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Community Callousness towards Lockdown of COVID-19 Pandemic and the Role of Preventive Specialist

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ABSTRACT

Background: The current COVID-19 pandemic has posed significant challenges to public health. In mitigating its spread, social distancing by imposing a lockdown is being promulgating; but various societies are reacting differently it. The current study aims to find out the community callousness towards lockdown of COVID-19 and the reasons thereof.

Methods: This is a community based cross-sectional study was conducted over a period of seven days from 24th to 31st March in the initial part of lockdown. To observe the effectiveness of lockdown, our team consisting of a doctor, a community health worker/guide and a driver visited the concerned areas. Observations were made whether the people were following the lockdown instructions in letter and spirit or not. Once the people were seen flouting these rules, they were interviewed, as to the reasons thereof and were counseled properly.

Results: On the first day of the visit, 736 people were seen to violate the norms. The mean age of the violators was 29.86 $\pm$ 3.24 years. The number of people defying the lockdown regulations decreased substantially in the successive days. There was a significant difference in flouting rules across age groups, genders, level of education, and employment status ($P < 0.05$).The main reason of people not adhering to lockdown was, "Since they are healthy, COVID-19 won't afflict them" ($P < 0.05$).

Conclusion: A good number of people were seen pretty callous towards the lockdown announced for mitigation of COVID-19 pandemic, but with proper counseling, almost all of them reverted back to follow the lockdown.

Key Words: COVID-19; Community; Callousness; Lockdown; Preventive.

INTRODUCTION

A series of unexplained pneumonias were reported from the city of Wuhan in Hubei Province of China in December 2019. [1] Epidemiological investigations pointed that these pneumonias were caused by a novel coronavirus. [2] The new virus was named as Severe Acute Respiratory Syndrome – Corona Virus (SARS-CoV2) or novel Coronavirus (2019-nCoV), and on 11 February 2020, the World Health Organization (WHO) designated this disease as coronavirus disease – 19 (COVID-19). [3] Furthermore, this disease was officially declared as a pandemic on 11th March 2020. [3] As in two previous occasions of emergence of coronavirus outbreaks in the past two decades, the current pandemic has posed significant challenges for the public health and research. [4]

On the date of writing this paper, COVID-19 is affecting 206 countries and territories around the world and 2 international conveyances. The total number of cases involved is more than 1,203,900 and the number of deaths exceeds 64,700. [5] After the first case of COVID-19 was diagnosed on January 29th in India, a total of 3730 cases have been documented till now. [6] As of 05th April 2020, a total of 94 cases

and two COVID-19 deaths have been confirmed in the union territory of Jammu & Kashmir, with majority of the cases reported from Kashmir Division. [7] Most of the countries are scrabbling to find methods to curb this pandemic. It is imperative that the public at large adheres to the containment measures announced locally, so that this outbreak can be controlled. In reducing the transmission and flattening the curve, social distancing is being promulgating; but various societies are reacting differently to these new societal borders. The current study aims to find out the community callousness towards lockdown of COVID-19 and the reasons thereof, and the role of preventive specialist in reversing it.

MATERIALS AND METHODS

To mitigate the spread of COVID-19, Prime Minister Narendra Modi ordered a nationwide lockdown for 21 days starting from 24th March 2020, limiting movement of the entire 1.3 billion population of India. [8] The present community based cross-sectional study was conducted over a period of seven days from 24th to 31st March in the initial part of lockdown. This study was carried out in the Tengpora area of Srinagar City, falling under the urban training health center of the department of community medicine, Sheri-Kashmir Institute of Medical Sciences Medical College, Srinagar.

To observe the effectiveness of lockdown, our team consisting of a doctor (the first author), a community health worker/guide and a driver visited the concerned areas daily, in an ambulance. During the visits, the importance of social distancing was discussed on the public address system of the moving ambulance. Observations were made whether the people were following the lockdown instructions in letter and spirit or not. Once the people were seen flouting these rules, they were interviewed by the first author, as to the reasons thereof and were counseled properly, after maintaining a proper social distance. The number of people flouting the rules was compared on each day for seven successive days of study. Demographic variables like age, gender, marital status, education, and occupation were noted for people flouting these regulations.

The data thus collected was compiled and analyzed using SPSS version 21 for Mac (IBM Corporation, 2012). Qualitative variables were expressed as proportions in percentages. The association between variables was calculated for 95% confidence intervals by using "Chi square test" and "One-way ANOVA". "Unpaired t – test" was used to compare the means. Binary logistic regression analyses were used to identify the factors associated with flouting of rules and regulations for the first three days, as the number of people decreased drastically thereafter. A P-value <0.05 was taken as significant. For quantitative data, mean and standard deviation was calculated. All procedures performed in this study were in accordance with the ethical standards of the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The persons involved in flouting the rules were informed about this study and they consented on the condition that their identity would not be revealed. We have neither asked nor revealed their identity in this paper.

RESULTS

On the first day of the visit, 736 people were seen to violate the norms. The mean age of the violators was 29.86±3.24 years. Majority of them were males [674 (91.57%)]. The number of people disregarding the regulations on the second day of the visit was 438, with males being more frequent [398 (90.87%)]. On the third day, this number further decreased to 216, with the number of males being 198 (91.66%). The number of people defying the lockdown regulations decreased substantially in the successive days with just seven violators seen on the last day of the study period. There was a significant

difference in flouting rules across age groups, genders, level of education, and employment status (P < 0.05). Multiple logistic regression analysis found that age group "19 – 28" years versus "29 – 38" years [Odds ratio (OR) 1.86, P < 0.05)]; males versus females (OR 1.23, P < 0.05); uneducated versus educated (OR 1.54, P < 0.05) and unemployed as compared to employed (OR 1.19, P < 0.05) were significantly associated with flouting of rules on the first day of lockdown. A similar trend was seen on multiple logistic regression analysis of the demographic variables for defying the rules in the subsequent days [Table 1].

Table 1: Multiple logistic regression analysis vis-à-vis the demographic profile of the lockdown violators on daily basis [OR = Odds Ratio].

PARAMETER		1st DAY n=736	2nd DAY n=438	3rd DAY n=216	4th DAY n=118	5th DAY n=56	6th DAY n=22	7th DAY n=7	P- Value
Gender	Male	674	398	198	102	51	21	7	0.0021
	Female	62	40	18	16	5	1	0	0.0043
	OR	*1.23*	*1.61*	*1.52*	*1.39*	*1.27*	*1.19*	*1.35*	-
	P- Value	*0.007*	*0.009*	*0.008*	*0.015*	*0.021*	*0.001*	*0.001*	-
Age (Years)	19 – 28	413	211	142	93	41	16	7	0.0079
	29 - 38	197	99	38	14	9	4	0	0.0038
	> 39	126	88	36	11	6	2	0	0.0101
	OR	*1.86*	*1.47*	*1.38*	*1.55*	*1.62*	*1.63*	*1.36*	-
	P- Value	*0.016*	*0.016*	*0.013*	*0.010*	*0.003*	*0.027*	*0.001*	-
Marital Status	Not married	342	200	102	52	24	9	3	0.1373
	Married	394	238	114	66	32	13	4	0.2035
	OR	*1.01*	*1.03*	*1.02*	*1.01*	*1.04*	*1.04*	*1.04*	-
	P- Value	*0.124*	*0.211*	*0.419*	*0.713*	*0.136*	*0.304*	*0.512*	-
Level of Education	Un-educated	698	399	201	103	52	21	7	0.0001
	Educated	38	39	15	15	4	1	0	0.0001
	OR	*1.54*	*1.84*	*1.75*	*1.66*	*1.20*	*1.19*	*1.35*	-
	P- Value	*0.001*	*0.008*	*0.003*	*0.010*	*0.002*	*0.001*	*0.001*	-
Employment Status	Employed	701	402	205	107	53	21	7	0.0001
	Un-employed	35	36	11	11	3	0	0	0.0001
	OR	*1.19*	*1.88*	*1.79*	*1.68*	*1.22*	*1.19*	*1.35*	-
	P- Value	*0.001*	*0.006*	*0.006*	*0.009*	*0.011*	*0.001*	*0.001*	-

On interviewing the persons for the reasons for coming out of their homes and flouting the lockdown rules, we found out that mostly the patients believed that "since they are healthy, COVID-19 won't afflict them" [Table 2].

Table 2: Binary logistic regression of the reasons for flouting the rules of lockdown on daily basis [OR = Odds Ratio].

REASONS		1st DAY n=736	2nd DAY n=438	3rd DAY n=216	4th DAY n=118	5th DAY n=56	6th DAY n=22	7th DAY n=7
1.	*Since they are healthy, COVID-19 won't afflict them* "Versus" *COVID-19 is a media hoax.*							
	OR	1.19	1.26	1.32	1.38	1.25	1.39	1.41
	P- Value	*0.0041*	*0.0032*	*0.0023*	*0.0017*	*0.0033*	*0.0015*	*0.0011*
2.	*Since they are healthy, COVID-19 won't afflict them* "Versus" *God will help us.*							
	OR	1.34	1.45	1.36	1.53	1.51	1.52	1.39
	P- Value	*0.0021*	*0.0009*	*0.0018*	*0.0007*	*0.0008*	*0.0008*	*0.0015*
3.	*Since they are healthy, COVID-19 won't afflict them* "Versus" *Bored sitting inside.*							
	OR	1.41	1.27	1.22	1.36	1.41	1.27	1.18
	P- Value	*0.0011*	*0.0028*	*0.0038*	*0.0018*	*0.0011*	*0.0028*	*0.0038*
4.	*Since they are healthy, COVID-19 won't afflict them* "Versus" *Out to buy Groceries.*							
	OR	1.97	1.34	1.25	1.36	1.27	1.32	1.45
	P- Value	*0.0001*	*0.0021*	*0.0033*	*0.0018*	*0.0028*	*0.0023*	*0.0009*
5.	*Since they are healthy, COVID-19 won't afflict them* "Versus" *Reasons not specified.*							
	OR	1.32	1.51	1.75	1.66	1.20	1.19	1.35
	P- Value	*0.0023*	*0.0008*	*0.0003*	*0.0005*	*0.0040*	*0.0041*	*0.0019*

Binary logistic regression analysis found a statistically significant difference between "since they are healthy, COVID-19 won't afflict them" and "COVID-19 is a media hoax" (OR 1.19, P < 0.05); "since they are healthy, COVID-19 won't afflict them" and "God will help us" (OR 1.34, P < 0.05); "since they are healthy, COVID-19 won't afflict them" and "bored sitting inside" (OR 1.41, P < 0.05); and "since they

are healthy, COVID-19 won't afflict them" and "out to buy groceries" (OR 1.97, P <0.05).

DISCUSSION

The effectiveness of transmission for infective agents has important implications for mitigation and containment strategies. [2] A study published recently indicates a basic reproduction number (R_0) of 2.2 for SARS-CoV2, which means that, on an average, each infected person spreads the infection to an additional two persons. Usually this transmission occurs from a symptomatic infected individual. [1] In case of COVID-19, the issue is further complicated by reports of high titers of virus in the oropharynx early in the course of disease arousing concern about increased infectivity during the period of minimal symptoms. [9,10] It is agreed upon till R_0 falls below 1.0, it is unlikely that the outbreak will be controlled. [1] Social distancing plays a very important role in decreasing R_0 as it reduces person-to-person transmission. [1-4] To the best of our knowledge, this is the first study aimed at finding out the reasons of communities to defy the lockdowns and flout the social distancing norms in COVID-19 pandemic.

Our study finds a significant difference in flouting rules across age groups, genders, level of education, and employment status. There is evidence to suggest that young people are prone to a number of socially impacting conditions due to personal choices, environmental influences and lifestyle changes. [11] This age group usually doesn't take life seriously and responsibly. Also by nature, this age group is mutinous towards societal norms and derives pleasure in breaking rules, which could explain the significant difference in defying the lockdown as compared to the other age group. Level of education amply reflects in the behavior towards a governmental advisory. It is thus expected to understand that being educated is associated with better compliance to the lockdown, which was indeed the case in our study. Most of the unemployed persons were also uneducated, which could explain the increased frequency of flouting the rules in this group.

Appropriate counseling and information educates an individual and increases their understanding about a disease. [12] This was amply reflected in our study in the number of people flouting the regulations of lockdown, which went down drastically in each subsequent day. From a total of 736 violators on first day, we reported 438 violations on the second day (a fall of 40.49%). On the third day we had 216 violations, implying a decrease of 50.68%. During the course of fourth day, 118 people violated the norms with a negative growth rate of 45.37%. This trend continued on the fifth day with a further decrease of 52.54% reflecting in only 56 reported violations. The number further decreased on the sixth day by 60.71% with only 22 people seen flouting the rules and on the last day of the study only seven persons were seen defying the regulations, meaning a further decrease of 68.18%. The average negative growth rate as seen in our study is 52.99%. This negative growth rate elucidates the role of a preventive specialist in convincing the community to shun their callous attitude towards COVID-19.

Our study has some potential limitations. First, this study was conducted during the first week of lockdown and it has not escaped our mind that the grocery stores of the households might get exhausted as the duration of lockdown increases, and more people might be forced to flout the regulations. Second, the negative growth observed in the people defying the norms might not have been only because of counseling, but could have been confounded by the growing scare of ever increasing COVID-19 cases in the neighborhood. The strength of our study is that all the persons violating the norms were interviewed and counseled, and so there is no chance of selection bias.

CONCLUSION

In conclusion, a good number of people were seen pretty callous towards the lockdown announced for mitigation of COVID-19 pandemic, but with proper counseling and information, almost all of them reverted back to being responsible, abiding by the lockdown rules and enforcing social distancing.

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Author Contribution: AR conceived the study and did the statistical analysis. SN collected the data and did the background research. Both the authors were involved in drafting the manuscript and have read and approved its final version. The authors agree to be accountable for the accuracy or integrity of any part of the work. The authors ensure the availability of data and material of this research work, and readers can access the data upon request to the corresponding author.

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