

The Impact of Lockdown Induced by COVID-19 on Lifestyle of Undergraduate Medical Student's of Shalamar Medical and Dental College, Lahore

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Abstract

Background: The massive corona virus (COVID-19) outbreak started in China in 2019 and spread around the globe with significant increase in number of cases. The educational institutes have been forced to shut down temporarily and pushed them to adapt a new ways for spending their daily routine. The least highlighted is long-term impact on medical education, where students are concerned about their role, serving the humanity and protection of the society from such catastrophe situations.

Objective: The objective of the study was to investigate the impact on the lifestyle of Medical Student's dwelling during quarantine lockdown, induced by COVID-19.

Study type, settings & duration: An online cross-sectional survey was carried by group of undergraduate medical students of Shalamar Medical and Dental College, Lahore from June to August 2020.

Methodology: After the approval of SMDC-IRB, the data was collected from 255 undergraduate medical students of Shalamar Medical & Dental College, through Google form based self-administered questionnaire. The consent was part of the Google form. The Google forms were transported into excel sheets and data was analyzed, response was recorded as percentage and frequency, for demographics, perception, education and impact.

Results: The data collected from 255 respondents, the slight majority 54.1% was of female students. The first source of knowledge was internet, 92.2% felt the situation is challenging. With lock down situation, only 20.4% were satisfied, whereas 28.3% were not satisfied while 25.5% were not sure and 80.8% lost their interest in online class lectures. For co-curricular activities, only 33.7% adapted some activity at home. The emotional status was disturbed, 38.5% were depressed and 70% had mood swings, 57.7% felt insecure with increase in anxiety, this resulted in some i.e. 32.2% loss of sleep and 43.1% felt burnt out.

Conclusion: There has been significant ongoing mental disturbance due to challenging situation caused by COVID-19 lockdown. The psychosocial consequences made an impact. The health officials need to emphasize on health and provide awareness on physical activities and its importance on the mental well-beings.

Key words: COVID-19, corona-virus, pandemic, lockdown, depression, anxiety.

Introduction

In the past two decades, two large-scale pandemics have been caused by corona viruses, namely, SARS (severe acute respiratory syndrome) and MERS (Middle East respiratory syndrome).¹ This massive corona virus COVID-19 outbreak which initially started in China in 2019 has spread around the globe with significant increase in cases and high number of deaths on daily basis. This pandemic is a public emergency putting the organizations and public on high alert.²

At present, there is no effective antiviral treatment or vaccine proven useful for COVID-19 infection. However, the spread can be limited by primary public precautions such as social

distancing, self-isolation, hand washing and by following basic hygienic measures.³ WHO has also encouraged a rapid response by Government

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Authors Contribution

SN & SS conceptualized the project. SN, SS, ON, RAS, SF, SR, SU, SF* & SM did the data collection. SS, RAS & SF also did the literature search. SN & FG performed the statistical analysis. Drafting, revision & writing of manuscript were done by SN, SS, & FG.

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bodies and public to stop the spread of COVID-19 pandemic through non-pharmacological methods and public health measures.⁴

Due to the outbreak of COVID-19, educational institutes around the world have been forced to shut down temporarily and pushed them to adapt a new method for teaching such as massive open online courses (MOOCs) and web-based lecture technologies as opposed to conventional classroom-based teaching.⁵ However the subject that is least highlighted is long-term impact on medical education, whereas a lot is expected from medical students, who are concerned about their role for serving the humanity and protection of the society from such catastrophe situations⁶ Therefore, this study has been designed using available validated questionnaires^{7,8} to see perception, activities and impact on undergraduate Medical students of Shalamar Medical and Dental College (SMDC) because of COVID-19 pandemic.

Methodology

An online cross-sectional survey was carried by group of undergraduate medical students of Shalamar Medical and Dental College, for a period of 2 months (15th June -14th August 2020). Based on 750 undergraduate medical students, the sample size of 255 was calculated using open source calculator "Open Epi," version 3, at 50% frequency of outcome factor with 95% confidence limit.

The designed and after pilot tested, Google form based questionnaire was circulated through Class representative's boys and girls of each academic year. The consent was part of the survey questionnaire, those who consented, completed the Google forms. After achieving the target number, the Google forms were transported into excel sheets and data was analyzed using SPSS version 22, response was recorded as percentage and frequency, for demographics, perception, education and impact.

For quantitative data variables like age, Mean and SD were calculated for total population as well as separately for gender. The qualitative data like perception, effect of lockdown was analyzed by Chi Square.

The ethical approval was taken from Institutional Review Board (IRB) of Shalamar Medical & Dental College, Lahore.

Results

The data of 255 students was analyzed, among them majority were females (54.1%), the

maximum respondents were undergraduates from year-4 (45.5%). Most of the respondents were 20–25 years of age (Table-1).

Table 1: Demographic characteristics of study participants.

		f	%
Gender	Male	117	45.9
	Female	138	54.1
Class	SMDC-Year-1	40	15.7
	SMDC-Year-2	27	10.6
	SMDC-Year-3	36	14.1
	SMDC-Year-4	116	45.5
	SMDC-Year-5	36	14.1
	<20 years	39	15.3
Age	21-25 years	214	83.9
	26-30 years	2	0.8

Exploring the perception, it was observed that internet was the first source of knowledge for 60.4% of respondents, 92.2% felt the situation is challenging for them and 57.7% were of the view, that lockdown is the solution to the pandemic situation, followed by 22.7% who thought social distancing is adequate to face the current situation. For safety, 75.7% respondents felt safe being at home and 69.4% had the proper quarantine facilities at home. Among respondents, 87.1% felt their social life has been changed whereas 85.5% were of the view that their style of study has also been changed. With lock down situation, 28.3% respondents were not satisfied, 18.0% were extremely unsatisfied and only 20.4% were satisfied (Table-2).

The 80.8% of respondents reported they have lost their interest in online class lectures, 50.2% felt the lockdown situation has decreased their efficiency. However 88.6% were of view online tests are effective but 67.8% thought this is not effective way of assessing the knowledge of medical students. For co-curricular activities, only 63.9% were interested before the lockdown and because of the situation to keep their interest, only 33.7% adapted some activity at home and 45.1% wanted to resume their activities after the lockdown (Table-3).

During the lockdown period, 96.1% of the respondents were living with their family members, the major activity during this period for them had been use of mobile/laptop etc, only 35.4% started helping in different house hold activities and 21.4% started reading books to gain knowledge.

Being at home, 49.8% felt increase in appetite. The financial resources to meet their minimum needs were available to 13.7% and 2% did not had enough to meet their needs. The respondents who often felt socially isolated were 51.4%, whereas 24.7% felt their isolation is

Table 2: Perception of study participants about COVID-19.

	f	%		
First source of knowledge about COVID-19				
Newspaper	6	2.4		
Television	58	22.7		
Internet	154	60.4		
Friends/relatives/colleagues	37	14.5		
Participants view about present situation as challenge				
Yes	235	92.2		
No	10	3.9		
Maybe	10	3.9		
Participants view about lockdown as the solution to present situation				
Yes, it is necessary	147	57.7		
Partial lockdown is enough	33	12.9		
Social distancing on a personal level is adequate	58	22.7		
No, this is not the solution	17	6.7		
Participants thinking that they are safe at home				
Yes	193	75.7		
No	21	8.2		
Somewhat	41	16.1		
Participants having proper quarantine facilities at home				
Yes	177	69.4		
No	13	5.1		
Somewhat	65	25.5		
Participants view about change in their Social life				
Yes	222	87.1		
No	33	12.9		
Participants view about change in style of their Studies				
Yes	218	85.5		
No	37	14.5		
Participants satisfaction with life before and after lockdown?	Before Lockdown	After Lockdown	Before Lockdown (%)	After Lockdown (%)
Extremely unsatisfied	10	46	3.9	18.0
Not satisfied	12	72	4.7	28.3
Not sure	65	65	25.5	25.5
Satisfied	95	52	37.3	20.4
Extremely satisfied	73	20	28.6	7.8

continuous. Only 69.4% were often in touch with friends, colleagues and relatives. The 50.6% respondents felt lockdown has developed distance between them. The frequency of shopping, either once a week or more was reduced by all respondents and most of them also decreased their habit of exercise, only 16.9% of the respondents started going for exercise for more than 5 times a week (Table-4).

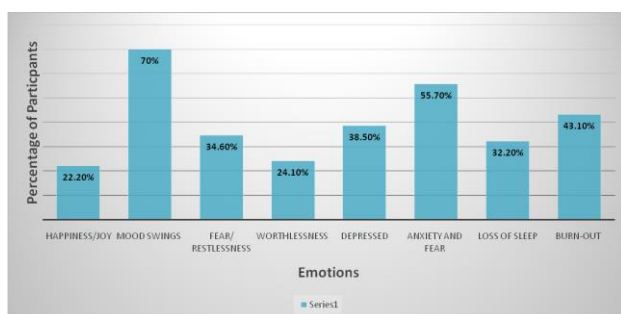


Figure: Emotional and psychological effect of lockdown on study participants.

For their emotional status during the lockdown period, only 22.2% of respondents were happy with lockdown, 38.5% were depressed and 70% had mood swings, 57.7% felt insecure with increase in anxiety, this resulted in some i.e. 32.2% loss of sleep and 43.1% felt burnt out (Figure).

Discussion

The novel corona virus, SARS-CoV-2, belonging to the viral family which couldn't be apprehended of such devastating impact in short span of time, it has led to a global public health emergency and forced the whole world at a standstill. WHO and Centre of Disease Control (CDC) has also called an immediate attention about this fatal emerging virus and encouraged the public to minimize the contact by limiting travelling and staying at home.^{2,9}

This unanticipated restriction caused massive disruption in the lives of tens of millions of people, especially who are bread winners for the family, patients and students. The medical schools and hospitals, have been affected immensely by this

sudden halt in everyday routine, both physically and mentally.⁶ With the increased burden of the disease and exposure of health care professionals to the virus, their burn out and fear of the disease has been also increased. In this desperate time, the infection, prevention and control practices have played a due role and have implemented numerous Standard Operating Procedures (SOPs). Nonetheless, the unpredictable behavior of the disease that is observed still has left people in havoc.

The current study carried in Shalamar Medical & Dental College to see perception, activities and impact on 255 undergraduate Medical students, the majority were female students (54.1%), in the age 20 -25 years. Similar study on 625 medical students was carried in Saudi Arabia with a response rate of 84.8%, majority 55.47% were female students.¹⁰ This could be females are more responsible or the trend of joining Medical School is more in females.

Table 3: Effect of lockdown on educational status of participants.

	f	%
Participants interest in online lectures		
Attention increased	11	4.3
No significant change	3	1.2
Attention decreased	206	80.8
Not sure	35	13.7
Effect on participants work efficiency		
Adversely affecting	128	50.2
Somewhat affecting	81	31.8
Same as before	25	9.8
Increased efficiency	21	8.2
Participants taking online quizzes and tests		
Yes	226	88.6
No	10	3.9
Somewhat	19	7.5
Participants view it is an effective way to evaluate knowledge		
Yes	38	14.9
No	173	67.8
Somewhat	44	17.3
Participants interested in co-curricular activities before lockdown		
Yes	163	63.9
No	44	17.3
Somewhat	48	18.8
Effect of lockdown on their co-curricular activity		
Affecting adversely	94	36.9
Activity will be resumed after lockdown	115	45.1
Not at all	46	18.0
Participants adapted any activity at home to continue their interest		
Yes	86	33.7
No	130	51.0
Somewhat	39	15.3

Exploring the perception, it was observed that internet was the first source of knowledge for 60.4% of respondents in the current study. A study carried in CMH-Lahore, also reported internet as

the primary source of knowledge in 53.1% medical students because of the immense usage⁷ In the current study, 92.2% of the participants felt the situation challenging for them but the high contagiousness was well understood by the medical students as it was reflected by their perspective, as majority (57.7%) held to the thought that complete lockdown is necessary to suppress the spread of the virus, they were of the view being at home is more safe (75.7%) with having proper quarantine facilities (69.4%) in case of emergency. A study in China also reported the risk perception in college students for COVID-19 infection was enhanced as they were more worrisome about the health of their parents and elderly relatives.¹¹ Another study revealed where directly people were inquired about their choice of staying at home, it was unearthed that most people regarded it safe to be at home during these difficult times.¹² However in present study, 87.1% of respondents felt their social life has been distorted and for 85.5%, style of study has been changed. With lock down situation, 46.3% respondents were unsatisfied and only 20.4% were satisfied.

The lockdown overall has impacted a very catastrophic effect on the study habits of students and their work proficiency, their creativity has been decreased because of disruption of a daily momentous routine. This study has shown 80.8% of respondents have lost their interest in studies, 50.2% students felt that their work efficiency is adversely affected. Another study conducted in Pakistan there where 56.1% female and 43.6% male medical students were concurred with the statement, "deterioration in work performance and studying subject contents."¹⁰ In this study, 88.6% were of the view that online tests are effective, however, 67.8% of the students attending online lectures protest that this is not an effective means to impart or grasp knowledge especially in medical science. Similar response was shown in Indian study where over 1016 Indian students from 30 different medical colleges revealed that 51.7% of the students do not want to continue online classes only 8% were comfortable with online classes whereas 36.4% of students supported for the regular conventional class method.¹³ Another survey among 382 medical students done by Abbasi S, regarding E-learning, reported 77% of the participants were at odds with E-learning.¹⁴ This could be because the system of education had been always interactive and it will take a long time to comprehend with this change.

Extra co-curricular activities for students are mostly relaxing to relieve the stress of studies. In current traumatic situation, this study has observed only 63.9% respondents were interested in co-

Table 4: Impact of lockdown on study participants.

	f	%		
Participants living with their family during lockdown.				
Yes	245	96.1		
No	10	3.9		
Activities opted by participants during lockdown				
Increased physical activities	54	21		
Use of mobile phone, laptop, etc.	201	81.3%		
Helping at house hold activities	91	35.4		
Reading books and gaining knowledge	55	21.4%		
Others	13	5.2		
Effect on participants eating habits.				
Appetite increased	127	49.8		
Appetite decreased	55	21.6		
No significant change	73	28.6		
Participants resources during the period of lockdown.				
Adequately	215	84.3		
To meet minimum needs	35	13.7		
Not at all	5	2.0		
Participants feeling for being socially isolated.				
Never	41	16.1 %		
Often	131	51.4 %		
Continuously	63	24.7 %		
Not sure	20	7.8 %		
Participants' in touch with their friends, colleagues and relatives				
Often	177	69.4		
Sometimes	48	18.8		
Very rarely	27	10.6		
Not at all	3	1.2		
Participants feeling about change in their relationships due to lockdown				
Adversely affected	56	21.9		
feel distant	129	50.6		
Not at all	70	27.5		
How often the participants did go for shopping weekly?	Before Lockdown	After Lockdown	Before Lockdown (%)	After Lockdown (%)
More than 5 times a week	21	2	8.2	0.8
2-4 times a week	72	18	28.3	7.1
Once a week	129	52	50.6	20.3
None	33	183	12.9	71.8
How many times participants did exercise weekly?				
More than 5 times a week	38	43	14.9	16.9
2-4 times a week	79	41	30.9	16.1
Once a week	43	35	16.9	13.7
None	95	136	37.3	53.3

curricular activities before the lockdown and to keep their interest, only 33.7% adapted some activity at home and 45.1% wanted to resume their activities after the lockdown. The family support is also a relief in difficult times. During the lockdown period, 96.1% of the respondents were living with their family members, the major activity for them during this period had been use of mobile/laptop etc. Moreover, 35.4% of participants of this study, started helping in different house hold activities and 21.4% started reading books to gain knowledge. A study conducted in Bangladesh revealed that only 30% of students were engaged in physical exercises at home during the lockdown.¹⁵ Whereas in this study most of respondents had decreased their habit of exercise, only 16.9% of the respondents started exercise for more than 5 times

a week. A data from a Chinese survey in late January, during the early period of the corona virus spread when the WHO declared a public health emergency; majority of the people (84.7%) were spending 20-24hrs daily at home.¹⁶ The same study also reported 16.5% of respondents had severe depressive symptoms and 28.8% had moderate to severe anxiety;¹⁶ A survey done in Spain also showed 27.5% symptoms of depression, 29.6% anxiety and 26.5% stress among the participants.¹⁷ This study has shown only 22.2% of respondents were happy with lockdown, 38.5% were depressed and 70% had mood swings, 57.7% felt insecure with increase in anxiety. This resulted in loss of sleep in 32.2% of respondent and increase in appetite in 49.8%. Sleeping disorders in 42.2% of respondents, sense of hunger and the consequent

change in eating habits in 48.6% of the respondents were reported in studies done in Italy, where positive relation between the severity of the stress and increased hunger was shown.^{18,19}

The current lock down has also reduced the frequency of shopping, this could be because of limited financial resources or the shops of their interest are either closed or do not have the stuff of their choice. This study has also shown, 76.1% of respondents felt they are socially isolated, 51.4%, often felt isolated, whereas 24.7% felt their isolation is continuous. The 50.6% respondents felt lockdown has developed distance between them and their relations, only 69.4% were in touch with friends, colleagues and relatives. Similar statistics was reported in US based study where 61.5% of the participants were feeling socially isolated much of the time.²⁰ It is important that public health officials should emphasize on health and provide awareness on physical activities and its importance on the mental well-being. The psychosocial consequences impacting nearly everyone including medical students should be addressed and a pliable approach should be made.²¹ This will facilitate in combating the pandemic with a clear mind and preventing mass hysteria and havoc.²² It is also important that all the member countries, in unison with WHO should strategically enhance the workforce reserve as a pre-emptive action for future global health emergencies.²³ It is also suggested that psychosocial interventions should be a part of National Pandemic Preparedness and incorporated in response plan and simulation drills for better management.

There has been significant ongoing mental disturbance due to challenging situation caused by COVID-19 lockdown. The psychosocial consequences made an impact. The health officials need to emphasize on health and provide awareness on physical activities and its importance on the mental well-being. In order to improve the curricular disturbance, the online education system should be made easier to understand and accessible to everyone, methods to grasp attention via online lectures should be explored.

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