:

CERTIFICATE OF VALIDATION

This is to certify that research group of mental health nursing doing his /her bachelor of science in nursing at suretech college of nursing, has develop tool for topic entitled: "A descriptive study to assess the impact regarding COVID -19 pandemic on mental health among the general population in the selected rural areas areas at Nagpur district."

We have gone through the content of the proposed study and tool developed by the investigator and found the tool is valid.

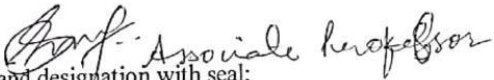
Over all remark:

Tool is effective

Grammatical correction needed

Clarify questions where necessary.

Please follow your respective guide


Signature and designation with seal:


Date: 28/12/2021

Place: Nagpur

Scanned with CamScanner

EDITOR'S CERTIFICATE

This is to certify that I.....have edited the thesis of Bachelor of Science in Nursing Students on the below mentioned topic in the partial fulfillment in the requirement of Basic B.Sc. Nursing 3rd year
TOPIC:-“A study to assess the knowledge regarding behavioral problems in Pre-schooler children among parents of selected urban areas at Nagpur district”


Head Master
Sadashob Khadse High School
Jambhedip Nagar, Nagpur - 24
Name of the editor:-

Editor's sign

Designation -

Date:-

Place:-

CERTIFICATE OF LANGUAGE TRANSLATION

This is to certify that Ms. Sweety Chacko , Ms. Manisha Pakhale , Ms. Nandini Zungare and Ms. Sejal Tirpude conducting a research on the topic “ A study to assess the attitude towards online learning among parents of primary school children in urban areas at Nagpur city.”

Their Research tool for data collection is translated from English to Marathi language by me. Their Marathi tool is valid to collect the research data.


Head Master
Vadasaheb Khadse High School
Name of Editor
Jambhulkar Nagar, Nagpur - 24

Signature

Designation:

CERTIFICATE OF VALIDATION

This is to certify that research group of mental health nursing doing his/her bachelor of science in nursing at suretech college of nursing, has develop tool for topic entitled: "A descriptive study to assess the impact regarding COVID -19 pandemic on mental health among the general population in the selected rural areas areas at Nagpur district."

We have gone through the content of the proposed study and tool developed by the investigator and found the tool is valid.

Over all remark:

*Hope this study have done during
pandemic -
Best wishes for your study!*

[Signature]
Signature and designation with seal:

Date: *11/1/2022*

Place: *Nagpur*

BLUEPRINT FOR CHECKLIST

Content	Cognitive domain	Affective domain	Psychomotor domain	Total
1.Defination	-	-	-	-
2.Symptoms	1,2,3,4,6,7,8	12	11	9
3.Impact	15,16,18,21,25	9,10,27,28	13,14,22	12
4.Treatment	23,26	-	-	2
5.Cause	-	-	19	1
6.Prevention	29,30	-	17,18,5,20	6
Total	16	5	9	30
Percentage	53.3%	16.6%	30%	100%

MASTER SHEET

que no./rampas no.	Que 1	Que 2	Que 3	Que 4	Que 5	Que 6	Que 7	Que 8	Que 9	Que 10	Que 11	Que 12	Que 13	Que 14	Que 15	Que 16	Que 17	Que 18	Que 19	Que 20	Que 21	Que 22	Que 23	Que 24	Que 25	Que 26	Que 27	Que 28	Que 29	Que 30	Total
1	0	0	0	1	0	1	0	0	1	0	0	1	1	1	1	0	1	0	0	1	0	0	1	1	1	0	0	0	0	13	
2	1	0	1	1	0	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	0	0	1	1	0	0	1	0	19	
3	0	0	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	0	1	1	0	1	1	1	0	21	
4	1	1	1	0	0	1	0	1	1	0	1	0	1	1	1	0	1	1	1	1	0	1	0	1	0	1	1	1	0	19	
5	0	1	1	1	1	0	1	1	1	1	1	0	0	1	0	1	0	1	0	1	1	1	0	1	1	1	0	1	0	20	
6	0	1	1	1	0	1	1	1	1	1	1	1	0	1	1	0	1	0	0	1	1	1	1	1	1	1	0	0	0	21	
7	1	1	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	0	1	1	0	1	0	1	1	1	1	1	1	21	
8	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	0	1	1	0	1	1	0	1	0	1	1	0	1	0	17	
9	0	0	0	1	0	1	0	0	1	1	1	0	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	15	
10	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0	1	1	0	0	1	1	0	1	1	0	0	20	
11	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0	1	0	25	
12	0	0	0	1	0	1	0	1	1	0	1	0	0	0	0	0	1	1	0	1	0	1	0	1	1	0	0	0	0	13	
13	1	0	1	0	1	1	1	0	1	1	1	0	1	1	0	1	0	1	1	0	1	1	0	0	1	0	1	0	1	20	
14	1	1	0	1	1	1	0	1	1	0	1	1	0	0	1	1	1	0	1	1	0	1	1	0	1	0	1	0	0	18	
15	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1	0	1	1	1	1	0	1	1	0	1	1	0	0	17	
16	1	1	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	1	0	1	0	1	0	1	0	0	0	16	
17	1	1	0	1	1	0	1	1	0	1	1	0	1	1	1	1	1	0	1	1	0	1	1	0	1	1	1	0	0	21	
18	1	0	1	0	1	1	0	1	1	0	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1	0	17	
19	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	0	1	1	0	1	0	0	0	18	
20	1	0	1	0	1	1	0	1	1	1	1	1	1	0	0	1	0	1	0	1	0	1	1	1	1	0	1	0	0	18	
21	0	0	1	1	0	1	1	1	1	0	1	0	1	1	1	0	0	1	1	0	0	1	0	1	1	0	0	0	0	16	
22	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0	1	1	0	0	1	1	1	0	1	1	0	0	20	
23	0	0	0	1	1	1	1	0	1	0	1	0	0	1	0	1	1	1	1	0	1	0	1	1	0	0	1	0	0	15	
24	1	1	1	0	1	0	1	0	1	1	0	1	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	16	
25	0	0	1	1	0	1	1	1	1	1	0	0	1	1	0	1	1	0	1	0	1	0	1	1	0	1	1	0	0	16	
26	0	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	0	1	1	1	0	0	0	0	11	
27	0	1	1	0	0	0	1	0	1	1	1	1	0	1	0	0	1	0	1	0	1	1	0	0	0	0	1	1	0	16	
28	1	0	1	0	1	1	0	1	1	0	1	1	0	0	0	1	0	1	1	0	1	0	1	1	0	1	1	0	1	19	
29	1	0	1	1	0	1	1	1	1	0	1	0	0	0	0	0	1	0	1	0	0	1	0	1	1	1	1	0	0	15	
30	1	1	0	0	1	0	0	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	0	0	1	0	1	0	0	15	
31	1	1	0	0	1	0	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	0	0	0	1	0	0	0	0	14	
32	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	8	
33	1	1	1	1	1	0	0	0	1	0	0	0	0	1	0	1	0	1	0	1	0	0	0	1	1	1	1	0	0	15	
34	0	0	1	1	1	1	1	1	1	1	1	0	0	1	1	0	1	0	1	1	1	1	1	1	1	1	0	0	0	22	
35	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	7	
36	1	1	1	0	1	0	1	1	1	0	0	1	0	0	0	0	0	1	1	1	1	1	1	1	0	0	1	0	0	17	
37	0	0	0	1	1	0	0	1	0	1	0	1	0	0	1	1	0	1	0	1	1	0	0	1	1	0	0	1	0	15	
38	0	0	1	1	0	1	0	1	1	0	0	0	0	0	1	0	1	0	1	1	1	0	0	0	1	1	1	0	0	15	
39	0	0	1	1	1	0	1	1	1	1	0	1	0	1	1	0	1	1	0	1	1	0	0	1	1	1	1	0	0	18	
40	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	8	
41	1	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	11	
42	1	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	1	0	0	11	
43	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	7	
44	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0	0	1	1	1	1	0	1	1	1	1	0	1	0	0	22	
45	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	10	
46	1	1	0	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	1	1	1	0	0	1	1	1	0	1	21	
47	1	1	1	1	1	1	1	0	1	1	0	1	1	0	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	18	
48	1	1	1	0	0	1	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	16	
49	1	1	1	1	1	0	1	0	1	0	1	0	1	1	0	1	1	1	0	0	0	0	1	1	1	1	1	1	1	21	
50	1	1	1	1	1	0	0	0	1	1	0	1	1	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	1	21	
51	1	1	0	1	1	1	1	1	1	0	0	1	1	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	17	
52	1	0	1	1	0	1	1	1	1	0	1	1	1	0	1	1	1	0	0	0	0	0	1	1	1	1	0	0	0	16	
53	0	1	0	0	1	1	1	1	0	0	1	0	1	0	1	1	1	0	0	1	1	0	1	0	1	1	0	0	0	18	
54	0	1	0	0	0	1	0	1	0	0	0	1	1	1	1	0	1	0	0	0	0	1	0	1	1	1	0	0	1	13	
55	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	1	1	12	
56	1	0	1	1	0	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	20	

