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# Impact of COVID-19 lockdown on the social media usage among different age groups in Hyderabad, India: A questionnaire-based community Study

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## ABSTRACT

The emergence and rapid spread of SARS-CoV-2 across the globe has caused a state of panic and chaos. Self-quarantine and lockdowns have been implemented in many countries leaving the public homebound. On one hand social media being a prime source of information, it could have a substantial contribution in causing unnecessary apprehension and fear in the public due to the speculations and misinformation, while on the other hand the unexpected event of lockdown resulted in a spurt of social media usage. The adverse effect of social media on psychological well-being, academic performance, socializing skills, interpersonal relationship and parenting were recorded by a number of studies in the past. It is imperative to be mindful of the content being watched and the time spent on social media. The study aims to understand the variation in social media usage in different age groups in the people of Hyderabad, India due to the COVID-19 pandemic. The survey was conducted through a questionnaire that was created using Google forms. The study shows that the social media usage has significantly increased in the people of Hyderabad, India during the COVID-19 lockdown. The data shows a correlation between the age groups and variation in social media usage. The increased social media usage is more in the younger age groups below 25 years. The study proves no impact of social media usage on productivity during the quarantine

**Keywords:** Social media, COVID-19, Productivity, Lockdown, Quarantine

## 1 INTRODUCTION

COVID-19, disease caused by novel coronavirus (SARS-CoV-2), has been rapidly increasing in the numbers since it is first reported on 31<sup>st</sup> December in Wuhan China. COVID 19 has been declared a pandemic by World Health organisation, on 11 March 2020. As a result of which self-quarantine and lockdown orders have been passed across several countries including India, leaving people in-doors. With ample time to spare, social media has become the new stomping ground for the locked down people. Social media is a highly preferred portal that allows people to share content quickly, efficiently and in real time. This has led to the increased access to information from various sources which may not always be accurate. The fleet of smart phones and gadgets has made social media a booming market. It neither requires introduction to a teenager nor to an elderly person. Social media seamlessly became a part of

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everyone's life so much so that it began to affect many aspects of peoples' lives. There are instances of extreme uses of social media leading to abuse and addiction. In the present scenario of COVID-19 pandemic, an uncertain pause is put on everyone's life and has locked us all indoors. This has opened up ample free time on people's hands leading to spending more time on social media. While some may use this for forming social networks, some others did that for seeking more news on COVID-19 and related information which tend to increase the anxiety and fear of COVID-19 and its consequences. The current situation of pandemic, resultant restrictions on peoples' movements and subsequent increase in use of social media may have probable consequences on their mental and social health. With this back ground, we propose to understand the impact of the COVID-19 lockdown in the social media usage. Aspects like the effect on different age groups and its impact on productivity are to be studied

## 2 RESEARCH METHODOLOGY

Once the survey questionnaire was created using Google forms, the link was mindfully shared to people of different ages, occupations and educational backgrounds from Hyderabad, India, with the help of volunteers and the people who took the survey were encouraged to make the people they were quarantining with take the survey. The survey was shared through email, WhatsApp, short message service (sms), Facebook and other social networking platforms as a strict curfew was in order throughout the city. The link opened up to the details and purpose of the study, followed by the consent. The questionnaire contained four sections, which included general questions, hygiene and health consciousness, social media impact and Psychiatric assessment. The identification details were omitted or kept optional to create a sense of anonymity and security in the subject. The responses were recorded for 48 hours following which the link was inactivated on 30th April, 2020. Before analysing the data, the duplicated submissions were excluded ( $n = 34$ ). The responses received from 1208 subjects aged between 10 and 85 years (Mean age = 26.8 years, standard deviation = 11.76) were included in the study. The data from the health and hygiene section and some general questions were used in this analysis. The Microsoft Excel and the IBM statistics software SPSS were used to analyse the data.

## 3 RESULTS

The study included 1208 subjects, 653 (54.05%) were female, 542 (44.86%) were male and 13 (1.07%) were transgender or queer (as specified by the subjects after choosing the others option). The age groups wise distribution of the subjects is represented in Table 1

<b>Age groups</b>	<b>Number of subjects (with percentage)</b>
10-17 years	39(3.22%)
18-25 years	840(69.53%)
26-40 years	159(13.16%)
41-55 years	131(10.84%)
56-85 years	39(.22%)

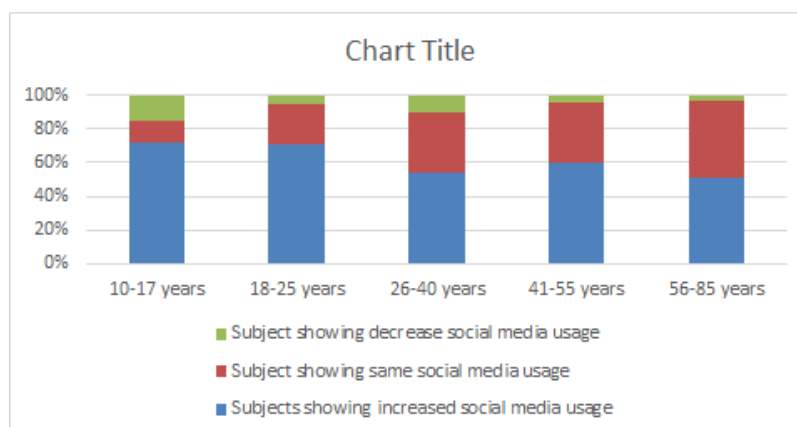
### 3.1 Variation in Social Media Usage in All Subjects

When the subjects were questioned in regards to variation or change in the time spent on social media, 72 subjects answered that it was decreased, 330 of the subjects answered that it was the same and 806 subjects answered that it was increased, which is 5.9%, 27.3% and 66.72% respectively. The data for variation in social media usage in all subjects is summarised in Table 2.

How did your social media (whatsapp, facebook, instagram, snapchat, etc) usage change?	No. of subjects	Percentage of subjects
Increased	806	66.72%
Same	330	27.3%
Decreased	72	5.9%

When the variation in the social media usage in different age groups was studied, the data summarized in Table 3 was obtained Variation in social media usage in different age groups is represented in Figure 1

Age groups	Subjects showing increased social media usage (with percentage corresponding to the age group)	Subject showing same social media usage (with percentage corresponding to the age group)	Subject showing decrease social media usage (with percentage corresponding to the age group)
10-17 years	28 (71.7%)	5 (12%)	6 (15%)
18-25 years	594 (70.7%)	201 (3.9%)	45 (5.3%)
26-40 years	86 (54%)	57 (35.8%)	16 (10.2%)
41-55 years	78 (59.5%)	48 (36.6%)	5 (3.9%)
56-85 years	20 (51.28%)	18 (46.1%)	1 (2.56%)

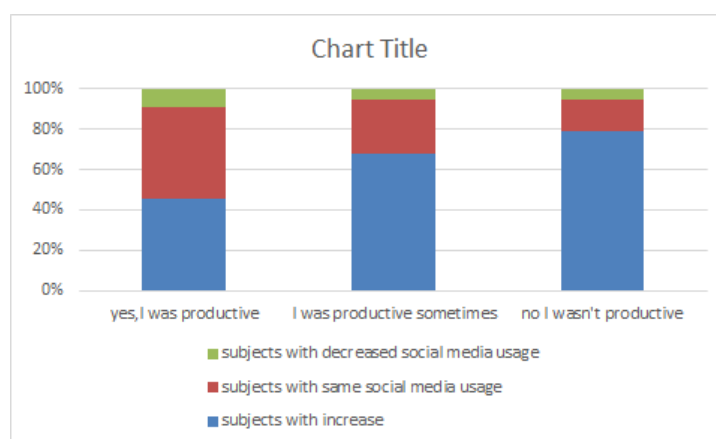


**Figure 1:** Variation in social media usage in different age groups

### 3.2 Correlation between the Variation in the Social Media usage and Productivity Levels

The subjects when questioned about productivity, 236 answered that they were productive all the time, 640 answered that they were productive at times and 332 answered that they were not productive which is 19.53%, 53.8% and 27.48% respectively. A correlation between the variation in the social media usage and productivity levels is done using somer-d test and is represented in Table 4 & 5. The variations in social media usage for different productivity levels is represented in Figure 2.

<b>Table 4:</b> Correlation between the variation in the social media usage and productivity levels						
Directional Measures						
		Value		Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Ordinal by Ordinal	Somers' d	Symmetric	0.205	0.026	7.737	0.000
Has your social media (whatsapp, facebook, instagram, snapchat, etc) usage/ screen time increased? 1-d Dependent			0.183	0.023	7.737	0.000
Do you think you are using your time productively? Dependent			0.233	0.030	7.737	0.000
<p>a. Not assuming the null hypothesis.</p> <p>b. Using the asymptomatic standard error assuming the null hypothesis.</p>						



**Figure 2:** Variation in the social media usage in relation to productivity levels

## 4 DISCUSSION

Social media usage was found to have an overall upsurge (Table 2). A study has found that in an always connected communication environment, users of social networking services (SNSs) need to pay continuous attention to the overwhelming volume of social demands from SNSs. These increased energy requirements may cause SNS fatigue, which can lead to physical and psychological strain [1] and this is

very possible due to the limitation of content creation opportunities. Study findings suggest that compulsive media use significantly triggered social media fatigue, which later resulted in elevated anxiety and depression. Fear of missing out indirectly predicted social media fatigue through mediation of compulsive social media use [2]. The percentage of increase in social media usage gradually decreased as the mean age of the age groups increased but still pronounced (Table 3). The increased social media usage in students might have a detrimental effect. It was reported in a study that students use short forms of words mixed with numbers when writing notes, answering questions in class and when they are having their own conversation. This usage of short forms of words also impacts negatively on students' academic performance [3].

It was found through a study that the number of hours a parent uses their device may increase the likelihood that they would use physical punishment, threats, or other negative consequences as a disciplinary technique, as opposed to discussing behaviour with their children or respecting their autonomy [4]. This might bring about changes in the household environment. A study reported that students construct their own patterns of social media usage to meet their changing needs in their environment [5]. Fear of missing out indirectly predicted social media fatigue through mediation of compulsive social media use [6]. But the correlation between the variation in social media usage and productivity in the general population was found to be insignificant during quarantine (Tables 4).

## 5 CONCLUSIONS

It is a pilot study to understand the prevalence of increased social media usage during a quarantine. It can help understand the implications of it. The study shows that the overall increase in social media usage by during the COVID-19 lock down is significant. This might be deleterious to the mental well-being, mood, relations, personality and productivity of people. A study on the psychological impact of social media during the quarantine is required to understand the effect of misinformation and the apprehensiveness caused by it. The increase in social media usage is more among people below 25 years (teenagers and young adults) compared to the older population. The increase in social media usage over a period of time may affect personality development and deteriorate academic performance. A follow-up study is required to learn the type of content adolescents and young adults are being exposed to, as it has shown to have a strong impact on them. The productivity doesn't have an appreciable variation due to social media usage during quarantine. The transition from this COVID-19 crisis back to normality is going to be a challenging path. It would be very useful to estimate and analyse these issues and the consequent ones that would arise so as to be prepared to tackle them

## DECLARATIONS

## STUDY LIMITATIONS

The study has certain limitation. The survey was taken only by those with access to internet and understood English. There is no information relating to the type of social media used, the type of content available and the time spent by each respondent.

## ACKNOWLEDGEMENTS

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None

## COMPETING INTERESTS

The author declared that no conflict of interest exists in this publication.

## INFORMED CONSENT

Informed consent was taken from each respondent.

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**SUPPLEMENTARY DATA****QUESTIONNAIRE**

(Only the questions used for this manuscript)

Consent:

I have read and understood the details, purpose of the study and how the information will be used. I, hereby, consent to be a part of this survey

- a. Accept
  - b. Decline
- 
- 1) E-mail address (optional)
  - 2) Gender
    - a. Male
    - b. Female
    - c. Others, \_\_\_\_\_
  - 3) Age group in years
    - a. 10-17
    - b. 18-25
    - c. 26-40
    - d. 41-55
    - e. 56-70
  - 4) Occupation
    - a. Students (up to 12th grade/intermediate)
    - b. Undergraduate student
    - c. Postgraduate student
    - d. Health care workers (including interns)
    - e. Emergency workers/ Essential service providers
    - f. IT professionals
    - g. Government employees
    - h. Private employees
    - i. Housewives
    - j. Unemployed
    - k. Retired

- 5) Where are you living during the quarantine/ lockdown?
- Home
  - Others, \_\_\_\_\_
- 6) During this period, you are living in a \_\_\_\_\_?
- Village
  - Town
  - City
- 7) How did your social media (whatsapp, facebook, instagram, snapchat, etc) usage change?
- Increased
  - It's the same
  - Decreased
- 8) Do you think you are using your time productively?
- Yes
  - At times
  - No
- 9) What do you think of the information about COVID-19? (Media coverage on Television, radio and social media)
- Too much information
  - Adequate and necessary
  - Not enough information
- 10) How does the information affect you?
- Makes me feel safer
  - Is increasing fear