

REVIEW ARTICLE

Impact of Quarantine in India during COVID-19 Situation: An Overview

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ABSTRACT

The present manuscript highlights the basic concept of quarantine with the history of quarantine concept, which deals with the different types of emotions, such as, resentment, acceptance, curiosity, etc. The impact of quarantine on the Indian population in terms of mental health, psychological health, and financial crisis is explained with the preventive measures. The positive and negative impact of COVID-19 led quarantine on public health is an important issue to highlight, and it is challenging to control the negative impact if the preventive measures are not employed seriously.

Keywords: COVID-19, Mental health, Psychological health, Quarantine.

How to cite this article: Gupta, P.K., Sharma, N., Porwal, P.K., Gupta, A. & Kanoujia, J. (2020). Impact of Quarantine in India during COVID-19 Situation: An Overview. Int. J. Pharm. Edu. Res., 2(2):46-49.

Source of support: Nil

Conflict of interest: None

INTRODUCTION

COVID-19 is a viral disease caused by corona virus-2. The first case of COVID-19 emerged in China, and now this disease spreads all over the world. The effective and proven treatment is not available for COVID-19. The treatment for COVID-19 is based on symptoms that arise during infection through antipyretics, antiviral, and oxygen support therapy. Vaccines are not available and research teams of various countries are working day and night in the development of an effective vaccine. In this situation, quarantine of symptomatic and asymptomatic individuals may be emerging as an effective strategy but the negative impact of quarantine is also observed in an individual under quarantine.^{1,2}

The word quarantine originates from *quarantina*, signifying "forty days." The idea of isolation or quarantine is fundamentally introduced in the neighborhood, and

worldwide wellbeing practices and culture, pulling in elevated enthusiasm during episodes of perceived or actual epidemics, while it also helps people to stay isolated from infected people.^{3,4} There is a minor difference between isolation and quarantine. The isolation is the process where on one hand, sick people who have been affected with the contagious disease are separated from those who are not sick, while on the other hand, the quarantine is the area or part where the movement of people is fully restricted or abounded from the contaminated area or places, where any communicable or touchable epidemic or pandemic occurs.^{5,6}

The whole world is suffering from COVID-19 and quarantine is an important step to separate the infected person from the public domain. All the impacted countries imposed quarantine as an important step to slow down the spreading of infection. Governments are creating quarantine facilities in the cities, and also suggest the patient for isolation with mild symptoms. The long period of quarantine may create a mental problem, such as, depression, and stress in patients, while some of them get it as a way to improve their lifestyles and enhancing their capabilities. The quarantine can show both positive and negative impacts on the lives of peoples from different perspectives.⁷⁻⁹

ETYMOLOGY

The word quarantine or the concept of quarantine was not originated in recent. This word originated in the mid-13th century when a plague-like disease known as Black Death was originated in Italy. This disease had almost cleared approximately 33% of Europe's population within three years. The different types of plagues can bring the biggest death toll results in mankind's history, which was an urgent stimulus to take immediate action. The port city of Ragusa, presently known as Dubrovnik, Croatia, passed a law regarding trentino (for 30 days) for ships arriving from plague-infected zones. Nobody, from Ragusa, was permitted to visit those boats under trentino. If anybody found violated the law, they also would be quarantined for the compulsory 30 days.¹⁰ The other regions, such as, Pisa, Marseille, and several other cities implemented the same law and which showed effectiveness in controlling the plague. After observing its

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effectiveness, many cities extended the isolation time or keeping sick people from normal people for 30 to 40 days and then term changed from trentino to “quarantino,” based on the English word “quarantine,” which is most commonly used during this COVID-19 pandemic across the world.^{11,12}

There was no scientific proof that why infected people being isolated for 40 days instead of 20 days. Some researchers have few hypotheses related to some cultural issues, but investigating some other theories, it was clear that 30 days was sufficient time to burn out the disease. The history of quarantine is very old, as shown in Table 1.^{13,14}

EFFICACY OF QUARANTINE OR ISOLATION

The effectiveness of quarantine totally depends on the peoples of different countries, and how they follow the quarantine in their life. In previous cases of some quarantinable disease shows that it only works if people accept it, and its overuse has been discouraging.^{15,16} Several pieces of research on the effectiveness of quarantine in COVID-19 demonstrated that the number of infections was reduced by applying the quarantine. The use of quarantine is beneficial when there is no proven medicine or vaccines available to treat patients. The concept of quarantine is always debatable as it involved economical, social, political, and ethical issues.^{17,18}

FACTORS AFFECTING QUARANTINE

The main factor which affects is the attachment or commitment to quarantine and the proper knowledge of quarantine rules is important. The more clearly the information regarding COVID-19 quarantine rules is transferred to the community, the more the positive results are expected. The government of India has issued advisory related to quarantine and strict implementation is required to control COVID-19. The adherence to quarantine at quarantine centers depends upon the facilities provided to the quarantined individual.^{19,20}

The demographic and employment feature of the quarantined people plays an important role in commitment to quarantine. The demographic factors, such as, age, marital status, and education are associated

with adherence to quarantine. In India, the quarantine applied to persons with low education status depends upon the knowledge regarding disease, and awareness regarding quarantine protocol in them. The other factors, such as, social, cultural, benefits of quarantine, risk of COVID-19, duration of quarantine, and trust in healthcare workers play an important role in adherence to the quarantine.²¹

IMPACT OF QUARANTINE IN THE CURRENT SITUATION OF COVID-19 ON PUBLIC

The impact of quarantine may be both positive, as well as, negative. The impact of COVID-19 on people's life results in terms of the economy of India, mental health, and environmental health.

Negative Impact of Quarantine

Mental Health

As the world is suffering from the COVID-19 pandemic, Indians who cannot move from their residence to home town may face some uncertainty and stress. The impact of quarantine is understood by three key elements, such as, autonomy, connections, and competency.²² The disengagement forced by quarantine, many times, leaves a person feeling that he has no power over the situations. Most often, an individual feels cut off from the outside world and unfit to take their standard responsibilities. Furthermore, academic institutes, schools, malls, and even all offices are closed for the people under the quarantine period. The time during quarantine appears to crawl by considerably more gradually, while quarantine may be only temporary. It has some negative consequences on both physical and mental well-being. The quarantined people should engage with physical, relaxation, cognitive, and reading activities to pass their time in an effective manner, and to prevent mental stress.²³

Psychological Problem

The impact of quarantine on psychological issues can be understood in three phases, like the pre-quarantine phase, during quarantine, and post-quarantine phase. In the pre-quarantine phase, several factors, such as, age, education level, gender (female), marital status,

Table 1: Noticeable quarantine held in the world due to various diseases

<i>Disease name</i>	<i>Country where it occurs</i>	<i>Year of occurrence</i>
Plague	Eyam village in Britain	1665
Typhoid	Convict ship Surry arrived in Sydney from England	1814
Typhoid Mary	United States	1907–1910 and 1915–1938
Flu pandemic	East Samoa	1918
Ebola	Africa	2014
COVID-19	China, United States, India, etc.	2019 to till now

Table 2: Problems arising due to COVID-19 led economic crisis

S. No.	Economic impact	Social impact	Long term impact
1	Investment	Poverty reduction	Legacy of debt
2	Jobs and productivity	Social tension	Protectionism
3	Real incomes	Political stability	Pressure on economic reform
4	Trend growth	Inequality	Risk of hysteresis

etc., play an important role in creating a physiological problem. For example, females have more physiological stress before going to the quarantine area, maybe due to insecurity, and feeling of not fulfilling the duties during quarantine period. The negative physiological impact during quarantine, includes depression, low mood, sadness, lack of sleep, anger, anxiety, and post-traumatic stress disorder (PTSD). The longer duration of quarantine, fear of infection, boredom, frustration, inadequate supplies, and insufficient information regarding disease may be the major reason for psychological stress during quarantine. The post-quarantine factors, such as, financial crisis and stigma, is the major reason for the psychological problem. The quarantine associated psychological problems can be reduced by providing adequate information about the disease, reducing the length of quarantine, provide proper supplies and proper engagement of quarantined people in other activities.²⁴⁻²⁷

Financial Crisis

The most important negative impact of quarantine is the financial crisis. To slow down the spread of infection, companies or manufacturing units reduce their production volume and utilize only a small number of employees. If the working person is in quarantine, he fears losing the job leading to income loss. The whole world is suffering from an economic crisis. These types of situations can be handled by creating a firm budget, creating the emergency fund, consider the insurance option, and avoid overspending on unwanted articles. Due to financial loss, one can feel tension, stress, feeling of inequality, etc., as shown in Table 2.²⁸

Positive Impact of Quarantine

It cannot be easy to evaluate the negative and positive impact of quarantine. The quarantine strategy with strict implementation reduces the risk of spreading the infection. The positive impact of the COVID-19 situation is observed in the environment, which includes clear air and water quality. The air quality improves tremendously and lows noise pollution, also due to less industrial activity and vehicle movement on roads. The quarantined individual can improve their quality of life by involving in the exercises, cognitive activity, physical activity, relaxation, reading, and entertainment. The low air pollution shows a positive impact on the health of chronic obstructive pulmonary disease (COPD) patients, such as,

asthma, bronchitis, and emphysema, if the patients are infected with COVID-19.^{29,30}

CONCLUSION

Overall, this review discusses the evolution and history of quarantine. This is suggested the quarantine can be used to control the COVID-19 by strictly implementing the quarantine guidelines issued by the government of India. The factors, such as, education status, age, social, and cultural factors may affect the quarantine strategy. The financial burden and negative psychological impact are some of the negative impacts of quarantine. Despite all the negative impacts of quarantine, its implementation cannot be discouraged in the absence of established treatment, such as, vaccines. The negative impact of quarantine can be managed by implementing the more systematic form of quarantine to overcome the psychological, mental, and financial problems. The authors acknowledge the continuous efforts of the healthcare workers of India in this pandemic situation.

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