JOURNAL OF COMPLEMENTARY MEDICINE RESEARCH, 2020
VOL 11, NO. 1
10.5455/jcmr.2020.11.01.21

REVIEW ARTICLE

Open Access

COVID-19 Lockdown: A Study on Behavioural Pattern - A Systematic Review in DELHI-NCR, India

Dr. Nitin Girdharwal[*]
Associate Professor-Research, KIET Group of Institutions, Delhi-NCR, Ghaziabad, India

Abstract

Objective: To test the Hypothesis that young people, when expelled from organized activities and restricted to their homes during the COVID-19 Pandemic will show negative patterns in way of life behaviours.

Methods: The example included 500 kids and teenagers with obesity taking an interest in a longitudinal observational examination situated in Delhi-NCR, India. Way of life data including diet, action, and rest practices was gathered at the pattern on two and a half months (75 Days) into the national lockdown during which home control was required. Changes in results over the 75 days time focuses were evaluated for significance using pared t-test.

Results: There were no progressions in reported vegetable intake; natural product consumption expanded (p=0.055) during the lockdown. On the other hand, potato chips, fried diet, and sweet beverage intake expanded altogether during the lockdown (p-esteem run, 0.005 to <0.001). Time spent in sports exercises diminished (X±SD) by 2.30±4.60 hours/week (p=0.003) and rest time expanded by 0.65±1.29 hours/day (p=0.003). Screen time expanded by 4.85±2.40 hours/day (p<0.001)

Conclusions: Recognizing these unfavorable guarantee impacts of the COVID-19 pandemic lockdown is critical. Contingent upon span, these untoward lockdown impacts may lastingly affect a kid's or juvenile's grown-up adiposity level and behaviour pattern

ARTICLE HISTORY

Received May 30 2020,
Accepted July 11, 2020
Published August 01, 2020

KEYWORDS

Lockdown, Children, Behaviour pattern, Food Intake, weight control

INTRODUCTION

COVID-19 is recognized as a major threat to health worldwide and is a threat to the global economy, which affects people's lives and their daily behaviour and causes anxiety, shock and often even more fear. In India, COVID-19 affects the behaviour of children between the ages of 04 and 18 years. [1] India has pursued a strategy to increase stability in children and adolescents suffering from the psychological effects of the COVID-19 pandemic [2]. Indian Pediatrician's recommended steps for parents and family members include fear and stress, overcoming their fears and concerns with children, playing interactive games to reduce loneliness, stimulating physical activity and reducing anxiety. In addition, parents should be aware of sleep disturbances and nightmares, avoid daytime sleep, and advocate sleep hygiene and relaxation strategies, demonstrate a positive approach to thinking, and divert attention from productive and positive directions. [3]. Table 1 address the children Leisure option during Covid 19.

[*]**Contact**: Nitin Girdharwal Associate Professor-Research,KIET Group of Institutions, Delhi-NCR,Ghaziabad, India
nitingirdharwal79@yahoo.com,**ORCID id:** https://orcid.org/0000-0002-1533-3591, (M) :9997123173

Table 1: Parents addressing children's Leisure option during COVID 19 Lockdown

		Ineffective				Very Effective
Option (%)	Not used	1	2	3	4	5
Media Leisure	18.77	0.97	5.83	11	37.86	25.57
Reading Leisure	19.09	3.56	12.3	17.48	28.8	18.77
Physical exercise	22.65	1.29	8.09	16.18	31.72	20.06

Source: Author Primary Data collection,

Boredom during COVID 19

To test whether there was a change in searches for Children's boredom; trends data for "boredom" was collected on May 15, 2020 and included the data from March 20, 2020through April24, 2020. Visually, the change in the rate of searching for "boredom" was obvious [4].

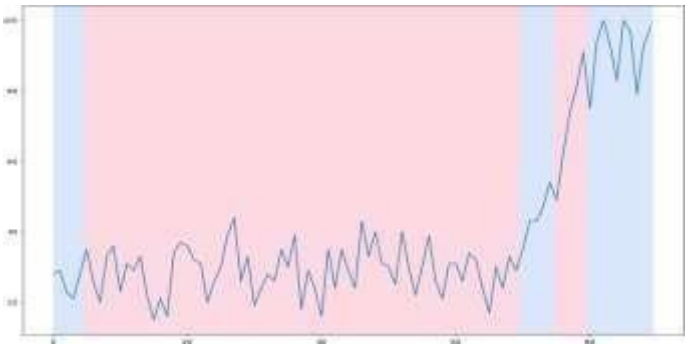


Figure 1: Change Point Analysis for Boredom

Table 2: TV Rating among different age bar

Variable Target/ Year	TV Rating			
4-14	6.19	9.27	3.08	50
15-24	4.95	6.27	1.32	27
24-35	6.9	6.86	-0.04	-1%
35-45	9.22	10.18	.96	10%
45-55	12.91	14.11	1.2	9%
55 +	17.39	18.88	1.4	9%
Working Male	10.53	11.35	0.82	8%
Working Female	9.42	10.52	1.1	12%
Student	5.12	8.02	2.9	57%
Housewife	17.29	18.57	1.28	7%

Source: Author Data, May 2020

Shifting Behaviour: COVID 19

The effect of COVID-19 is boundless & will probably shape business and purchaser conduct for quite a long time to come. And keeping in mind that the philanthropic and security related parts of this flare-up are top of brain internationally, it's obvious that social separating, isolating and remaining at home will significantly affect media utilization.[5]

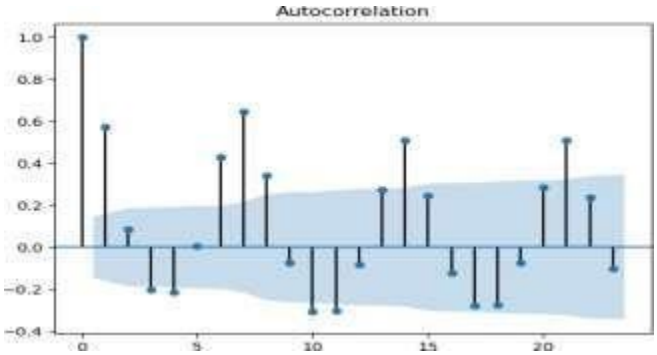
Web based life Becomes the COVID-19 Conversation Channel Social media, presently a piece of regular daily existence for most buyers drew in with the world carefully, turned into the essential hotspot for buzz pretty much all things COVID-19 as stresses and news increased[6]. The degree of internet based life buzz about COVID-19 far dominated most different subjects and crested in the initial fourteen days of increasing episode news in each market. To outline, web based life commitment in India crested toward the beginning of March and in total April. The pinnacles reflected declarations about nearby contaminations and neighborhood highly sensitive situations, separately. Table 2 explains the TV Rating across different age bar.

COVID-19 Lockdown: Shift in Social Media

1. Media time rises and apps assist in accordance with indoor living
2. Expanded TV Viewing.
3. Hangover of Social Media.
4. New App Choices Support Indoor Lifestyles

Function or Anxiety" During Lock Down

One of the first observations when looking at the trends data is an apparent seasonality to search trends related to stress, such as anxiety and depression. This seasonality appears to have a length of roughly 60 days, with peaks during the middle of the week and lows during the weekends. Trends data from March 24, 2020 through May 30, 2020 was used for the initial analysis.



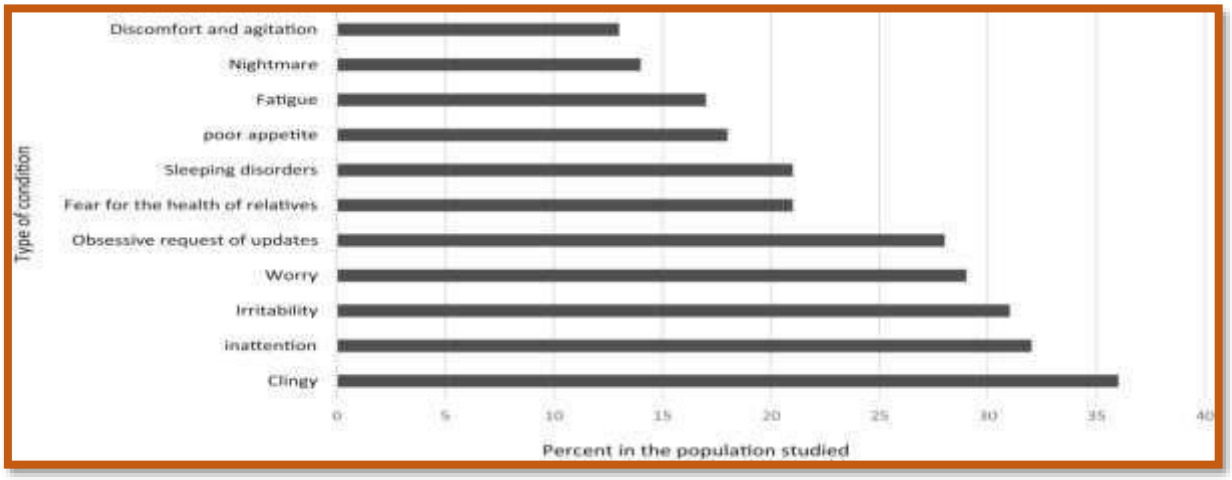
Source: WHO, May 2020

In a survey (Table 3) in Indian of more than 2000 people, most people said they had experienced heightened fear of becoming mentally unwell. The SARS epidemic was associated with increased risk of suicide among elderly women patients.[7]

Table 3

Sample %	Symptoms	Solutions
50 % 30% 20%	Family Members showed severe anxiety of the member showed some negative psychological effects, which include insomnia and depression Family members had psychological problems including Feeling of depression or stigmatization	**1**. Have a regular schedule **2.** Eat well & Planty of fluid **3.** Rediscovered old hobbies **4.** Tinkering is important **5.** An expended TV entertainment base can help relieve stress.

Psychological Disorders in Children during the COVID-19 Epidemic



Source: Author Primary Data, MAY 2020

Materials and Methods

Study Design

Members with weight (BMI> 25 kg / m2) were Enrolled as controls in the ongoing Study in Delhi-NCR, India where lifestyle Modifications were a goal of recovery and the meeting included telephone interviews from time to time. The test was recommended by the Institutional Review Medical Clinic and the invigilators gave the study Permission for the study visits to take place between 24 March 2020 and 30 May 2020.

During this time the children went to class (Jan. - March) or did after-school exercises that were held during the weekday mornings. Body weight, length,

and median and median border were estimated at pattern visits; BMI was determined by weight / height2. BMI z-scores and BMI% -tiles were registered.

In this pre-Lockdown screening study, general observation of the person is encountered and later telephone interviews in subsequent assessments were directed at parents and focused on the behaviour of their children. The lifestyle consists of 12 questions related to athletic support, screen time, relaxation, and dietary practices that focus on providing pasta, bites, organic products, and vegetables. The banquet was characterized as non-fluid planning sessions including breakfast, lunch & dinner. [8]

Statistical Method

The inclusion in the understanding of the members' attribute of the curtains is given as the mean deviation & standard deviation (SD) for consistent factors and recurrence values in all aspects. I used composite t-tests to assess the significance of changes from pre-lockdown (pattern, January – February 2020) to Lockdown (April-May 2020) to item response. Pearson's correlation test was directed to examine the relationship between diets, gesture, and sleep changes before behaviour. In addition, I experienced for comparative significance between boys and women and therefore used two independent t -tests.

Table 4: Base Line Characteristics Primary Data, May 2020

	Male (n=222)		Female (n=219)		Total (n=441)	
Features	**Mean ±SD**	**Range**	**Mean ±SD**	**Range**	**Mean ±SD**	**Range**
Age	14.0±2.0	(5.0, 19.0)	13.7±3.2	(5.0, 19.0)	12.0±3.1	(5.0, 19.0)
Height (cm)	171.4±16.8	(123.0, 193.0)	144.9±12.0	(123.0, 193.0)	168.4±15.6	(123.0, 193.0)
Weight (kg)	91.7±24.9	(40.0, 131.0)	71.2±15.7	(40.0, 99.5)	76.4±21.9	(40.0, 131.0)
Z-score	3.32±0.19	(1.71, 2.80)	2.11±0.31	(1.68, 2.80)	2.18±0.30	(1.68, 2.80)
BMI (kg/m2)	31.0±4.3	(23.1, 38.1)	28.7±3.8	(24.0, 39.9)	30.2±4.1	(23.1, 38.9)
WC (cm)	91.8±12.7	(71.0, 121.0)	86.4±9.8	(68.5, 110.0)	90.3±11.6	(68.5, 121.0)

Table 5 : Life style survey Evaluation, May 2020

Variable	Baseline	Lockdown	D	95% CI	t	p-value
Meals (#/day)	4.17±0.95	5.32±1.29	1.15±1.56	0.65/1.64	4.71	<0.001
Vegetable intake*	1.34±0.74	1.27±0.69	-0.07±0.60	-2.16666	-0.78	0.438
Fruit intake*	1.16±0.74	1.39±0.70	0.23±0.75	-0.0212766	1.98	0.055
Potato chips*	0.07±0.24	0.61±0.83	0.54±0.86	0.26/0.81	3.99	<0.001
Cold drinks (#/day)	0.40±0.90	0.90±1.16	0.50±1.08	0.16/0.84	2.97	0.005
TV (hrs/day)	2.76±1.64	7.61±2.13	4.85±2.40	4.10/5.61	12.9	<0.001
Nap (hrs/day)	8.46±0.85	9.11±1.10	0.65±1.29	0.24/1.05	3.22	0.003
Aerobic (hrs/week)	3.60±4.25	1.29±1.44	-2.30±4.60	4.423529412	-3.21	0.003

Source: Author Primary Data, May 2020,

RESULT AND DISCUSSION

500 guardians were reached and 441 were consented to be interviewed. The 441 individual included 222 guys and 219 females with a mean Measure time of 14.0±2.1 (territory, 6-18) years (**Table 4**). Standard BMI was near at around 31 kg/m2 in guys and females with mean z-scores between the 97th and 98th percentiles that reached out from the 94.4th to 99.6th percentiles. The participant included from Delhi, Noida, Gurugram and Meerut. The Result of

Lifestyle survey evaluations are presented in Table 5. The amount of suppers eaten each day extended by 1.15±1.56, a distinction that was noteworthy (p<0.001). There were no changes in vegetable intake and regular item utilization extended (minimal significance, p=0.055). Potato chips, singed things and sweet refreshment affirmations all extended on a very basic level (p=0.005-<0.001) during the lockdown in Delhi- NCR, India.

COVID 19: Lessons to Students

Amidst corona virus, the world — and the health care sector specifically — face an extraordinary territory of VUCA, the abbreviation for a Volatile, Uncertain, Complex, and Ambiguous situation. The health care community faces unprecedented how-to challenges, from how to quickly scale-up ailment testing to truly securing laborers with restricted assets to making physical and clinical limit with regards to mind of exceptionally infectious patients, just to give some examples. [9]This general wellbeing emergency requires health care organization (HCOs: e.g., Hospitals, critical consideration habitats, network wellbeing focuses, essential consideration rehearses, state and neighborhood general wellbeing divisions).

Three "C" of Behavioral change

Dr. Jenny radesky, pediatricians at the University of Michigan, suggest "three C" approach toward this issue.

Child: You know your child better than anyone else. So, focus accordingly on news, music or children channel which best motivate them.
Content: Quality matter than quantity. Instead of limiting screen time focus on live cameras to entertain and educate children.
Context: Talking an interest in what your kids are doing will help boost their self-esteem

Source: WHO Report, May 2020

SPIRITUALITY: Seeking Answer through Ramayana and Mahabharata

Spiritual shows are high on nostalgia, during lockdown, seeing as a coping mechanism. Research projected "watching shows like Ramayana &Mahabharata give me peace at the time of upheaval". The current situation has made me curious to know more. In fact how the show how you choose to see during the lockdown reflect your emotional quotient. [10]

A Progressive Plan for Reopening Educational Institutions:

	Survey Report (%)	Observation
University Readiness Survey in India	99	Increase access to hand sanitizers & Social Distancing
	96	Introduce alternative work arrangement: Odd & Even
	96	Communicate about preventing respiratory diseases
	86	Disinfect worksites & Aarogya Setu App compulsory
	71	Provide masks or other personal protective equipments
	65	Train Supervisor / Functional Head & design SOP.
	64	Increase access to Students counseling
	33	Evacuate Students & all resources Family History.

Source: Author Primary Data Collection, May 2020

ARTIFICIAL INTELLIGENCY: DATA ANALYSIS

Based on Artificial Intelligence (AI)-driven data analysis, the Singapore University of Technology and Design (SUTD) has predicted that the corona virus disease (COVID-19) crisis can soon end in specific countries, including India.[11]

According to the prediction by the Singapore-based University, COVID-19 may 97% ends in India by around Feb. 21. Keep in mind that this prediction a data-driven estimation of end dates (as of April 24, 2020). Report has said that India will be 100 per cent corona virus free by March, 2021

According to the university's website calculating the data-driven estimates, the SIR (susceptible-infected-recovered) model is regressed based on the data from different countries. The calculations show that COVID-19 will 100% end across the world on March 21.

CONCLUSION

Pediatricians working in Delhi-NCR, India have followed a strategy to increase child and adolescent morbidity associated with the psychological effects of the COVID-19 epidemic. Steps recommended by Indian medical practitioners to parents and family members, include increasing Contact with children to address their fears and anxieties, cooperative sports to alleviate loneliness, activities that promote physical fitness & music therapy.

India may have ICMR-Bharat Biotech COVID-19 vaccine Covaxin trial results by August 15, as per an ANI report. The central government has also given its nod for a clinical trial for corona virus COVID19 vaccine of Zydus Cadila in India. The Trail was started in AIIMS, New Delhi , India

ACKNOWLEDGEMENT

Dr. Nitin Girdharwal wishes to express gratitude to the Almighty and parents for their blessings.

CONFLICT OF INTEREST

The author declares that there is no conflict of interests regarding the publication of this manuscript.

REFERENCES

1. Ferguson, N.M., (2020) "Impact of non-mortality and healthcare demand," London: Imperial College COVID- 19 Response Team, DOI: 10.25561/77482.
2. Huang (2020), Corona virus (COVID-19): Latest Information and Advice.
3. Liu & Dai-Wen (2020). "Single-Virus Tracking: From Imaging Methodologies to Virological Applications", Chemical reviews.
4. Lee, Hyun & Michael E (2015)."Inhibitor recognition specificity of MERS-CoV Papain-like protease may differ from that of SARS-CoV", ACS chemical biology, 10, pp 1456-65
5. Pillaiyar, Jung, Sang-Hun (2016). "An Overview of Severe Acute Respiratory Syndrome--Corona virus(SARS-CoV) 3CL Protease Inhibitors: Peptidomimetics and Small Molecule Chemotherapy", Journal of medicinal chemistry,Vol. 59, PP 6595-662
6. Website of Ministry of Health and Family Welfare (MoHFW), Government of India (2020)
7. Franckle R, Adler R, Davison K. Accelerated weight gain among children during summer versus school year and related racial/ethnic disparities: A systematic review. Prev Chronic Dis 2014.
8. Effect of Covid 19 on obesity, Angelo & Lussa, 2020.
9. Cohen J.; Normile D., (2020). New SARS-like virus in China triggers alarm. J. Sci., 367(6475): 234-235 (2 Pages).
10. Corman V.M.; Drosten, C., (2020). Detection of 2019 novel corona virus (2019-nCoV) by real-time RTPCR, Euro Surveillance, 25(3): 1-8 (8 Pages).
11. Dhama, K.; Sharun, K.; Tiwari (2020). Corona virus disease 2019 – COVID-19. Preprints. 1- 61 (61 pages).