ISSN: 2320-2882

IJCRT.ORG



INTERNATIONAL JOURNAL OF CREATIVE **RESEARCH THOUGHTS (IJCRT)**

An International Open Access, Peer-reviewed, Refereed Journal

Mathematical model effect of coronavirus on human

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Abstract

Presented herein are in the studies of infection of corona virus disease. This model taken in account of special characteristic to awareness about infection of corona virus disease. The symptomology of these patients, including fever, malaise, dry cough, and blackspot. It has been observed that total infected parson depends on social distance and gathering. When gathering increases the total number of infected parson incases rapider. It also has been observed that the chain of infected person depends on social distance and lockdown. It is clear that the death rate depends upend high infected person, social distance and lockdown. When high infected person increases then death rate increases. JCR

Key word: Corona virus, Infection, Lockdown, Social Distance.

Introduction

Coronaviruses can cause of common cold and covid-19. These virus affect the respiratory system rapidly. Some of these viruses can infect human of illnesses and cause of death. A person might have higher risk of developing severe symptoms and have a weakness immune system. In human coronaviruses can cause common cold, salve acute respiratory system and reparatory syndrome.1'2 In infection with serve acute respiratory syndrome corona viruses causes of illness.

Viruses work by hijacking cells. They enter host cell and spread to new cells throughout the body. Coronaviruses are large single standard RNA viruses. Coronaviruses spread among person thought droplets from cough, sneezes, or breathing. The droplets may land on another person. The virus may pass on to them if they touch their mouth, nose or eyes.

The Coronaviruses mostly affect the respiratory system including The nose and lungs. But some viruses react on immune system they can have a wider impact of person .the corona viruses SAR-COV-2 appear to pass from person to person though respiratory droplets. Primarily it affect the lungs of the body .In So 2-14 day the system may develop such as; persistent of cough, shortness of breath, pain in the chest, fatigue and loss the fever, and small. At most eighty percent people of covid -19 recover without specialist treatment in two weeks. These people may experience mild flow symptoms. Covid -19 has impact on lungs such as ; difficulty breathing low level of oxygen in the blood, lungs injury pneumonia and pulmonary edema. It in clear that the body immune reaction impact of the virus on cell. The covid can increase the risk of damage blood kidneys, nerves system

and bran car sentinel system. people have wild symptoms initially but go on to experience health problem for week or month .

Covid-19 can causes of blood clots brain fog, moods change, sensual disturbances kidney damage and heart palpitations. Asthma emphysema and chronic born people is may have a higher risk of symptoms and complications.

Infected person chain decreases much important factor of these Covid-19 disease.

The Purpose of this paper is develop mathematical modal to know about the infected person and chain of infected person of covid disease .

Method

Covid -19 data was collected published literature. We introduce the general approach of modeling is important tools for decision that can be useful for human diseases.

Mathematical Formulation of the model

The detail some of the model outputs will be performed. This model are of relevance studies in particularly in the real world. In this model influence of the people by corona virus is dynamic.

Let N(t) be the total infected people at time t, the rate of change ;

$$\frac{dN}{dt} = N (I+S+G)$$

Similarly chain rate and death rats are

$$\frac{dC}{dt} = C(I+S+G)$$

and

 $\frac{dD}{dt} = D(H+S+G)$

Where

I = Infected person

S = Social Distance

G = Gathering of person

C = Chain of infected person

- H = high infected person
- D = death of person

With boundary condition;

(4)

(1)

(3)

30

(7)

Solution of the problem

Integrating equation (1) with boundary condition (4), we get

$$N = N_0 (I + S + G)$$
(5)

Similarly integrating education (2) and (3) with boundary condition (4); we get .

$$\mathbf{C} = \mathbf{C}_0 \ (\mathbf{I} + \mathbf{S} + \mathbf{G}) \tag{6}$$

$$D= D_0 (H+S+G)$$

and

The present paper proposes a more realistic model of explaining the infected parson corona virus the infected parson have been examined social distance an gathering from equation (5) its clear that the total infected parson depend on social distance and gathering of parson. From equation (6) its also clear that the chain of infected parson depend on social distance and gathering parson from equation (6) it has been observed that the death of parson depends on social distance. When social distance is proper then rate of infected person is constant and decreasing finally we say that the immunity of person have much role in this virus.







IJCRT2112376 International Journal of Creative Research Thoughts (IJCRT) <u>www.ijcrt.org</u> d621

 $N = N_0(I + S + G), G = 1, S = 1 and N_0 = 1$



Graph between N and S fig.(3)





 $C = C_0(I + S + G), I = 1, S = 1 \text{ and } C_0 = 2$



 $C = C_0(I + S + G), G = 2.0, S = 1 \text{ and } C_0 = 2$



Graph between D and G fig.(7)

 $D = D_0(H + S + G), G = 3, S = 2 and D_0 = 5$



Graph between D and H fig.(8)

 $D = D_0(H + S + G), G = 3, S = 2 and D_0 = 5$



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