

A Study on Psychological and Behavioral Impact of Covid-19 Lockdown in Indore

Dr. Shubhangi Jain, Assistant Professor, Indore Institute Of Management And Research, Indore, M.P., India. shubhangi.jain@indoreinstitute.com, shubhangi.jain6@gmail.com

Abstract - Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Most people who fall sick with COVID-19 will experience mild to moderate symptoms and recover without special treatment. By the first week of March 2020, several countries like China, Italy, Spain, and Australia were fighting with the COVID19 pandemic by taking strict measures like nationwide lockdown or by cordoning off the areas that were suspected of having risks of community spread. This paper deals with the mental health analysis of common public after the lockdown announcements were made. Mental health is analyzed on the basis of psychological and behavioral aspects. Primary research based study in which a sample of 150 respondents is taken and information is gathered from them through likert scale questionnaires. Respondents are selected on random basis and asked to know their experience about this COVID-19 Lockdown. Percentage Analysis and Multiple Regression method are used to analyze obtained data. This study is just a small step in understanding the multi Dimensional construct of mental health and its dependency upon various factors.

Keywords- *Likert Scale, Mental Health, Multiple Regression, Percentage Analysis, Psychological Aspect and Symptoms.*

I. INTRODUCTION

Corona Virus Disease or COVID19 is a new virus disease that originated in Wuhan, China (Wanget al, 2020). The virus has now spread across the world and almost all the countries are battling against this virus and are trying their best to curb the spread as much as possible. The World Health Organization has declared it as a Pandemic (World Health Organization, 2020) and is leaving no stone unturned to control the pandemic and is awaiting a vaccine to cure it (El Zowalaty and Jarhult, 2020). There are not many academic studies (barring a few e.g. Boldoget al, 2020; Goyal et al, 2020; Bhat et al, 2020) that can guide researchers to study the impact this pandemic has on the mental health of the people and also on the economies of countries worldwide.

On January 8, 2020, a novel corona virus was officially announced as the causative pathogen of COVID-19 by the Chinese Center for Disease Control and Prevention (Li et al. 2020). The epidemics of corona virus disease 2019 (COVID-19) started from Wuhan, China, last December and have become a major challenging public health problem for not only China but also countries around the world (Phelan et al. 2020). On January 30, 2020, the World Health Organization (WHO) announced that this outbreak had constituted a public health emergency of international concern (Mahase 2020). The novel corona virus was initially named 2019-nCoV and officially as severe acute respiratory syndrome corona virus 2 (SARS-CoV-2). As of

February 26, COVID-19 has been recognized in 34 countries, with a total of 80,239 laboratory-confirmed cases and 2,700 deaths (WHO 2020b).

The virus that causes COVID-19 is mainly transmitted through droplets generated when an infected person coughs, sneezes, or exhales. These droplets are too heavy to hang in the air, and quickly fall on floors or surfaces. One can be infected by breathing in the virus if he/she is within close proximity of someone who has COVID-19, or by touching a contaminated surface and then eyes, nose or mouth.

By the first week of March 2020, several countries like China, Italy, Spain, and Australia were fighting with the COVID19 pandemic by taking strict measures like nationwide lockdown or by cordoning off the areas that were suspected of having risks of community spread. Taking cues from the foreign counterparts, the government of India undertook an important decision of nationwide lockdown on March 25th for 21days from March 26th to April 14th, 2020 (British Broadcasting Corporation, 2020). India, with a population of 1.3 Billion people, was at a high risk of suffering from irreversible damage, and strict measures were expected to "flatten the curve." The Prime Minister of India announced the lockdown (COVID-19, 2020), but it did not come as a surprise because Indians were actually given a feel of what it had in store through a one-day curfew named as "Janata Curfew" of 14 hours on March 22nd from 7 AM to 9 PM (The Economic Times, 2020). Thus, Indians were exposed to a lockdown situation

partially, and this helped in preparing mentally for the nationwide lockdown, and the announcement did not come as a shocker to them.

Looking at the statistics of COVID19 infected, recovered, and death cases of Italy and other countries, Indians knew that drastic measures were needed in India to stop the numbers from rising exponentially.

On 24 March, the Government of India under Prime Minister Narendra Modi ordered a nationwide lockdown for 21 days, limiting movement of the entire 1.3 billion population of India as a preventive measure against the 2020 corona virus pandemic in India. It was ordered after a 14-hour voluntary public curfew on 22 March, followed by enforcement of a series of regulations in the country's COVID-19 affected regions. The lockdown was placed when the number of confirmed positive corona virus cases in India was approximately 500.

In view of lockdown, there is ban on people from stepping out of their homes, All services and shops closed except pharmacies, hospitals, banks, grocery shops and other essential services, Closure of commercial and private establishments (only work-from-home allowed), Suspension of all educational, training, research institutions, Closure of all places of worship, Suspension of all non-essential public and private transport, Prohibition of all social, political, sports, Services such as food shops, banks and ATMs, petrol pumps, other essentials and their manufacturing are exempted. The Home Ministry stated that anyone who fails to follow the restrictions can face up to a year in jail.

Observers state that the lockdown has slowed the growth rate of the pandemic by 6 April to a rate of doubling every six days, and, by 18 April, to a rate of doubling every eight days.

As the end of the lockdown period approached, state governments and other advisory committees recommended extending the lockdown. The governments of Odisha and Punjab extended the state lockdowns to 1 May. Maharashtra, Karnataka, West Bengal and Telangana followed suit.

On 14 April, Modi extended the nationwide lockdown until 3 May, with a conditional relaxation after 20 April for the regions where the spread has been contained.

II. REVIEW OF LITERATURE

L. Meng, F. Hua, Z. Bian (2020) introduces essential knowledge about COVID-19 and nosocomial infection in dental settings and provides recommended management protocols for dental practitioners and students in (potentially) affected areas.

Johal SS (2009) proposed that the threat of outbreak of infectious disease such as non-seasonal influenza A (H1N1), commonly referred to as Swine Flu, can provoke the implementation of public health control measures such

as quarantine. Blendon RJ, Benson JM, DesRoches CM, Raleigh E, Taylor-Clark K. (2004) identified that even at a relatively low level of spread among the population, the SARS outbreak had a significant psychological and economic impact.

The HIV/AIDS virus affects households, businesses and governments - through changed labor supply decisions; efficiency of labor and household incomes; increased business costs and foregone investment in staff training by firms; and increased public expenditure on health care and support of disabled and children orphaned by AIDS, by the public sector (Haacker, 2004).

According to Cuddington, 1993a; Cuddington, 1993b; Cuddington et al., 1994; Cuddington and Hancock, 1994; Haacker, 2002a; Haacker, 2002b; Over, 2002; Freire, 2004; The World Bank, 2006 the effects of AIDS are long-term but there are clear prevention measures that minimize the risks of acquiring HIV, and there are documented successes in implementing prevention and education programs, both in developed and in the developing world. Treatment is also available, with modern antiretroviral therapies extending the life expectancy and improving the quality of life of HIV patients by many years if not decades. Several computable general equilibrium (CGE) macroeconomic models have been applied to study the impact of AIDS (Arndt and Lewis, 2001; Bell et al., 2004).

Barry (2004) identified that influenza virus is by far more contagious than HIV, and the onset of an epidemic can be sudden and unexpected. It appears that the COVID-19 virus is also very contagious. Shannon and Willoughby, 2004; Peiris et al., 2004 proposed that fear factor was influential in the world's response to SARS - a corona virus not previously detected in humans. Hyams et al., (2002) investigated that it is also reflected in the response to COVID-19. Entire cities in China have closed and travel restrictions placed by countries on people entering from infected countries. The fear of an unknown deadly virus is similar in its psychological effects to the reaction to biological and other terrorism threats and causes a high level of stress, often with longer-term consequences.

Individual assessment of the risks of death depends on the probability of death, years of life lost, and the subjective discounting factor. Viscusi et al. (1997) rank pneumonia and influenza as the third leading cause of the probability of death (following cardiovascular disease and cancer). Sunstein (1997) discusses the evidence that an individual's willingness to pay to avoid death increases for causes perceived as "bad deaths" - especially dreaded, uncontrollable, involuntary deaths and deaths associated with high externalities and producing distributional inequity. This is exactly the reaction revealed in two surveys conducted in Taiwan during the SARS outbreak in 2003 (Liu et al., 2005), with the novelty, salience and public

concern about SARS contributing to the higher than expected willingness to pay to prevent the risk of infection.

Studies of the macroeconomic effects of the SARS epidemic in 2003 found significant effects on economies through large reductions in consumption of various goods and services, an increase in business operating costs, and re-evaluation of country risks reflected in increased risk premiums. Shocks to other economies were transmitted according to the degree of the countries' exposure, or susceptibility, to the disease. Despite a relatively small number of cases and deaths, the global costs were significant and not limited to the directly affected countries (Lee and McKibbin, 2003). Other studies of SARS include (Chou et al., 2004) for Taiwan, (Hai et al., 2004) for China and (Sui and Wong, 2004) for Hong Kong.

Schoenbaum (1987) is an example of an early analysis of the economic impact of influenza. Meltzer et al. (1999) examine the likely economic effects of the influenza pandemic in the US and evaluate several vaccine-based interventions. At a gross attack rate (i.e. the number of people contracting the virus out of the total population) of 15-35%, the number of influenza deaths is 89 – 207 thousand, and an estimated mean total economic impact for the US economy is \$73.1- \$166.5 billion.

Bloom et al. (2005) use the Oxford economic forecasting model to estimate the potential economic impact of a pandemic resulting from the mutation of avian influenza strain and identified that Global GDP is reduced by 0.6%, global trade of goods and services contracts by \$2.5 trillion (14%). Open economies are more vulnerable to international shocks.

III. RESEARCH METHODOLOGY

The Study

The present investigation is based on exploratory research inquiry and examines the impact of COVID-19 Lockdown on Mental Health of common public. The study is based on primary data that is collected through the use of a questionnaire. In this study convenient sampling technique is used to select a total sample of 108 respondents in age group of 20-50 Years at Indore (MP). Here as this research has a quantitative base so questionnaire used in this research is close ended questionnaire. The research instrument comprises of a number of statements under four variables. It includes Mental Health as the dependent variable, and behavioral aspect, emotional aspect, psychological aspect as the independent or explanatory variables. The questionnaire consists of 14 questions on psychological aspect, 6 questions on behavioral aspect, and 1 question on mental health making a total of 21 questions based on degree scale. Respondents were asked to indicate their degree of agreement with each of the questions on a five-point Likert scale. In this study the reliability of the scales was first evaluated using Cronbach's alpha, which measures the

consistency with which respondents answer questions within a scale. Finally, regression analysis is run to test the research hypotheses. The data were analyzed using window based Statistical package of the Social Science (SPSS).

The Sample

The data was collected from sample of 108 respondents of Indore division. The respondents were selected through non-probability convenience sampling method.

Variables

The present investigation is a quantitative research to understand the impact of Psychological Factors and Behavioral Factors on Mental Health. The closed ended questionnaire is used to collect primary data and to check the extent to which the behavioral aspect and psychological aspect affect mental health. The three important aspects of mental health are categorized as one dependent and two independent or explanatory variables.

Dependent Variable: The dependent variable under this study is mental health. The extent of the effect of behavioral and psychological aspect on mental health is measured through this variable.

Independent or Explanatory Variables: The explanatory variables include two important aspects of mental health. These variables include behavioral aspect and psychological aspect.

Conceptual Model

This paper examines the relationship between mental health and three aspects of mental health i.e. behavioral aspect and psychological aspect. The conceptual model is as follows:

$$MH = f(PA, BA)$$

Where:

MH = Mental Health;

PA= Psychological Aspect;

BA = Behavioral Aspect;

This model is adopted to test the first hypothesis of the study. The model is checked by Multiple Regression Method. Another tool used to determine whether a linear relationship exists between the variables is Pearson's Correlation, r.

Item Total Correlation and Reliability of the Measures

Questionnaire adopted in this study consists of 14 questions on psychological aspect and 6 questions on behavioral aspect; item total correlation was used in order to check the normality of the sample. As the sample size was 108, item with correlation value less than 0.1948 should be dropped. All the items in the study had correlation values more than 0.1948 thus; no item was dropped from the questionnaire.

As shown in table number 1 to 3, Reliability of the measures was assessed with the use of Cronbach's alpha on

all the 20 items. Cronbach's alpha allows us to measure the reliability of different variables. It consists of estimates of how much variation in scores of different variables is attributable to chance or random errors (Selltiz et al., 1976). As a general rule, a coefficient greater than or equal to 0.7 is considered acceptable and a good indication of construct reliability (Nunnally, 1978). The overall Cronbach's alpha for the three aspects is (0.731). Cronbach's alpha for the Psychological Factor (0.810), Behavioral Factor (0.756). Hence, it was found reliable for further analysis.

Table 1: Psychological Aspect Reliability Statistics

Cronbach's Alpha	N of Items
.810	14

Table 2: Behavioral Aspect Reliability Statistics

Cronbach's Alpha	N of Items
.756	6

Table 3: Psychological Aspect, Behavioral Aspect and Mental Health Reliability Statistics

Cronbach's Alpha	N of Items
.731	21

OBJECTIVES

- To study the relationship of psychological and behavioral factors with mental health
- To identify the psychological and behavioral changes in public due to lockdown

HYPOTHESIS

H01: THERE IS NO RELATIONSHIP OF PSYCHOLOGICAL FACTORS AND BEHAVIORAL FACTORS WITH MENTAL HEALTH

H02: THERE IS NO SIGNIFICANT PSYCHOLOGICAL AND BEHAVIORAL CHANGE IN PUBLIC DUE TO LOCKDOWN

RESULTS AND DISCUSSION

1. Gender Analysis

Table No. 4

Gender	No. of Respondents	Percent	Cumulative Percent
Male	60	56	56
Female	45	44	100
Total	108	100	

Out of the sample size of 108 respondents, around 56% are Male and 44% are Female.

2. Age

Table No. 5

Age	No. of Respondents	Percent	Cumulative Percent
21-30	39	36	36
31-40	37	34	70
41-50	32	30	100
Total	108	100	

Out of the sample size of 108 respondents, around 36%, 34% and 30% of the respondents belongs to the age category of 21-30, 31-40 and 41-50 respectively. This shows that all the respondents are sensible and matured enough to respond properly.

3. Education Qualification

Table No. 6

Education	No. of Respondents	Percent	Cumulative Percent
Graduate	38	35	35
Post Graduate	49	46	81
Any other	21	19	100
Total	108	100	

Out of the sample size of 108 respondents, around 35%, 46% and 19% of the respondents are Graduate, Post-graduate and have taken some other degree respectively. This shows that all the respondents are educated and qualified enough to respond sensibly.

4. Occupation

Table No. 7

Occupation	No. of Respondents	Percent	Cumulative Percent
Housewife	9	8	8
Teaching in college/ univ.	18	17	25
Teaching in School	2	2	27
Medical Professional	2	2	29
Executive	3	3	32
Businessman	19	17	49
Engineer	5	4	53
Student	33	31	84
Any other	17	16	100
Total	108	100	

Out of the sample size of 108 respondents, around 31%, 17% and 17% of the respondents are students, teaching in university/ college and doing business respectively. This shows that responses obtained can help to properly understand the impact of lockdown as they are the people who are very much affected by lockdown. However very few of the respondents 8%, 2%, 2%, 3%, 4% and 16% are housewife, teaching in schools, medical professional, executive, engineer and some belong to other category respectively.

5. Marital Status

Table No. 8

Marital Status	No. of Respondents	Percent	Cumulative Percent
Married	48	44	44
Unmarried	60	56	100
Total	108	100	

Out of the sample size of 108 respondents, 44% are married and 56% are unmarried.

HYPOTHESIS TESTING

H₀₁: There is a no relationship of psychological factors and behavioral factors with mental health

Multiple-Regression Model

The regression model is applied to estimate the relationship between Mental Health and the two explanatory variables as follows:

$$MH = f (PA, BA)$$

Pearson correlation is used to analyze correlations among the explanatory variables, namely psychological aspect (PA), and behavioral aspect (BA). Table 9 reveals the correlation coefficients between all the variables. This table of bi-correlations is useful to detect any potential case of multicollinearity. The “rule of thumb” test suggested by Anderson et al. (1990) states that any correlation coefficient exceeding (0.7) indicates a potential problem. An examination of the results of correlations presented in Table 1 suggests that there is no problem of multicollinearity among all explanatory variables.

Table 9: Correlation Coefficients between Explanatory Variables

		Correlations		
		Mental	Psychological	Behavioral
Pearson Correlation	Mental	1.000	.590	.348
	Psychological	.590	1.000	.564
	Behavioral	.348	.564	1.000
Sig. (1-tailed)	Mental	.	.000	.000
	Psychological	.000	.	.000
	Behavioral	.000	.000	.
N	Mental	108	108	108
	Psychological	108	108	108
	Behavioral	108	108	108

Table 10

Overall PA, BA and MH

Model	R	R Square	Adjusted R Square	R Square Change	F Change	Sig. F Change
1	.590 ^a	.348	.336	.348	28.013	.000

Table 11

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	24.442	2	12.221	28.013	.000 ^a
	Residual	45.808	105	.436		
Total		70.250	107			

a. Predictors: (Constant), Behavioral, Psychological

b. Dependent variable: Mental Health

Table 12

Model		Standardized Coefficients	t	Sig.
		Beta		
1	(Constant)		-.102	.919
	Psychological Aspect	.577	6.041	.000
	Behavioral Aspect	.023	.241	.810

Interpretation- Table 10 depicts the regression results. It can be seen from the results provided in Table 10 that R² is 0.348. This indicates that the two explanatory variables explain 34.8 percent of the variations in mental health. Table 11 shows the results of multiple-regression model which depicts that the estimated coefficients of RQ is significant (F= 28.013, p< 0.01) and show a positive impact on mental health.

Psychological Aspect was found to be the most important aspect for Mental Health since the beta value (regression coefficients) was found to be 0.577. The strength and direction of the beta coefficients (regression coefficients) suggest that better the psychological aspect better will be the mental health.

However, behavioral aspect (p= 0.810) has no significant relationship with mental health. This could be due the reason that it is the psychological factors only that develops mind-set and accordingly behavior changes. Behavioral aspect is secondary for impacting mental health. Behavior is the outcome of psychological feeling and accordingly human acts. Psychological feeling is in-built in the human beings and has a direct connection with mental health. Hence null hypothesis H₀₁ is rejected at 1% level of significance as there is relationship of psychological and behavioral aspect with mental health.

H02: There is no significant psychological and behavioral change in public due to lockdown

Psychological Impact of Lockdown

Table 13

S.No.	Statement	Responses				
		Never	Rarely	Sometimes	Often	Always
1	How often do you feel you are progressing towards accomplishing your goals? (P)	3 (2.8%)	4 (3.7%)	32(29.6%)	45(41.7%)	24(22.2%)
2	How often do you feel boredom in what you are doing? (P)	22(20.4%)	30(27.8%)	26 (24%)	22(20.4%)	8(7.4%)
3	How often do you achieve the important goals you have set for yourself? (P)	2 (1.9%)	8 (7.4%)	35 (32.4%)	42 (38.9%)	21(19.4%)
		Terrible	Fair	Good	Very Good	Excellent
4	In general, how would you say your life is? (P)	4 (3.7%)	2 (1.9%)	21 (19.4%)	46 (42.6%)	35 (32.4%)
5	In general, how would you say your health is? (P)	0 (0%)	4 (3.7%)	15 (13.9%)	39 (36.1%)	50 (46.3%)
		Not at all	Slightly	Some what	Moderately	Completely
6	To what extent do you lead a purposeful and meaningful life? (P)	7 (6.5%)	2 (1.9%)	24 (22.2%)	44 (40.7%)	31 (28.7%)
7	To what extent do you receive help and support from others when you need it? (P)	3 (2.8%)	4 (3.7%)	40 (37%)	26 (24.1%)	35 (32.4%)
8	To what extent do you feel that what you do in your life is valuable and worthwhile? (P)	3 (2.8%)	2 (1.9%)	25 (23.1%)	48 (44.4%)	30 (27.8%)
9	How lonely do you feel in your daily life? (P)	24 (22.2%)	30 (27.8%)	28 (25.9%)	20 (18.5%)	6 (5.6%)
10	How satisfied are you with your current physical health? (P)	1 (0.9%)	9 (8.3%)	15 (13.9%)	40 (37%)	43 (39.8%)
		Never	Rarely	Sometimes	Often	Always
11	In general, how often do you feel sad? (P)	15 (13.9%)	31 (28.7%)	39 (36.1%)	18 (16.7%)	5 (4.6%)
		Terrible	Fair	Good	Very Good	Excellent
12	Compared to others of your same age and sex, how is your health? (P)	0 (0%)	8 (7.4%)	25 (23.1%)	44 (40.7%)	31 (28.7%)
		Not at all	Slightly	Some what	Moderately	Completely
13	To what extent do you feel loved? (P)	3 (2.8%)	2 (1.9%)	17 (15.7%)	43 (39.8%)	43 (39.8%)
14	How satisfied are you with your personal relationships? (P)	4 (3.7%)	6 (5.6%)	17 (15.7%)	30 (27.8%)	51 (47.2%)

Interpretation- The first section of our questionnaire which explored the psychological impact of the ongoing lockdown, underlined some interesting results, as outlined in Table 13. While (51.4%) of our participants feeling boredom in what they are doing, comparatively more (58.8%) feel sad while seating at home. A large fraction of our participants (93.5%) felt they are progressing towards accomplishing their goals, and achieving important goals they have set for themselves (90.7%). Majority of our respondents (75%) felt their life is very good and is not affected by lockdown. Almost all of our respondents

(96.3%) are perfectly fine with their health while seating at home. Around (91%) of our participants feel they are leading purposeful and meaningful life and are receiving help and support from others when they need it (93.5%). A huge majority (76%) are satisfied with their current physical health. While around (78%) of the respondents feel they are being loved, around (90.7%) believes that they are satisfied with their personal relationship. On the basis of these points it can be clearly interpreted that people are less affected psychologically due to lockdown and hence their mental health is stable.

Behavioral Impact of COVID-19 Lockdown

Table 14

S.No.	Statement	Responses				
		Never	Rarely	Sometimes	Often	Always
1	In general, how often do you feel joyful?	3 (2.8%)	2 (1.9%)	28 (25.9%)	43 (39.8%)	32 (29.6%)
2	In general, how often do you feel anxious?	10 (9.3%)	27 (25%)	40 (37%)	19 (17.6%)	12 (11.1%)
		Not at all	Slightly	Some what	Moderately	Completely
3	In general, to what extent do you feel excited and interested in things? (B)	0 (0%)	3 (2.8%)	9 (8.3%)	52 (48.1%)	44 (40.7%)
		Never	Rarely	Sometimes	Often	Always
4	In general, how often do you feel positive?	0 (0%)	3 (2.8%)	15 (13.9%)	48 (44.4%)	42 (38.9%)
5	In general, how often do you feel angry?	5 (4.6%)	25 (23.1%)	43 (39.8%)	25 (23.1%)	10 (9.3%)
6	How often are you able to handle your responsibilities?	1 (0.9%)	3 (2.8%)	11 (10.2%)	47 (43.5%)	46 (42.6%)

Interpretation- Our second section of the questionnaire dealt with the behavioral impact of COVID-19 lockdown,

as demonstrated in Table 14. Only a small fraction of our participants feel angry (32.4%) while sitting at home. Other

than this majority of respondents feel no change in behavior as they lifestyle remains same as it was before lockdown. Maximum (94%) feel joyful, they never feel anxious (61%), feel excited and interested in doing things (88%), feel positive (87%) and are able to handle responsibilities in the same manner as they were handling before (96%). This shows that lockdown does not have any big impact on behavior of common people. Their lifestyle remains same and they are able to do all the things that they were doing before lockdown.

Hence null hypothesis H02 is accepted as there is no significant psychological and behavioral change in public due to lockdown.

IV. FINDINGS

- 1) It can be seen that out of the total respondents 56% are Male and 44% are Female.
- 2) Around 36% belongs to the age category of 21-30, 34% belongs to the category of 31-40 and remaining 30% belongs to the age group of 41-50 years. This shows that all the respondents are sensible and matured enough to respond properly.
- 3) Around 35%, 46% and 19% of the respondents are Graduate, Post-graduate and have taken some other degree respectively. This shows that all the respondents are educated and qualified enough to respond sensibly.
- 4) Around 31%, 17% and 17% of the respondents are students, teaching in university/ college and doing business respectively. This shows that responses obtained can help to properly understand the impact of lockdown as they are the people who are very much affected by lockdown. However very few of the respondents 8%, 2%, 2%, 3%, 4% and 16% are housewife, teaching in schools, medical professional, executive, engineer and some belong to other category respectively.
- 5) Out of the sample size of 108 respondents, 44% are married and 56% are unmarried.
- 6) Psychological Aspect was found to be the most important aspect for Mental Health since the beta value (regression coefficients) was found to be 0.577. The strength and direction of the beta coefficients (regression coefficients) suggest that better the psychological aspect better will be the mental health. However, behavioral aspect ($p= 0.810$) has no significant relationship with mental health. This could be due the reason that it is the psychological factors only that develops mind-set and accordingly behavior changes. Behavioral aspect is secondary for impacting mental health. Behavior is the outcome of psychological feeling and accordingly human acts. Psychological feeling is in-built in the human beings and has a direct connection with mental health.

- 7) There is no significant psychological and behavioral change in common public due to lockdown. This can be due to the fact that people are engaged in work from home and have adopted preventive measures to cope up with the ill effects of lockdown.

V. SUGGESTIONS

- These high levels of awareness and positive behavioral changes could be because this research was conducted at a time when preventive measures were being highly emphasized to prevent the spread of the disease. However, one should not forget that abrupt changes in lifestyle and social interaction could further trigger anxiety, especially keeping in view the uncertainty of the situation. Supporting this, a survey indicates that preventive measures are undoubtedly closely related to the effective and timely transmission of epidemic and virus-related information.
- In order to avoid causing huge losses to firms, work from home should be encouraged in every workplace where possible, and since young people are more receptive towards Smartphone applications, students should be provided with online courses and lectures which may help the country save itself from any long-term losses.
- Lastly, as has been noted from previous pandemics, increased anxiety leads to further exacerbation of the disease, therefore a few measures could be taken on an individual level to reduce this anxiety and fear. Avoiding excessive exposure to news that would lead to distress may be helpful. Similarly, maintaining a healthy lifestyle will not only increase immunity but also help keep the mood elevated. Talking to friends and family is yet another way to gain emotional support and keep oneself comfortable and consolidated.

VI. SCOPE FOR FURTHER RESEARCH

Study can be conducted by focusing a specific zone in Indore. Further sample size can be increased to better analyze the perception of the respondents. Comparative study can be made among different states. Study can be done by focusing only on specific segment of population. Perception of common public living in rural and urban areas can also be studied. Study can be conducted on people with limited resources and belong to backward areas. Research can also be conducted on different segments of population. Further study can be done on impact of lockdown specific industry. Comparative study on impact of lockdown on housewives and working women can also be done. Also perception of people towards work from home due to Covid-19 lockdown can be studied.

VII. CONCLUSION

It has been identified that Psychological Aspect and Behavioral Aspect are the two important aspects that affect Mental Health of Human Beings. In order to have better mental health, a person should have positive psychology and behavior aspect which should be developed by fulfilling and satisfying the need of the human beings. Descriptive and analytical results have explained the relationships between psychological aspect and mental health. The results indicated that Psychological Aspect (PA) is the most important aspect or the most influencing factors affecting Mental Health in human beings, which mean that human beings need to give more attention to these aspects of Mental Health. Our study highlighted the increased anxiety levels that an individual experienced on a routine basis regarding their health and the health of their peers, certain avoidance behaviors which the disease had led to, and behavioral changes of the concerned population. We also tried to list possible solutions to avert any future distress that may ensue as a result. Hopefully, our study will help the concerned authorities to take measures in order to alleviate the psycho-behavioral impact of COVID-19. Furthermore, as the disease continues to evolve, future, larger-scale studies should be conducted to assess the psycho-behavioral impact of COVID-19 on the wider population.

ACKNOWLEDGMENT

The most awaited moment of successful completion of endeavor is always a result of persons involved explicitly or implicitly there in. It is impossible without the help and guidance of the people around to carry on this research work. I take the opportunity to express my sincere gratitude to each and every person who gave me the guidance and help for preparing the report.

I take this opportunity to thanks Dr. Simranjeet Kaur, Indore Institute of Management and Research for providing me an opportunity to work for this research.

I am also desirous of placing on record profound indebtedness to Dr. Shubhangi Jain and all the members of faculty of Indore Institute of Management and Research, Indore, for the valuable advice, guidance, precious time and support that they offered.

My strength and inspiration are the blessings of my parents and my friends. I owe all my success and achievements to them.

My utmost thanks and appreciation to all the respondents who had devoted their precious time and gave me all the related details as and when required.

Last but not least Thanks to **everyone** who is directly or indirectly associated with the completion of this work.

REFERENCES

- [1] Johal SS. (2009). Psychosocial impacts of quarantine during disease outbreaks and interventions that may help to relieve strain, 47-52.
- [2] Blendon RJ, Benson JM, DesRoches CM, Raleigh E, Taylor-Clark K. (2004). The public's response to severe acute respiratory syndrome in Toronto and the United States, 925- 931.
- [3] Taylor M, Agho K, Stevens G, Raphael B. (2011). Factors associated with high psychological distress in horse industry participants during the 2007 Australian equine influenza outbreak and evidence of recovery after 1 year, 158-159.
- [4] L. Meng, F. Hua, Z. Bian. (2020). Coronavirus Disease 2019 (COVID-19): Emerging and Future Challenges for Dental and Oral Medicine, 71-84.
- [5] W.Qiu; S. Rutherford; A. Mao; C. Chu. (2017). The Pandemic and its Impacts, Vol. 9-10
- [6] Carmela Roybel. (2020). Tribal Communities and Nations in a Time of COVID-19, 118-122.
- [7] Rogelio Bayod. (2020). Ethics of Care and Philippine Politics During the Covid-19 Outbreak, 69-76.
- [8] Barrelet, C., Bourrier, M., Burton-Jeangros, C., & Schindler, M. (2013). Unresolved issues in risk communication research: the case of the H1N1 pandemic (2009-2011). *Influenza Other Respir Viruses*, 7 Suppl 2, 114-119.
- [9] Bhandari, R., Hartley, T. A., Lindsley, W. G., Fisher, M. A., & Palmer, J. E. (2013). Assessing Healthcare Utilization for Influenza-like Illness at an Emergency Department and a Student Health Service during the 2009-2010 H1N1 Pandemic. *Infect Dis (Auckl)*, 6, 15-23.
- [10] Castillo-Chavez, C., Curtiss, R., Daszak, P., Levin, S. A., Patterson-Lomba, O., Perrings, C., . . . Towers, S. (2015). Beyond Ebola: Lessons to mitigate future pandemics. *The Lancet Global Health*, 3(7), e354-e355.
- [11] Cauchemez, S., Ferguson, N. M., Wachtel, C., Tegnell, A., Saour, G., Duncan, B., & Nicoll, A. (2009). Closure of schools during an influenza pandemic. *The Lancet infectious diseases*, 9(8), 473-481.
- [12] Chen, W.-C., Huang, A. S., Chuang, J.-H., Chiu, C.-C., & Kuo, H.-S. (2011). Social and economic impact of school closure resulting from pandemic influenza A/H1N1. *Journal of Infection*, 62(3), 200-203.
- [13] Chung, L. H. (2015). Impact of pandemic control over airport economics: Reconciling public health with airport business through a streamlined approach in pandemic control. *Journal of Air Transport Management*, 44, 42-53.
- [14] Davies, S. E. (2013a). NATIONAL SECURITY AND PANDEMICS. *UN Chronicle*, 50(2), 20-24.
- [15] Davies, S. E. (2013b). National Security and Pandemics. *UN Chronicle*, 50, 20-24.
- [16] Ross, A. G., Crowe, S. M., & Tyndall, M. W. (2015). Planning for the Next Global Pandemic. *International Journal of Infectious Diseases*, 38, 89-94.
- [17] Ross, A. G. P., Ross, A. G. P., Olveda, R. M., & Yuesheng, L. (2014). Are we ready for a global pandemic of Ebola virus? *International Journal of Infectious Diseases*, 28, 217-218.
- [18] Su, W., & He, H. (2015). Emergence and Pandemic Potential of Avian Influenza A (H7N9) Virus. *MICROBIOLOGY IN AGRICULTURE AND HUMAN HEALTH*, 33.
- [19] Tanner, W., Toth, D., & Gundlapalli, A. V. (2015). The pandemic potential of avian influenza A (H7N9) virus: a review. *Epidemiology and Infection*, 143(16), 3359-3374.
- [20] Taubenberger, J. K., & Morens, D. M. (2009). Pandemic influenza - including a risk assessment of H5N1. *Revue Scientifique Et Technique-Office International Des Epizooties*, 28(1), 187-202.