

# Factors Affecting Fight Against Covid 19 Pandemic in India: An Empirical Study

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**Abstract:** *Corona Virus Disease or COVID19 is another infection that began in Wuhan, China. The infection has now spread over the world and the practically all the nations are engaging against this infection and are attempting their best to control the spread however much as could reasonably be expected. The World Health Organization has proclaimed it as a Pandemic and is investigating every possibility to control the pandemic and is anticipating an antibody to fix it. There are relatively few scholastic investigations that can control specialists to contemplate the effect this pandemic has on the emotional well-being of the individuals and furthermore on the economies of nations around the world. The outbreak of the novel coronavirus, COVID-19, has been announced a pandemic by the WHO. So, the present study aims at identifying the factors affecting to fight against COVID 19 pandemic in India. Six factors viz. Upliftment in Self Realization, Proactive Precautions, Self-Reliance, Precautionary measures of Government, Driven behavior towards health, Lockdown Tensity are identified based on principal component method of exploratory factor analysis. The empirical findings not only prioritize different parameters of fight against COVID 19 pandemic in India but also provide guidelines to peoples for focusing on important factors that affect perception of individual peoples related to factors to fight against COVID 19 pandemic in India.*

**Keywords:** COVID19, Pandemic, World Health Organization, Corona, Lockdown.

## I. INTRODUCTION

The Coronavirus, COVID-19, began in Wuhan and has spread quickly over the globe. The World Health Organization has announced it to be a pandemic. Without an immunization, social distancing has developed as the most generally embraced system for its alleviation and control. The concealment of social contact in working environments, schools and other open circles is the objective of such measures. Since social contacts have a solid assortative structure in age, the efficacy of these measures is subject to both the age structure of the populations and the recurrence of contacts between age bunches over the populations. As these are geologically specific, equivalent measures can have inconsistent results when applied to areas with significantly differing age and social contact structures. Quantitative evaluations of the effect of these measures in diminishing bleakness, top contamination rates, and overabundance mortality can be a significant help in general wellbeing arranging.

The Wuhan city in China is the point of convergence of thought worldwide because of the episode of febrile respiratory ailment brought about by the crown infection 2019-nCoV. In December 2019, an unexplained flare-up of pneumonia broke out in the Wuhan territory of Hubei, China, with an epidemiological association with the Human Seafood Supermarket where there was likewise a proposal of live life forms. Coronaviruses are a huge group of infections with some incurring less serious respiratory sickness to a great deal of extreme maladies like serious intense digestion condition (SARS) and geographic zone digestion disorder (MERS). The respiratory ailment CoV-21 might be a coronavirus frightfully equivalent to the one that caused SARS. Numerous coronaviruses are creature malady, that implies they're transmitted from creatures to people. Crown infection Disease 2019 (COVID-19) is an intense irresistible illness brought about by Acute Respiratory Syndrome Corona infection 2 (SARS-CoV-2). The ailment was first identified in Dec 2019, and has since spread all inclusive in Wuhan, the capital of Hubei Province of China, bringing about the continuous 2019-20 Pandemic crown infection. In November 2019 Hubei found the first affirm instance of an obscure crown infection. India decided a 14-hour long intentional time limit by open at the desire of the

executive Narendra Modi on 22nd March 2020. Specialists went to it as further lockdown in the states tainted from Covid-19. Thereafter the head administrator proclaimed an across the nation lockdown in India. Therefore, the present study is undertaken to explore the factors to fight against COVID 19 pandemic in India.

## **II. LITERATURE REVIEW**

**Barkur, et al. (2020)** considered the investigation of pre and post lockdown tweets and comprehend whether there was an adjustment in slants from the earliest starting point to the furthest limit of the lockdown. Additionally, future investigations can glance in to factors that influence mental wellbeing during lockdowns and pandemic spreads. Another territory for future exploration could be handling of phony news that gets coursed through web-based social networking, affecting the psychological well-being of the recipients.

**Singh & Adhikari, (2020)** introduced a numerical model of the spread of disease in a population that organized by age and social contact between ages. Since virus spreads through the structure of social contacts and the last shifts with age, it is important to determine both these parts of a population in any model that endeavors to comprehend and foresee how the alteration of the social contact structure through social distancing impacts the spread of sickness.

**Singh, et al. (2020)** examined the general uses of the demonstrated IoT reasoning by offering a viewpoint guide to handle the COVID-19 pandemic. At last, twelve critical utilizations of IoT are recognized and talked about. It has at last constrained the analysts, academicians, and researchers to propose some beneficial answers for survive or stand up to this pandemic.

**Balajee, et al. (2020)** demonstrated that India can spend 2.2-4.8% of its GDP dependent on a worldwide benchmark. Nonetheless, the danger of a rating downsize and monetary shortage spike will make it harder to obtain and spend later on.

**Bhutta, et al. (2020)** has uncovered glaring holes in general wellbeing readiness for irresistible illness episodes in South Asia. The absence of a strong irresistible illness observation and control framework is especially apparent.

**Chatterjee, et al. (2020)** recommended that quick usage of Non Pharmacological Interventions among everyone, including total lockdowns, can possibly hinder the advancement of the pestilence by April 2020 and diminish the COVID19 cases, cut down hospitalizations, ICU prerequisites and mortality practically by 90%. This will make the plague sensible, and bring it inside the ambit of accessible human services assets in India.

## **III. RESEARCH OBJECTIVE**

The main objective of the present study is to identify the factors affects to fight against COVID19 pandemic in India.

## **IV. RESEARCH METHODOLOGY**

- **The Study:** The research is exploratory in nature and based on survey of respondents from various cities of India. It aims to explore the factors affecting to fight against COVID 19 pandemic in India.
- **The Sample:** The population under investigation includes the individuals from various cities of India. In the absence of sampling frame non-probability judgmental sampling has been used in the present study to select sample from the population. According to Bryman and Cramer (2001), differences between random and nonprobability convenience / judgmental samples in terms of their representativeness are not as significant as have often been implied. Various E-mail invitations were sent to a number of well-judged respondents for filling up the questionnaire and they were also requested to forward the same to others with same kind of profiles. Social media platforms were also used for filling up the questionnaire. The sample of the study was drawn from the various cities of India. Finally, a total of 253 respondents completed the survey successfully out of 300 targeted respondents.
- **Tools for Data Collection:** The primary data for the study have been collected through a self-structured and self-administered questionnaire comprised of 29 valid items. After rigorous literature review initially 34 items were finalized by the researchers and sent to 6 judges/experts of industry and academia for face validity process. Out of 34 items 29 were finalized by the judges. These items were presented on five-point Likert

scale range from Strongly Agree (5) to Strongly Disagree (1) and directed on the sample of 253 respondents. General demographic information of the respondents has also been collected using separate section in the questionnaire.

- **Tools for Data Analysis:** Collected data was analyzed using Statistical Package of Social Science (SPSS 21.0) and MS Excel 2007 to arrive at meaningful conclusion. Firstly, the Reliability Analysis had done using Cronbach's Alpha Method. The Cronbach's Alpha Reliability of all 29 items found to be 0.927 showing the high reliability of 29 statements (Table -1)

**Table 1: Reliability Statistics**

Cronbach's Alpha	No. of Items
0.927	29

Secondly, the Principal Component Method of factor analysis using varimax rotation was applied on the 29 significant items to explore the factors along with KMO and Bartlett's Test. Value of Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was found to be 0.907 (which should be more than 0.5 as per standards). To ensure significant correlations among input variables, Bartlett's test of sphericity was done and the p value (sig.) was found 0.000 (which should be less than 0.05 as per standards) and indicating significant correlation among the selected variables therefore factor analysis found valid to apply on the collected data (Table-2).

**Table 2: KMO and Bartlett's Test**

<b>Kaiser-Meyer-Olkin Measure of Sample Adequacy</b>		0.907
<b>Bartlett's Test of Sphericity</b>	<b>Approx. Chi Square</b>	3807.339
	<b>Df</b>	406
	<b>Sig.</b>	0.000

The extraction values of communalities for each item must be more than 0.4 (i.e. 40%) as per standards and therefore once again confirmed the significance of each item that were used in factor analysis (Table-3). Finally, as a result of factor analysis, four factors were explored and discussed in the next section.

**Table 3: Communalities**

QUESTIONS	INITIAL	EXTRACTION
Q1	1.000	.565
Q2	1.000	.622
Q3	1.000	.711
Q4	1.000	.555
Q5	1.000	.763
Q6	1.000	.731
Q7	1.000	.723
Q8	1.000	.672
Q9	1.000	.665
Q10	1.000	.656
Q11	1.000	.468
Q12	1.000	.646
Q13	1.000	.655
Q14	1.000	.647
Q15	1.000	.602
Q16	1.000	.447
Q17	1.000	.628
Q18	1.000	.709
Q19	1.000	.659

Q20	1.000	.594
Q21	1.000	.409
Q22	1.000	.601
Q23	1.000	.530
Q24	1.000	.608
Q25	1.000	.582
Q26	1.000	.601
Q27	1.000	.664
Q28	1.000	.611
Q29	1.000	.560

## V. RESULTS AND DISCUSSIONS

As a result of the factor analysis 29 items were finally classified into six factors namely Upliftment in Self Realization (with % of variance = 15.088), Proactive Precautions (with % of variance = 12.611), Self-Reliance (with % of variance = 12.468), Precautionary measures of Government (with % of variance = 10.681), Driven behavior towards health (with % of variance = 6.155), Lockdown Tensity (with % of variance = 4.670). These factors explain 61.673% of the total variance. The present study empirically explored these six factors affecting to fight against COVID 19 pandemic in India keeping track of the literature for providing better criteria to fight against COVID19 in India. All these factors are individually discussed as under.

The first factor entitled 'Upliftment in Self Realization' consists of seven items. The total load of this factor is 4.298. The reliability of the factor was evaluated by assessing the internal consistency of the seven items that contributed to this factor using Cronbach's Alpha. The alpha coefficient for this subscale was evaluated to be 0.855 (N = 07). The factor explained highest 15.088 percent of variance. Table 1.1 summarizes the details of this factor.

**Table 1.1:** Details of Upliftment in Self Realization Factor

Factor Name	Reliability	Percent of Variance	Statements	Item Load	Factor Load	Eigen Value
<b>Upliftment in Self Realization</b>	0.855	15.088	Taking precautions as per the advisories being issued by Ministry of Health and Family Welfare in preventing the spread of virus is correct.	.721	4.298	4.376
			During the lockdown period, I realized the importance of essential goods and services.	.689		
			I get hurt when people do not follow the guidelines communicated by government officials.	.645		
			Social Media helps me getting in touch with my friends and relatives	.644		
			I have understood the 'joy of giving' to needy peoples.	.594		
			I support government staff and health officials.	.572		
			I believed that ecological balance has been improved in this lockdown.	.433		

Upliftment in self- Realization is an important factor which affect to fight against COVID19 Pandemic in India. This factor is important in the sense that many people's understood the joy of giving to needy peoples, support government staff and health officials. Various precautions have been taken as per the advisories being issued by Ministry of Health

and Family Welfare, environmental balance has been improved and various social media platforms helps in getting touch with various friends, colleagues and relatives.

The second factor entitled Proactive Precautions consists of six items. The total load of this factor is 3.798. The reliability of the factor calculated using Cronbach's Alpha which is 0.840 (N=6). The factor explained 12.611 percent of variance. Table 1.2 summarizes the details of this factor.

**Table 1.2: Details of Proactive Precautions Factor**

Name of the Factor	Reliability	% of Variance	Statements	Item Load	Factor Load	Eigen Value
<b>Proactive Precautions</b>	0.840	12.611	I always wearing mask and sanitize hands while stepping out.	.807	3.798	3.657
			I give special care to my old age family members.	.754		
			I maintain proper social distancing	.678		
			I adopt work from home concept to fight against COVID 19	.537		
			I follow the lock down period very carefully	.524		
			I don't touch my face before washing my hands with the soap.	.458		

Proactive Precautions is a strong factor which determines various peoples to fight against COVID19 pandemic in India. It is considered to be a significant factor as it shows maintain proper social distancing amongst peoples, focused on work from home concept to fight against COVID 19, followed the lock down period very carefully, wears masks and sanitize hands while stepping out, give special care to old age family members.

The third factor titled Self Reliance consists of eight items. The total load of this factor is 4.573 with reliability value of 0.856 (N=8). The percent of variance of this factor is 12.468. Table 1.3 summarizes the details of Self Reliance factor.

**Table 1.3: Details of Self- Reliance Factor**

Name of Factor	Reliability	% of Variance	Statements	Item Load	Factor Load	Eigen Value
<b>Self-Reliance</b>	.856	12.468	This lockdown situation led me to enjoy my hobbies.	.798	4.573	3.616
			This lockdown situation led me to use/learn technology or work which I liked the most.	.700		
			I have decided to do some online courses which can make me learn something new for my career or for knowledge sake.	.599		
			During the lockdown period, I became more matured / responsible after spending a quality time with my family.	.558		
			I feel good spending time with myself.	.525		
			I have understood how-to live-in crisis with limited resources.	.509		
			In this situation I have learnt to do things on my own.	.475		

			While fighting against COVID 19, a strong emotional bonding is created amongst all citizens of India	.409		
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Self-Reliance is relatively a strong indicator for factors affecting to fight against COVID 19 Pandemic in India. It is a concept that creates strong emotional bonding amongst all citizens of India, peoples understood how-to live-in crisis with limited number of resources, they learn to do things on their own. They became more matured and responsible after spending a quality time with families, enjoy their hobbies, learn something new for their career and for their knowledge.

The fourth factor named Precautionary Measures of Government consists of five items. The total load of the factor is 2.898 with reliability 0.776 (N=5) and 10.861 percent of variance. Table 1.4 summarizes the details of Precautionary Measures of Government factor.

**Table 1.4:** Details of Precautionary Measures of Government

Name of factor	Reliability	% of Variance	Statements	Item Load	Factor Load	Eigen Value
<b>Precautionary Measures of Government</b>	0.776	10.681	I think self-quarantine is best solution to fight against COVID 19.	.689	2.898	3.098
			‘Stay Home, Stay Safe’ is the best mantra to fight against COVID 19	.666		
			According to me, the extension of lockdown period is a good step towards the growing pandemic of COVID 19	.600		
			In this situation, Exercise and Yoga are the possible prevention from Corona Virus.	.476		
			I avoid travelling by any medium and going out in cold weather.	.467		

Precautionary Measures of government is that factor which plays a crucial role towards fight against COVID19 pandemic in India. This factor shows that lockdown was the good step towards the growing pandemic of COVID19, avoid travelling through any medium, going out in cold atmosphere, various types of exercises and Yoga like pranayama, kapalbharti etc. are the possible prevention from Corona Virus. Stay Home, Stay Safe is the best mantra to fight against COVID 19 pandemic in India.

The fifth factor i.e. Driven behavior towards health consisted of two items. The total load of this factor is 1.414 with reliability 0.552 (N=5) and 6.155 percent of variance. Table 1.5 summarizes the details of Driven behavior towards health factor.

**Table 1.5:** Details of Driven Behavior Towards Health Factor

Name of Factor	Reliability	% of Variance	Statements	Item Load	Factor Load	Eigen Value
<b>Driven behavior towards Health</b>	0.552	6.155	I download AarogyaSetu App to fight against COVID - 19	.857	1.414	1.785
			I take various measures to boost the immunity level like drinking warm water/eating ginger/garlic/hot chilies/Pepper etc.	.557		



Driven behavior towards health is also a relatively a strong factor to fight against COVID19 pandemic in India. This factor can be analyzed through downloading AarogyaSetu App to fight against COVID – 19, take various measures to boost the immunity level like drinking warm water/ eating ginger/garlic/hot chilies/Pepper etc. The sixth factor named Lockdown Tensity consists of one item having the factor load 0.768 and 4.670 percentage of variance. Table 1.6 summarizes the details of Lockdown Tensity factor.

**Table 1.6:** Details of Lockdown Tensity Factor

Name of Factor	Reliability	% of Variance	Statements	Item Load	Factor Load	Eigen Value
<b>Lockdown Tensity</b>	-----	4.670	Lockdown stressed me to an extent that has never happened before	.768	.768	1.354

In the present study the factor load of Lockdown tensity is .768 which is lowest among all the factors. This shows that effect of Lockdown tensity factor is less than any other factor. The reason for this could be that the data on which the analysis is done are collected from the peoples who are already tensed for COVID 19 and lockdown ; no matter whatever the percentage of their stress is And once the peoples get experienced about Lock down and learn the necessary skills, they are likely to develop more favorable perception of it.

## **VI. CONCLUSION AND SUGGESTIONS**

Knowledge about the diffusion of COVID 19 pandemic is somewhat in its infancy in India. The present study explored the six factors which were found to be the characteristics of fight against COVID 19 pandemic in India. The result indicates that this factor must be promoted the usefulness features to fight against COVID 19 Pandemic in India among the peoples so more and more peoples must be aware about this. By addressing the key factors mention in the study, the promoters may develop positive attitude and intentions towards fighting against COVID 19 pandemic in India. Furthermore, the findings suggest that even if peoples find these factors to be useful, their values will become inconsistent if these factors does not provide a secured and a safe environment. Hence focus on reduction of risk is essential for the successful fight against COVID 19 pandemic in India. Further the study concludes that if the people's living and working styles are compatible with these factors of fighting against COVID 19 pandemic in India then they build a positive attitude towards it. Hence there is a need to show to the peoples that how these factors fit well and can be useful with their lifestyle. Moreover, the outcomes are beneficial for various working places, organizations in setting up the policies for increasing adoption of these factors which in turn will help them to remain competitive.

## **REFERENCES**

- [1]. Balajee, A., Tomar, S., & Udupa, G. (2020). Fiscal situation of India in the time of COVID-19\*. 1-24.
- [2]. Barkur, G., Vibha, & Kamath, G. B. (2020). Sentiment Analysis of Nationwide Lockdown due to COVID 19 Outbreak: Evidence from India. Asian Journal of Psychiatry, 1-4.
- [3]. Bhutta, Z. A., Basnyat, B., Saha, S., & Laxminarayan, R. (2020). Covid-19 risks and response in South Asia. BMJ, 1-2.
- [4]. Bryman, A., and D. Cramer. Quantitative Data Analysis with SPSS Release 10 for Windows: A Guide for Social Scientists. London: Routledge, 2001
- [5]. Chatterjee, K., Chatterjee, K., Kumar, A., & Shankar, S. (2020). Healthcare impact of COVID-19 epidemic in India: A stochastic mathematical model. Medical Journal Armed Forces India, 1-27.
- [6]. (2020, March 29). Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations. World Health Organisation.
- [7]. Singh, R. P., Javed, M., Haleem, A., & Suman, R. (2020). Internet of Things (IoT) applications to fight against COVID19 pandemic. Diabetes and Metabolic Syndrome: Clinical Research and Review, 521-524.
- [8]. Singh, R., & Adhikari, R. (2020). Age-structured impact of social distancing on the COVID-19 epidemic in India. 1-9.