Prevalence and Pattern of Addictive Behaviors among Health Care Personnel During the COVID-19 Quarantine

Brijesh Saran[1*], Amoolya K. Seth[2], Anuradha Singh[3], Gautam Anand[4]

[1*]Assistant Professor
[2]Professor Psychiatry Dept. of Psychiatry Santosh Deemed to be University, Ghaziabad, NCR Delhi
[3]Professor Obstetrics and Gynaecology Lady Hardinge Medical college Delhi
[4]Professor Department of Psychiatry, Muzaffarnagar Medical College and Hospital

Corresponding Author: [1*]Brijesh Saran

ABSTRACT

Background: Internet addiction has significant effects on the mental health of several individuals, including health care workers. Objective: to examine the prevalence of Internet usage among health care professionals (HCPs) before, during, and after Lockdown. Institution for higher education and cross-sectional study. A total of 418 health care personnel from a tertiary teaching hospital in northern India were contacted online by an investigator in order to collect data on their internet addiction. Internet Addiction (IA) was found to be highest among those aged 20 to 30 (64.3%), the majority of participants were female 73.6%, the majority were married 65.4%, the majority had incomes between 50,000 and 1 lakh (42.6%), and the majority lived in metropolitan areas (97.8%). It was substantially associated with persons' income and age (P0.005).During lockdown times, the prevalence of mild to moderate addiction increased. Severe addiction only arose once the lockout was lifted. Conclusion: the prevalence of IA among HCPs is greater than that of the general population and increased during lockdown periods.

Keywords: Internet Addiction, COVID-19, Lockdown, Health care professionals

1. INTRODUCTION

Internet addiction (IA) is defined by excessive or poorly regulated computer and internet-related preoccupations, desires, or behaviours. Access that results in disability and anxiety [1].Young originally characterised the examples of Internet addiction (IA) in 1998, proposing a taxonomy of various internet-related addictive behaviours [2]. Several studies have attempted to quantify the frequency of Internet addiction in the general population, with estimates ranging from 1 to 14%, and it has been labelled as a new epidemic of the 21st century despite the lack of consensus over diagnostic criteria [3].The prevalence of internet addiction was determined to be 10.8% overall, with moderate and severe prevalence rates of 8% and 2.8%, respectively. According to studies, the prevalence of internet addiction varies between 1.5% and 25% among populations.[4] Despite the fact that Internet use is important to our daily lives. As folks have been confined to their houses for the duration of the lockdown, internet usage has surged dramatically. During lockdowns, when people were

unable to meet in person, the internet allowed them to conduct banking transactions from the comfort of their homes without having to purchase even a tiny commodity.

Internet has grown essential due to the rising adoption of electronic health records, telemedicine, and other online resources. component of contemporary medical treatment During the COVID19 pandemic, for instance, the use and expansion of telehealth services have increased the significance of telehealth in contemporary healthcare. [7]Using Young's Internet addiction test, the incidence of IA was determined to be 8% for mild severity and 2.8% for severe reliance in a 2011 Iranian research of 428 medical students. [2] A meta-analysis involving 3,651 medical students revealed a prevalence rate of 30.1% for internet addiction. [8]

In a cross-sectional survey of 597 medical and dental students from India, 2.3% of dental students and 1.2% of medical students were diagnosed with IA of extreme severity.[9]

In a study conducted on 90 first-year college students in South India in 2013 (Pre-Lockdown), the prevalence of IA was reported to be 18.8%.[10-12] However, there is a paucity of material examining the comparative usage of the Internet before, during, and after the COVID-19 lockdown, and essentially no Indian data comparing the use of the Internet by medical professionals during the lockdown. Therefore, it is necessary to conduct a study to determine usage patterns.

2. MATERIALS AND METHODS

This cross-sectional study assessed Internet addiction among male and female health care employees aged 20 to 60 years. The study was approved by the Institutional Ethics Committee and registered with the Clinical trial registry-India (CTRI). Before adding participants in the study, informed consent was obtained from them, and their identities were concealed throughout the duration of the study. The contact information of health care professionals (HCPs) was obtained via social media platforms such as WhatsApp and Gmail. The HCPs were contacted by means of an official whatsApp group for resident physicians and nursing professionals.

Procedure

The overview of the study was emailed to 300 Doctors and 300 Nurses in anticipation of receiving 210 samples from each group. The addition of a Google form with a Participant Information Sheet describing the goal of the study, as well as a permission form, socio-demographic information like age, gender, occupation, marital status, education, and family type was made. Once the individual agreed to participate in the study, they were asked to complete Young's Internet Addiction exam (IAT).

The Internet Addiction Test is a 20-item, 5-point Likert scale that measures the intensity of self-reported compulsive internet use. According to Young's criteria, a total IAT score between 20 and 39 indicates average users with complete control over their internet use, a score between 40 and 69 indicates overusers with frequent problems caused by their internet use, and a score between 70 and 100 indicates internet addicts with severe problems caused by their internet use. 11 It took between 10 and 15 minutes to complete this form. Participants were required to provide IAT responses before, during, and after the Lockdown time.

Participants who did not react to the initial email were sent a reminder email one week later, and those who did not respond were deemed uninterested in the study. Google sheets were used to collect data online.

Statistical Analysis

The data was analysed using version 26 of SPSS. For percentage computation, descriptive analysis was performed, followed by application of the Chi-square test. sociodemographic and clinical characteristics and the severity of internet addiction. The P value was considered significant at 0.05 and extremely significant at 0.001.

3. RESULTS

Initial Google form distribution to 620 participants yielded a response rate of 418 participants. Lastly, replies from 220 registered nurses . In the final analysis, physicians were included. The remaining 12 forms were deleted owing to insufficient data**.**

Table-1: Sociodemographic details of the participants in the study

Characteristics		
Age	20-30	64.4%
	31-40	14.8%
	41-50	12.6%
	51-60	5.3%
	>60	3.4%
Gender	Males	26.5%
	Females	71.5%
Marital status	Married	66.3%
	Unmarried	35.8%
Family type	Nuclear	82%%
	Joint	11.3%
	Extended	6.8%
Income	Upto 50,000	34.8%
	50,000-1 lakh	43.8%
	More than 1 lakh	22.5%
Occupation	Nurses	50%(n=200)
	Doctors	50%(n=200)
Residence	Urban	97.8%
	Rural	2.3%

According to Table 1, the majority of participants were between the ages of 20 and 30. Our study participants were predominantly female 71.5%, and 97.8% belonged to an urban background.

Table-2: Internet addiction scores during three time periods

Severity	Participants	Pre lockdown	Lockdown	Post lockdown
Normal	Nurses	26.12%	21.42%	26.82%
	Doctors	27.15%	21.82%	27.35%

Mild	Nurses	17.85%	16.26%	14.1%
	Doctors	16.35%	17.42%	13.36%
Moderate	Nurses	9%	12.26%	6.82%
	Doctors	8.5%	11.72%	8.26%
Severe	Nurses	0.8	1.2	3.27%
	Doctors	0.9	0.3	5.32%

In table 2 are the normal internet addiction scores for three time periods: before lockdown, during lockdown, and after lockdown.

During the pre-lockdown period, doctors and nurses utilised the Internet similarly within normal parameters. During the lockdown, the number of participants within the normal range decreased from 26% to 21.5%, and from 27.15 to 21.75 for nurses and doctors, respectively. During the lockout period, the prevalence of mild scores increased from 16.75% to 17.25% among nurses and from 16.5% to 16.5% among doctors. During the lockout period, moderate Internet addiction increased significantly from 7% to 11.25 % among nurses and from 6.5% to 11.72% among physicians. During the post-lockdown period, the prevalence of moderate scores declined in both doctors and nurses. During the pre-lockdown and lockdown periods, there were no participants with significant levels of internet addiction. During the post-lockdown period, it was stated that up to 1.2 percent of nurses and doctors suffered from acute internet addiction.

Table 3 displays a substantial association between income and age and the intensity of addiction throughout the lockdown period, as well as a very significant correlation between income and age and internet addiction before and after the lockdown.

4. DISCUSSION

The epidemic of COVID-19 and subsequent lockdowns impacted the entire town. Internet was an important source of communication and information retrieval during this time period. Additionally, health care providers utilised this site for information sharing and other objectives. This is the first Indian study to evaluate the index internet addiction in health care professionals during three time periods; before lock down, during lockdown and after lockdown.

Table-3: Correlation of various sociodemographic parameters with internet addiction scores during pre-lockdown, lockdown and post lockdown using Chi Square

Before lock-down (p value)		Lockdown	Post lockdown
Income	0.001	0.002	0.002
Age	0.002	0.002	0.002
Gender	0.733	0.04	0.054
Occupation	0.912	0.941	0.982

Our study mostly included people between the ages of 20 and 30. This may be attributable to the increased awareness of internet and social media usage among younger population. The literature indicates that internet use is more widespread in the 18- to 24-year-old age range, and our study confirms this. [12] IA was related with age between 18 and 25 in

a study involving 49 physicians, 198 nurses, 123 medical assistants, 73 other health care employees, and 42 health care workers. 13 Moreover, the majority of research on internet addiction focuses only on adolescents. [7-9]

The index research sample consisted primarily of females (72,3%), urban residents (97.8%), and members of nuclear families (81%) Since the study was conducted at a city hospital with tertiary care, this could be attributed to the urban population and nuclear family structure.

During the lockdown period, the prevalence of moderate to severe Internet addiction increased.[10-12] In another study conducted. During the COVID-19 pandemic, internet addiction rose. This may be because to the decreased motility and higher work-related stress experienced by individuals during COVID, causing them to rely on the Internet more. However, the scores declined significantly following the lockdown period.

This result is unique to our research. The increased, stressful, and longer work hours, as well as the separation from family during COVID-19 postings, may have prompted health care professionals to use the Internet as a form of relief, as it was most readily available during the lockdown period and other recreational activities were closed. The ratings declined following the end of the lockdown, which could be attributed to the desire to return to normal life. Only following the conclusion of the lockdown were scores in the severe range recorded. As we have observed, this could be related to the ever-increasing internet usage during the lockdown period.[14-16] Even though the lockout was released, approximately 9% of participants in both groups continued to utilise it during the period following the lockdown. As a result, people are still restricted to Internet use as a means of relaxation.

The index study's strengths include a sufficient sample size, age stratification of participants, and online data gathering. Nevertheless have few limitations like the study did not measure psychiatric comorbidities, such as depression, anxiety, sleep difficulties, and substance use, which are frequently reported in individuals with addiction disorders. Nonetheless, this is the first Indian study to assess the prevalence of Internet use among HCPs before, during, and after a lockdown.

5. CONCLUSION

Internet addiction is currently developing as a significant public health issue. Internet dependency was discovered to be on the rise during the pandemic (lockdown period)

In this index research In addition, a small number of participants remained severely addicted to the internet after the lockdown. Since health care professionals are responsible for the health of others, it is essential that rules be developed to protect their mental health as well. The decline in levels of addiction in the post-lockdown period indicates that confinement during the COVID period contributed to these rising tendencies, necessitating the development of policies during the Lockdown time to address the issue in the future.

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