A Mathematical Model for Relationship of Spouse in Covid-19 Lockdown Period

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ABSTRACT

In this paper we develop mathematical model for relationship of spouse in Covid-19 lockdown period. This model is taken account of special characteristic of relationship during covid-19 lockdown period. The relationship depends upon various values of parameter R, N, Q and t. it is clear that increases the time of lockdown decrease the value of physical and social relation. Again it is clear that negativity and quarrel value affected the behavior of physical relationship. The negativity affects the child mental level deployment and their social relation in family.

KEYWORDS: Negativity, relationship, Covid-19, efficiency, economic factor

INTRODUCTION

1. Now it has become clear that the covid-19 pandemic is not only global health factor but also affected social system[4,5]. In this paper we provide some results on how to social relation on downturn is going to affect family.

2. By providing evidence we start that the effects of current crisis on family are likely to be sparely distinct from these of other economic downturns[13]. The current crisis has or big impact on service occupations with high employment such as private sector. The most important impact on family relationship is that in the course of pandemic countries have decided to close school. This has dramatically increased the need of child care. In addition senior person of family is now discouraged due to higher mortality rate and given social distance measuring to friends.

3. During the age of corona virus of the part of life romance have changed. new dating partners are longing to one another long time marred .couples are spending mill time together while some could use a weather from seeing loosed one face. Pandemic has added a new wrinkle for separated present for children. The Covid-19 crisis has impacted a physical relationship of couple He said that in lockdown money native factors increases inspected time.

4. In lockdown some people disturbance in sleep whiles other at might engaging in avoidance behavior difficulty concentration. This entire thing can effect in a relationship.

   The lockdown anything in that a changed routine might impact a couple sex life. When the children all constantly relationship when the couple is together they might that of pressure to have satisfying experience.

5. The couples who live a past have been better equipped to manage social distance and these relationship in item o amount of time these conclusion are separated geographically have already talk to each other at distance.

6. The Situation has elated a higher late of confect here are individual issue going on which may be the engaging the

could violence situation. They fight escalates to the point that it become physically with a couple. That normally in not physically but have to do recognize weather a high risk in present lift. While working with salient that these higher and tension in the bodies. They reached in past and create many problems each other.

7. In terms of improving physically relationship suitable while the day they are trebling holding hands and setting next each other the whole day. It is a continue physical relation to maintained properly.

8. The best couples are fertile and erective nature they think outside the beat about how to maintain connection throughout the day. They want to make sure understand the maintain for while reopening. They maintain social distance and protect their children sick.

9. The couple violence is going to be really challenging navigate because they to do not able to get the reason people in higher tension situation might leave house and go to worse that time people do not doing their much

10. Some researcher said that people need to at least 20 minutes to calm down before physically engage in again

Due to speed of their virus Covid-19, India has announced nationwide lockdown to control this virus.

They purpose of their paper in to develop a mathematical model of relationship spouse in Covid – 19 period.

Mathematical model of the problem
The details some of the model output will be performed. This model is relevance studies in research approach.

In this model domestic life of spouse in our country is dynamic in the period of covid-19.

The basic equation of model is;

$$\frac{dL}{dt} = L(R-N-Q) \tag{1}$$

Where L= Current affection family
R= Past affection of family
N= Negative factor of family
Q= Dispute factor of family

With the boundary condition

$$L=L_0 \quad \text{at} \quad t=0$$
$$R=R_0 \quad \text{at} \quad t=0$$
$$N=N_0 \quad \text{at} \quad t=0 \tag{2}$$
$$Q=Q_0 \quad \text{at} \quad t=0$$

Solution of the problem
Separate the variable, we get

$$\frac{dL}{L} = (R-N-Q)dt \tag{3}$$

Integration equation (3), we get

$$\log L = (R-N-Q)t + \log A \tag{4}$$

Applying the boundary condition, (3) in equation (4), we get

$$L = L_0 e^{(R-N-Q)t} \tag{5}$$

Result
The present paper proposed a more realistic model of explaining the domestic problem during covid-19 period.

The domestic love of family depends upon the following factor R, N, Q and t. it has been observed that domestic love of spouse decreases with increase of N. We also observe that the domestic love of spouse decrease with the increases of Q (quarrel). Again we observed that when lockdown period increases then domestic love of spouse decrease. Finally we say that in lockdown period increases the value of N, Q and t disturb the physical relation of this system disturb family structure rapidly in lockdown period. When negativity increases then family creativity decrease and disturb domestic life. Again it is clear that the negativity and system affected the whole family creativity, efficiency and social relation. Finally we say that these positive ability and mental development.

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