Online Journal of Health and Allied Sciences
Peer Reviewed, Open Access, Free Online Journal
Published Quarterly : Mangalore, South India : ISSN 0972-5997
Volume 19, Issue 4; Oct-Dec 2020

Original Article:

The Effects of Social Media Consumption Among the Internet Users During COVID-19 Lockdown in India: Results from an Online Survey

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Citation
Mustafa A, Alam MS, Shekhar C. The Effects of Social Media Consumption Among the Internet Users During COVID-19 Lockdown in India: Results from an Online Survey. *Online J Health Allied Scs.* 2020;19(4):6. Available at
URL: https://www.ojhas.org/issue76/2020-4-6.html

Submitted: Sep 18, 2020; Accepted: Feb 25, 2021; Published: Mar 25, 2021

Abstract: In previous studies it has been found that spending too much time on social media can have negative effects on social and mental wellbeing of the users. Average time spent on social media increased drastically during covid-19 lockdown in India. The present study thus aims to analyze the direct and indirect effects of extensive social media and social networking services' usage during the lockdown in India. A nationwide online survey was conducted through a 'Google Forms' questionnaire between 30th June 2020 to 27th July 2020. A total of 818 respondents took part in the study. 'Social media effect index' was constructed using exploratory factor analysis. Ordinal logistic regression was employed to analyze the effect of social media consumption on social and mental wellbeing of respondents. The average time spent on social networking sites in a day increased from 3.08 hours to 5.17 hours.75% people reported an increased time spent on social media and other services during the lockdown. 60% had reported procrastinating due to extensive SNS usage and had also experienced irregularities in sleep pattern. Respondents from age group '21 – 30' (OR: 0.22, 95% CI: 0.08 - 0.62) were 78% less likely of having a higher index value compared to '>30 years' age group. During the lockdown there has been a significant increase in social media consumption. The study finds mixed effects of social media consumption during lockdown on users however younger participants reported a negative effect of the consumption on their social and mental well being.
Key Words: Social Media, Social Networking, Covid-19, Online Survey, Mental Well-Being

Introduction:
In the past decade, online social networking services have gained an enormous amount of popularity across the globe. People generally use social media for self-presentation and impression building [1], as well as building social capital [2] and for making and maintaining connections with friends and relatives [3]. There are large number of studies showing that social media use impacts positively on subjective well-being of users both directly and indirectly, such as lessened stress level, decreased depression level, enhanced social support and increased social satisfaction [4-10]. In spite of numerous advantages, empirical evidence show that an excessive use of social media might have negative effects on social, behavioral and physiological aspects of the user's life [11,12]. A psychological study conducted in 2010 found that online information has capability of restructuring the user's brain, making them less focused and decreasing motivation [13]. Some of the research studies even claimed that excessive use of social networking sites may lead to symptoms of substance-related addictions [14,15]. Conclusively, on the basis of past research we can say that an excessive use of social media, which is also referred to as problematic social media use (PSMU), can negatively affect the daily life of the users.

The emergence and spread of covid-19 created conditions of public health emergencies across the world. On 30th January 2020 the World Health Organisation (WHO) declared covid-19 a global emergency and by 11th March, WHO declared it as a pandemic. By the end of March 2020, around half of the world's population went into lockdown to prevent the spread of the virus [16]. India too imposed a nationwide lockdown on 24th March 2020, putting a restriction on 1.3 billion people of the country [17]. The nationwide five-phase lockdown was preceded by a voluntary curfew branded as "Janta Curfew" on 22 March 2020. The nationwide lockdown was observed in five waves till 8th of June 2020, where a 76 days long disruption in the everyday lives of 1.3 billion citizens had taken place. Such sudden chaos might lead to several changes in the daily routine and habits. In order to cope up with the ocean of time available at hand people resorted to different kinds of activities the most common one being the use of the internet and social networking sites. According to the government's telecom department the usage for the week following" Janta Curfew" was around 308 petabytes which was 9% more than what was consumed the day before the curfew and 13% more than that consumed two days' prior, the Cellular Operators Association of India (COAI) also

confirmed around the third week of March, that the operators had recorded a 30% jump in traffic [18]. A survey conducted on the impact of the coronavirus (COVID-19) pandemic on media usage across India found that average time spent on social media drastically increased with implementation of the lockdown, the data showed that before lockdown time spent on social networking sites was 3.13 hours which increased to 4.34 hours in the first week of lockdown [19].

After the imposition of the lockdown, the whole nation came to a standstill as there was no commerce, supply chains were disrupted, schools were closed down to prevent large scale spread, people started working from home and industries had to work with minimum required staff or support in regular intervals all while maintaining social distancing norms. While the economic sector and social activities came to a stand still, some people deferred to the only choice at hand, i.e. the only place they could socialize while following lockdown protocols and maintaining social distance, the internet or more specifically the social network services. The social networking sites (SNS) saw a huge spike in demand as well as consumption and companies like Zoom, Netflix and Amazon Prime reported massive surge in user base (also known as the covid boom). Being confined within four walls led to the digitization of learning, teaching, honing skills and showcasing them [20]. Thereafter, comes the aspect of problematic social media use which refers to leading a less productive life, procrastinating and degradation in quality of life in terms of overall health.

The present study thus aims to analyze the relative consumption behaviour of social network services according to several demographic factors and the toll it costs in terms of subjective personal, psychological and social degradation. We also tried to assess the utility of social media as a medium to connect, socialize and learn versus a medium which propagates isolation, procrastination and depression.

Materials and Methods

Study Design

An online survey was conducted on various social networking sites like Facebook, LinkedIn alongside several mobile messaging application platforms such as WhatsApp, Telegram and Instagram. The proposed cross sectional data was collected between 30th June 2020 and 27th July 2020, via a questionnaire made on Google Forms. All of the people who had access to the questionnaire were eligible to participate in the survey. To avoid multiple responses from a single respondent, one survey per IP address was allowed, though to maintain anonymity of the respondent IP addresses were not stored. No incentives of any kind were offered to the participants of the survey. The respondents were informed that the information and results of the questionnaire would be used to conduct statistical analysis and scientific publication.

For pre-testing, the questionnaire was first sent to six researchers/experts for pilot survey. Suggestions and recommendations were collected from the experts/researchers and the questionnaire was finalized after slight modifications. None of the researchers/experts complained about the format of the questionnaire and the completion time of the questionnaire was reported to be 5-10 minutes with a total of 18 questions. Once the respondents started filling out the questionnaire, they had to answer all the subsequent questions. In the time period of four weeks a total of 818 people responded to the survey. We eliminated 8 participants who had reported equal to or more than 20 hours of social networking services' usage; though we didn't find any literature supporting our exclusion criteria, we formulated the range to prevent outliers skewing our data and also on the basis of the human body's feasibility. The final sample considered for our study was of 810 respondents.

The Questionnaire

The questionnaire draft assessed the following four sections:

1. The introduction section provided the basic information pertaining to the objectives of the study and stated the terms and conditions to participate in the study. No incentive for responding and respondents' anonymity was clearly mentioned in this section. The section didn't involve any response except for accepting to participate or not. Respondents were directed to the next section if they agreed to participate.
2. In the demographic section data on age, sex, current marital status and current profession were collected.
3. Under the social media consumption section, questions asked were time spent before and during lockdown on SNS and other similar platforms, most frequent services used and reasons for using those services.
4. Final section was drafted to evaluate the effects of social media on the respondent. We had questions assessing general increase in procrastination, sleep deprivation, whether or not the usage resulted in an inclusion within the virtual society or exclusion from it.

Though everyone was eligible to participate in our survey yet the method utilized for collecting data in this study inherently introduced selection bias as the use and distribution of electronic items and services incur a charge which may skew towards an economically affluent and younger age group which have more access to such technologies, thus resulting in marginalization of socio-demographic groups with low income and lacking online skills or those without the access to the internet.

Construction of the Index (Social Media Repercussion Index)

To present the results in a more lucid and precise manner we created an index by performing 'Exploratory Factor Analysis' on seven questions asked in the survey pertaining to the perception and behavior of the user regarding social media usage. Theses variables are:

Q.No.	Question
Q11	How do you usually feel/ would feel after extensively using social media?
Q12	Do you think social media affects negatively on your life?
Q13	Do you feel like quitting social media?
Q14	Do you feel you could have spent a portion of the time in being more productive?
Q15	Do you usually delay your routine work due to social media?
Q16	Did social media really connected or disconnected you from your family and friends?
Q17	Is social media usually the cause of your sleep deprivation?

All the seven questions were on numerical scale and having three options. The options were labelled a value according to their tone e.g.:

- Feel Bad : -1
- No Feeling : 0
- Feel Good : 1

Exploratory Factor Analysis (EFA) can be used to uncover the underlying structure of a large set of variables. The technique is commonly used by researchers to develop a scale or an index and serves a set of latent variables underlying a battery of measured variables. We consider the model of exploratory factor analysis in the form:

$\mathbf{\Sigma = \Lambda\Lambda' + \Psi}$,

where $\mathbf{\Sigma}$ is the $\boldsymbol{p \times p}$ covariance matrix of observed variables, $\mathbf{\Lambda}$ is a $\boldsymbol{p \times m}$ matrix of factor loadings, and $\mathbf{\Psi}$ is a diagonal matrix of error variances with $\mathbf{\Psi ii >= 0}$ $\boldsymbol{(i = 1,\ldots, p)}$.

To check the internal consistency between the variables, Cronbach's alpha was calculated, which came out to be 0.709,

showing a strong internal consistency between the variables. 'Factor1' was having the highest eigen value (0.73) and was explaining the maximum variability between the selected variables (See Fig-1). So the factor scores of 'Factor1' were store for the index creation. To construct the index factor scores of the 'Factor1' were divided into five categories based on quintiles. The newly created index can be explained as:

Value	Effect
1	Extremely Negative
2	Negative
3	Neutral
4	positive
5	Extremely positive

So the newly created index can be interpreted as: value '1' is showing extremely negative impact, '5' is showing Extremely positive impact and '3' is showing neutral impact of social media consumption on the users.

Statistical Analysis

The data was analyzed using Stata 16SE. Various statistical analyses were performed to analyze the data. We performed Chi-square analysis to determine the degree of association between demographic characteristics and perception and behavior regarding social media use. Wilcoxon sign rank test was used to test the significant difference between time spent on social media before and during the lockdown. Finally, to analyze the self-rated utility score t-test and one-way ANOVA were used.

Odds of reporting positive effect (higher index value) of social media consumption with respect to background characteristics were examined using Ordinal logistic regression with reporting of Odds ratio and 95% confidence interval. Univariate model (Model-1) was used to provide unadjusted odds ratios and then a full multivariate ordinal logistic regression model (Model-2) to provide the adjusted odds ratios to determine the independent relationship between the 'social media effect index' and all the background variables. The proportional odds assumption for ordinal regression was checked for both the models using Brant's test which showed that none of the model violated the assumption.

Results

Out of the 810 respondents in the final sample, 408 (50.37%) were male, 554 (68.89%) from the age group 21-30 years, 676 (83.46%) were students and 628 (77.53%) were Single/Never married (Table-1).

Table 1: Percentage distribution of respondents according to demographic characteristics

Characteristic	Frequency (n)	%
Age		
10-20'	196	24.69
21 - 30	554	68.89
>30	52	6.42
Gender		
Male	408	50.37
Female	402	49.63
Profession		
Student	676	83.46
Unemployed	58	7.16
Employed	76	9.38
Marital Status		
Single/Never Married	628	77.53
Currently Married	54	6.67
In a relationship (Unmarried)	128	15.8

Perception and Behaviour

The perception and behavior of the respondents are shown in the Table-2. From the Table it can be seen that majority of the study participants (74.57%) reported that their time spent on SNS has increased during the lockdown, 33.58% reported that they feel bad after using social media extensively, 60.49% of the respondents feel that sometimes or strongly feel that they should quit social media, 58.77% of the participants think that they could have spent their time productively instead of using social media, 60.99% of the respondents reported that they usually or sometime delay their routine work due to social media, 13.09% of the respondents think that social media disconnected him/her from family and friends, and 62.46% of the participants reported that social media was either usually or sometimes the cause of their sleep deprivation.

Table 2: Percentage distribution of respondents according to their perception and behaviour

Perception/Behaviour	Frequency (n)	Percentage
Frequency of Social Media Use		
Frequently	516	63.7
Moderately	252	31.11
Rarely	42	5.19
Change in time spent on SNS during lockdown		
Increased	604	74.57
Decreased	54	6.67
Remained the same	152	18.77
Feeling After using social media extensively		
Feel good	180	22.22
Feel bad	272	33.58
No feelings	358	44.2
Do you think social media affects negatively on your life?		
Yes	230	28.4
No	196	24.2
Sometimes	384	47.41
Do you feel like quitting social media?		
Yes	198	24.44
No	320	39.51
Sometimes	292	36.05
Do you feel you could have spent a portion of the time in being more productive?		
Yes	476	58.77
No	100	12.35
Maybe	234	28.89
Do you usually delay your routine work due to social media?		
Yes	258	31.85
No	316	39.01
Sometimes	236	29.14
Did social media really connected or disconnected you from your family and friends		
Connected	324	40
Disconnected	106	13.09
No Change	380	46.91
Is social media usually the cause of your sleep deprivation?		
Yes	256	31.6
No	304	37.54
Sometimes	250	30.86
Utility of Social Media		
Negative	188	23.21
Neutral	202	24.94
Positive	420	51.85

Table 3a: Bivariate analysis of perceptions and behaviours related to social media usage and demographic characteristics												
	Frequency of Social Media Use			**Do you usually delay your routine work due to social media?**			**Did social media really connected/disconnected you from your family and friends**			**Is social media usually the cause of your sleep deprivation?**		
	Frequently	Moderately	Rarely	Yes	No	Sometimes	Connected	Disconnected	No Change	Yes	No	Sometimes
Gender	(p-value = 0.001)			(p-value = 0.056)			(p-value = 0.056)			(p-value = 0.00)		
Male	250 (61.27)	146 (35.78)	12 (2.94)	120 (29.41)	154 (37.75)	134 (32.84)	166 (40.69)	42 (10.29)	200 (49.02)	122 (29.9)	158 (38.73)	128 (31.37)
Female	266 (66.17)	106 (26.37)	30 (7.46)	138 (34.33)	162 (40.3)	102 (25.37)	158 (39.3)	64 (15.92)	180 (44.78)	134 (33.33)	146 (36.32)	122 (30.35)
Age	(p-value = 0.013)			(p-value = 0.16)			(p-value = 0.007)			(p-value = 0.00)		
10-20'	120 (60.0)	70 (35.0)	10 (5.0)	58 (29.0)	82 (41.0)	60 (30.0)	98 (49.0)	30 (15.0)	72 (36.0)	58 (29.0)	76 (38.0)	66 (33.0)
21 - 30	372 (66.67)	156 (27.96)	30 (5.38)	182 (32.62)	208 (37.28)	168 (30.11)	204 (36.56)	72 (12.9)	282 (50.54)	188 (33.69)	206 (36.92)	164 (29.39)
>30	24 (46.15)	26 (50)	2 (3.85)	18 (34.62)	26 (50.0)	8 (15.38)	22 (42.31)	4 (7.69)	26 (50.0)	10 (19.23)	22 (42.31)	20 (38.46)
Marital Status	(p-value = 0.53)			(p-value = 0.18)			(p-value = 0.68)			(p-value = 0.00)		
Single/Never Married	402 (64.01)	194 (30.89)	32 (5.1)	204 (32.48)	248 (39.49)	176 (28.03)	250 (39.81)	88 (14.01)	290 (46.18)	196 (31.21)	234 (37.26)	198 (31.53)
Currently Married	30 (55.56)	22 (40.74)	2 (3.7)	20 (37.04)	22 (40.74)	12 (22.22)	22 (40.74)	6 (11.11)	26 (48.15)	16 (29.63)	24 (44.44)	14 (25.93)
In a relationship (Unmarried)	84 (65.63)	36 (28.13)	8 (6.25)	34 (26.56)	46 (35.94)	48 (37.5)	52 (40.63)	12 (9.38)	64 (50.0)	44 (34.38)	46 (35.94)	38 (29.69)
Profession	(p-value = 0.153)			(p-value = 0.81)			(p-value = 0.009)			(p-value = 0.00)		
Student	438 (64.79)	204 (30.18)	34 (5.03)	216 (31.95)	262 (38.76)	198 (29.29)	264 (39.05)	94 (13.91)	318 (47.04)	218 (32.25)	258 (38.17)	200 (29.59)
Unemployed	30 (51.72)	22 (37.93)	6 (10.34)	20 (34.48)	20 (34.48)	18 (31.03)	18 (31.03)	4 (6.9)	36 (62.07)	12 (20.69)	24 (41.38)	22 (37.93)
Employed	48 (63.16)	26 (34.21)	2 (2.63)	22 (28.95)	34 (44.74)	20 (26.32)	42 (55.26)	8 (10.53)	26 (34.21)	26 (34.21)	22 (28.95)	28 (36.84)
Note: P values calculated using standard chi-square test												

Table 3b: Bivariate analysis of perceptions related to social media usage and demographic characteristics												
	Feeling after using social media extensively			**Do you think Social Media affect negatively on your life**			**Do you feel like quitting Social Media**			**Do you think you could have done something productive**		
	Feel Good	Feel Bad	No Feeling	Yes	No	Sometimes	Yes	No	Sometimes	Yes	No	Maybe
Gender	(p-value = 0.85)			(p-value = 0.09)			(p-value = 0.009)			(p-value = 0.003)		
Male	94 (23.04)	136 (33.33)	178 (43.63)	102 (25.0)	104 (25.49)	202 (49.51)	92 (22.55)	148 (36.27)	168 (41.18)	240 (58.82)	36 (8.82)	132 (32.35)
Female	86 (21.39)	136 (33.83)	180 (44.78)	128 (31.84)	92 (22.89)	182 (45.27)	106 (26.37)	172 (42.79)	124 (30.85)	236 (58.71)	64 (15.92)	102 (25.37)
Age	(p-value = 0.00)			(p-value = 0.00)			(p-value = 0.005)			(p-value = 0.00)		
10-20'	46 (23.0)	64 (32.0)	90 (45.0)	56 (28.0)	44 (22.0)	100 (50.0)	42 (21)	82 (41)	76 (38)	94 (47.0)	20 (10)	86 (43)
21 - 30	106 (19.0)	198 (35.48)	254 (45.52)	168 (30.11)	124 (22.22)	266 (47.67)	150 (26.88)	206 (36.92)	202 (36.2)	350 (62.72)	72 (12.9)	136 (24.37)
>30	28 (53.85)	10 (19.23)	14 (26.92)	6 (11.54)	28 (53.85)	18 (34.62)	6 (11.54)	32 (61.54)	14 (26.92)	32 (61.54)	8 (15.38)	12 (23.08)
Marital Status	(p-value = 0.00)			(p-value = 0.00)			(p-value = 0.06)			(p-value = 0.271)		
Single/Never Married	124 (19.75)	222 (35.35)	282 (44.9)	198 (31.53)	138 (21.97)	292 (46.5)	158 (25.16)	234 (37.26)	236 (37.58)	362 (57.64)	76 (12.1)	190 (30.25)
Currently Married	32 (59.26)	12 (22.22)	10 (18.52)	8 (14.81)	26 (48.15)	20 (37.04)	8 (14.82)	30 (55.56)	16 (29.63)	34 (62.96)	10 (18.52)	10 (18.52)
In a relationship (Unmarried)	24 (18.75)	38 (29.69)	66 (51.56)	24 (18.75)	32 (25.0)	72 (56.25)	32 (25.0)	56 (43.75)	40 (31.25)	80 (62.5)	14 (10.94)	34 (26.56)
Profession	(p-value = 0.018)			(p-value = 0.00)			(p-value = 0.146)			(p-value = 0.13)		
Student	138 (20.41)	228 (33.73)	310 (45.86)	198 (29.29)	150 (22.19)	328 (48.52)	166 (24.56)	266 (39.35)	244 (36.09)	400 (59.17)	84 (12.43)	192 (28.4)
Unemployed	14 (24.14)	22 (37.93)	22 (37.93)	22 (37.93)	20 (34.48)	16 (27.59)	20 (34.48)	22 (37.93)	16 (27.59)	40 (68.97)	4 (6.9)	14 (24.14)
Employed	28 (36.84)	22 (28.95)	26 (34.21)	10 (13.16)	26 (34.21)	40 (52.63)	12 (15.79)	32 (42.11)	32 (42.11)	36 (47.37)	12 (15.79)	28 (36.84)
Note: P-values calculated using standard chi-square test.												

Bivariate Analysis

Table-3a and 3b are showing the results of bivariate analysis. From the table it is clear that gender and age have significant association between frequency of social media use and demographic characteristics while marital status and profession doesn't. Of the single/never married respondents, 35.5% felt bad after using social media extensively; on the other hand 22.22% of currently married and 29.69% of 'In a relationship (Unmarried)' reported that they felt bad after using social media extensively. About 28% of the age group '10-20 years' and 30.11% of the age group '21-30 years' think that social media affect negatively on their life while this percentage was quite low (11.54%) in the age group '30+ years'. Among the male participants, 8.82% reported that they don't think they could have spent their time in something productive while the percentage was 15.92% among the female participants. From the table we can see that in the response when asked about usual delays in routine work there was no significant difference between the demographic categories. About 29% participants of the age group '10-20 years' and 33.69% of the age group '21-30 years' reported that social media is usually the cause of their sleep deprivation while the percentage was 19.23% in the age group '30+ years'.

Change in average time spent on social media

Table-4 is showing average time spent on social media before and during lockdown. Average time spent on social media was 3.079 hours (SD: 2.06) before the lockdown which increased to 5.17 (SD: 3.45) hours during lockdown. Younger respondents were spending almost two hours more on social media compared to '>30 years' age group, the increment was also significantly higher in younger age groups.

Table 4: Average time spent on social media before and during the lockdown

	Average Time spent before lockdown on Social Media (T1) (hours).	**Average Time spent during lock down on Social Media (T2)** (hour).	**Difference**
Age			
10 - 20	3.055	5.38	2.325
21 - 30	3.16	5.21	2.05
>30 (ref)	2.25	3.46	1.21
Gender			
Male (ref)	3.11	5.28	2.17
Female	3.044	4.99	1.946
Profession			
Student	3.14	5.24	2.1
Unemployed	2.91	4.79	1.88
Employed (ref)	2.61	4.44	1.83
Marital Status			
Single/Never Married (ref)	3.11	5.18	2.07
Currently Married	2.29	3.59	1.3
In a relationship (Unmarried)	3.25	5.6	2.35
Total	3.079	5.17	2.091

'Social Media Effect Index'

Results of the 'Social Media Effect Index' with respect to demographic and social categories are displayed in Table-5. From the table it can be seen that the value of the index for age group '30+' was 3.84 while for the other two groups it was comparatively low showing that the effect of social media is more negative for the younger age groups while for elder people the scenario was other way round. The index value was much higher for the married (3.66) participants compared to the single (2.91) respondents showing that the negative effect of social media is more on singles compared to the currently married participants. It is also evident from the table that the index value is higher for Employed (3.39) respondents than the unemployed (2.89) and students (2.96).

Table 5: Average value of 'Social Media Effect Index' with respect to demographic and social characteristics

	Index Value	**Standard deviation**
Gender (P-value: 0.59**)***		
Male	3.03	1.37
Female	2.97	2.97
Age (P-value: 0.00)**		
10-20'	3.11	1.41
21 - 30	2.88	1.4
>30	3.84	1.21
Marital Status (P-value: 0.09)**		
Single/Never Married	2.91	1.41
Currently Married	3.66	1.28
In a relationship (Unmarried)	3.12	1.4
Profession (P-value: 0.23)**		
Student	2.96	1.41
Unemployed	2.89	1.35
Employed	3.39	1.37
*Note: * p-value calculated using t-test, ** p-value calculated using one-way ANOVA*		

Results of regression analysis

The Table-6 is displaying the results of ordered logistic regression analyzing 'Social Media Effect Index' with respect to background characteristics. Model-1 examines the unadjusted association of socio-demographic variables and the 'Social Media Effect Index'. It can be seen for the table that respondents from age group '21 – 30 years' (OR: 0.29, 95% CI: 0.17 - 0.48) were 71% less likely to report a positive effect of social media consumption compared to the respondents from age group '>30 years'. Respondents who are student (OR: 0.58, 95% CI: 0.38 - 0.88), unemployed (OR: 0.58, 95% CI: 0.38 - 0.88) were less likely to report a positive impact of social media consumption. 'Currently married' (OR: 2.57, 95% CI: 1.56 - 4.25) respondents were 2.57 times more likely of having a higher index value compared to 'single/never married' respondents. Model-2 is a multivariate model which examines the adjusted association of socio-demographic variables and the 'Social Media Effect Index'. The Model-2 depicts almost similar results in case of 'Age'; respondents from age group '21 – 30' (OR: 0.22, 95% CI: 0.08 - 0.62) were 78% less likely of having a higher index value compared to '>30 years' age group. On the other hand, gender, profession and marital status did not found to be significantly associated with 'Social Media Effect Index'.

Table 6: Results of ordinal logistic regression				
	Model - 1		Model - 2	
Age	OR	p - value	Adj. OR	p - value
10 - 20'	0.38 (0.22 - 67)	0.001	0.29 (0.10 - 0.84)	0.023
21 - 30	0.29 (0.17 - 0.48)	<0.001	0.22 (0.08 - 0.62)	0.004
>30 (ref)	1	-	1	-
Gender				
Male (ref)	1	-	1	-
Female	0.92 (0.72 - 1.18)	0.551	0.98 (0.76 - 1.26)	0.91
Profession				
Student	0.58 (0.38 - 0.88)	0.012	0.85 (0.52 - 1.40)	0.54
Unemployed	0.53 (0.29 - 0.97)	0.042	0.59 (0.33 - 0.98)	0.133
Employed (ref)	1	-	1	-
Marital Status				
Single/Never Married (ref)	1	-	1	-
Currently Married	2.57 (1.56 - 4.25)	<0.001	0.79 (0.29 - 2.16)	0.66
In a relationship (Unmarried)	1.29 (0.92 - 1.81)	0.12	1.32 (0.94 - 1.85)	0.1
Model-1 is univariate in nature and Model-2 is a multivariate model				

Discussion and Conclusion

The study examined the aftermath of social media usage during covid-19 lockdown in India. It was found that the average time spent on social media increased by more than two hours during the lockdown among the users. The study found mixed effects of social media consumption during lockdown on users; for example, 33.58% of the respondents reported that they feel bad after using social media extensively, on the other hand 22% of the respondents reported that they feel good. Similarly, in the answer of the question 'Do you usually delay your routine work due to social media?' 32% reported 'Yes' and 39% said 'No'. So it will be unfair if we draw an all-inclusive conclusion about the negative or positive impact of social media consumption on the users during lockdown. However, after closely observing results of bivariate and regression analysis it can be inferred that respondents from '21-30 years' age group were reporting a negative effect of social media consumption on their social and mental well-being.

Hwang et.al. in their study reported that young people of Taiwan who feel alone were more likely to go online to use internet and make friends. However, if we see the present context, the lockdown caused zero social mobility and increased social isolation, in turn people started spending more time on social media in the quest of social engagement and mental gratification; and some of them might have succeed in their objective [21-25]. But on the other hand there are numerous studies which empirically showed that spending too much time on social media can have negative consequences [26-31]. A study conducted on young adults in US found that young adults with high social media use were feeling more social isolation than their counterparts with lower social media use [32]. Similarly, some other studies reported that high volume of social media consumption occurring in tandem (problematic social media use) was associated with higher levels of depressive feelings [33-35]. The association between mental health and social media use has been well established in previous research studies but the direction of association is still a hazy picture i.e. whether social media consumption causes disturbance to mental health or people with disturbed mental health tend to spend more time on social media; we recommend further qualitative studies in this context.

The regression analysis reveals that the respondents from younger age groups were less likely to report a positive effect of social media consumption, however we have to keep in mind that they were spending almost two hours more on social media than elder respondents. Major proportion of the '21-30 years' age group is constituted by students. The students in India were already in dire straits even before the emergence of covid-19, the increasing unemployment, parental pressure, unsecured future, fear of missing out, and social seclusion was already causing a significant damage to the mental wellbeing of Indian youth and then covid-19 emerged and added some more fuel to the fire [36]. In most of the previous studies in this context the focus was on younger adults or teenagers and age component was not analyzed comprehensively; the reason of this maybe because the major proportion of the social media users are younger adults or teenagers. But in past few years we are seeing a spike in social media consumption by older age people [37]; so a comparative study analyzing the effects of social media consumption on social and mental well-being of users of different age groups will be required in future.

Awareness regarding the rampant use or even misuse of SNS, the internet or related services and the consequences on mental health need to be promoted more focusing on the youth as such behaviour can lead to several mental disorders. Parents need to educate their children regarding the same. The use of social networking services should be put to good use as plethora of valuable information is available from all around the globe regarding almost anything one can think of, so if properly educated the SNS can be turned into a boon.

Limitations

Though our study primarily depended upon online responses and was unrestrictive of any eligibility to participate yet due to the young generation being the largest shareholder in consumption as well as access to such services, had resulted in a skewed data; although we tried to minimize the bias by spreading the questionnaire on several platforms used by all age groups. It was focused to determine the effect caused by excessive consumption specifically during the lockdown phases, though it is a general practice to overuse these platforms for recreation or other purposes all throughout the year. Our respondents were only Indians, though the pandemic had varying degrees of effect in different countries with people willing or forcefully being kept in social confinement in their homes.

Acknowledgements

We express our endless gratitude to all the respondents who took part in the present study. We are also thankful to all the subject experts of IIPS who provided technical support throughout the study.

Conflict of Interest

The author(s) declare no conflicts of interest regarding the publication of this paper.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

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