Original Research Article

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Facebook addiction and depression in adults [19 years-64 years]

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ABSTRACT

Background: Facebook, one of the most popular social networking sites, has been a popular time pass activity site. Most of the users log in at least once daily. Some even keep their Facebook accounts online over their mobile phones/android devices throughout the day. Most studies take into account the association of social networking sites and depression in adolescents or school students/college students etc. Hence this study was conducted in adults aged 19years to 64 years.

Methods: A study was conducted to determine Facebook addiction and depression in those users aged 19 years to 64 years in India from April 1st 2016 to April 1st 2017. The participants were interviewed through an online questionnaire.

Results: This study was conducted among four hundred and sixty nine adults of age nineteen years to sixty four years of which Two hundred and fifty three were males and two hundred and sixteen were females. 64% of the participants were addicted to Facebook. 40.66% (122) had signs of depression.

Conclusions: Simple measures like spending time with friends and loved ones, going out for a ride, attending social gatherings, doing activities that release endorphins and decreasing the time spent on social networking sites could help prevent Facebook addiction and depression.

Keywords: Facebook addiction, Adults, 19 years, 64 years

INTRODUCTION

Facebook has slowly entered every person's life. Social networking has become a daily necessity. Almost everyone has become dependent to it, some addicted too. Some even keep their Facebook accounts online over their mobile phones/android devices throughout the day. In the movie "The Social Network", the fictional telling of Mark Zuckerberg says that one day, everyone will let everyone else know what they're doing all the time. Worse, they're going to stay logged in all day to watch what everyone else is doing. "Are you on Facebook?" has become a regular part of conversations with asking as for someone's phone number.

Online social networks are rapidly changing the way human beings interact. Over a billion people belong to Facebook, the world's largest online social network, and over half of them log in daily.² Facebook usage has its range of consequential benefits including increased self-esteem and peace of mind.³ But it can also lead to depressive symptomatology and loneliness.⁴

But why does almost everyone like to log in to social networking sites? Why do people feel happy when they are online? Are we being over dependent on Social networking sites like Facebook?

One important aspect to be thought about when it comes to discussing Facebook and addiction is how social media stimulates the brain. Dopamine is the neurotransmitter in the brain responsible for sending signals of pleasure. It is commonly associated with the 'pleasure system' of the brain, providing feelings of enjoyment and reinforcement to motivate us to do, or continue doing, certain activities. Dopamine is known to be released when unpleasant or aversive stimuli are encountered, suggesting that it is not only associated with 'rewards' or pleasure. Also, the firing of dopamine neurons occur when a pleasurable activity is expected, regardless of whether it actually happens or not. This suggests that dopamine may be involved in desire rather than pleasure.⁵

Social media directly influences our reward center, stimulating the production of dopamine. As we learn in addiction, dopamine can change the way our midbrain processes priorities, and even contributes to the development of dependence. Symptoms of social media, like cyberbullying, have caused an increase in suicides. Famous Instagrammers have had public mental breakdowns.

Without question, one of the most appealing aspects of Facebook is how easy it makes staying in touch with family and friends. Even family members and friends living on opposite sides of the world can quickly chat with or receive updates from each other. Rather than drifting apart, Facebook truly does make it easier to stay connected to those we care. One mostly remembered days when one gets to greet their near and dear is their birthday. Even if it's someone you have had a misunderstanding with, you still spend a few minutes to type in a birthday wish. But nowadays even birthdays are remembered only after a reminder update flashes on our screen. Days and numbers which were remembered by heart have been left to sites like Facebook to remind us.

Taking all the above said into consideration, the questions arise are we dependent on Facebook? Are we addicted to Facebook? Is there an association between Facebook addiction and depression?

For the first objective, Are we dependent on Facebook, a simple day to day activity was chosen. It was altered and evaluated to as how many people got it right.

For the second objective, Are we addicted to Facebook, Fas/Fad-new psychological scale was used to determine Facebook addiction.

For the last objective, association between Facebook addiction and depression, DSSS was used in those who were found to be addicted to Facebook.

METHODS

This study was conducted from April 1st 2016 to April 1st 2017. An invite was sent, online, all over India asking

people to participate in the study. All those who were willing to take part in the study were included. Participants below the age of nineteen and above the age of sixty five were excluded from the study.

The age of nineteen was considered as this study is done in adults and the gazette of India, prohibition of child labor states anyone who has not completed eighteen years and below to be an adolescent.⁷

The age group of sixty four was selected as sixty five years and above was in old age dependent age group.⁸

All the participants, after their consent being obtained, were asked to reset their birthday entry in their Facebook page by three days before or after their birthday. The participants were asked to keep a note on who first corrected their birthday/wished them correctly in spite of the wrong entry, whichever occurred first.

After the above information was mailed, a questionnaire was mailed to the participant consisting of questions regarding Facebook addiction, depression, frequency of access etc.

Fas/Fad-New Psychological Scale was used to determine Facebook addiction.

Facebook addiction syndrome/Facebook addiction disorder (FAS/FAD) is a part of internet addiction disorder (IAD). Internet addiction disorder was originally proposed as a disorder in a satirical hoax by Ivan Goldberg in 1995.

The new psychometric tool reflecting each of the six elements of addiction is called the Bergen Facebook Addiction Scale (BFAS). It includes six basic criteria with participants asked to give one of the following five responses to each one: (1) very rarely, (2) rarely, (3) sometimes, (4) often, and (5) very often.

- 1. You spend a lot of time thinking about Facebook or planning how to use it.
- 2. You feel an urge to use Facebook more and more.
- 3. You use Facebook in order to forget about personal problems.
- You have tried to cut down on the use of Facebook without success.
- 5. You become restless or troubled if you are prohibited from using Facebook.
- 6. You use Facebook so much that it has had a negative impact on your job/studies.

Andreassen and colleagues suggested that scoring "often" or "very often" on at least four of the six items may suggest that the respondent is addicted to Facebook.⁹

Depression was measured using depression and somatic symptoms scale (DSSS). Somatic symptoms among patients with depression are important for several

reasons. First, somatic symptoms may confound or mask the diagnosis of depression. 10 Second, residual symptoms, which are often somatic symptoms, might increase the risk of relapse. 11-13 Patients with major affective disorder and somatization had more and longer depressive episodes as well as more depressive symptoms than patients without somatization.¹⁴ Increased pain severity in patients with major depressive disorder (MDD) was associated with worse depression, poor health-related quality of life (HRQoL), and a negative impact on treatment response of depression. 15 Finally, pain or somatic symptoms in depression increase the economic burden of depression.¹⁶ Therefore, somatic symptoms have a significantly negative impact on diagnosis, treatment, and prognosis of depression. 12 Hence DSSS was used. The severity of the symptoms like Loss of interest in daily or leisure activities, depressed mood or tearful, chest pain, feelings of self-reproach or guilt, anxious or nervous, soreness in more than half of the body's muscles, unable to concentrate, palpitations or increased heart rate etc. experienced in the past week (7days) after the participant's birthday were graded as

- Absent: no symptoms.
- Mild: symptoms caused slight discomfort or disturbance.
- Moderate: symptoms caused significant discomfort or disturbance.
- Severe: symptoms caused very significant discomfort or disturbance.

A pilot study was done with the first twenty participants. After appropriate modifications in the questionnaire were made the final version of the questionnaire was prepared.

Numbers and codes were assigned to each variable. Data entry was done in Excel spread sheet (Microsoft Office 2010). Data was later transformed to SPSS (Statistical Package for Social Sciences) software (version 21.0).

RESULTS

Four hundred and sixty nine adults volunteered to participate of which, two hundred and fifty three were males and two hundred and sixteen were females (Figure 1).

All the participants were between the age group of nineteen years to sixty four years. All the participants had a Facebook account.

To the question who first corrected their birthday/wished them correctly in spite of the wrong entry, whichever occurred first 28% [131] of the participants answered as Mother, 22% [103] of the participants answered as Father, 21% [99] of the participants answered Husband/Wife, 11% [52] of the participants answered as Siblings, 10% [47] of the participants answered as friends, 6% [28] of

the participants answered as relatives and 2% [9] of the participants answered as colleagues (Figure 2).

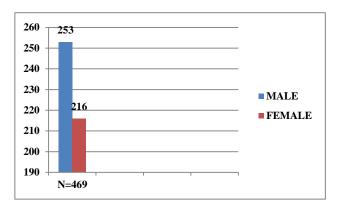


Figure 1: Sex-wise distribution.

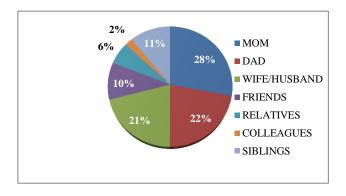


Figure 2: Who first corrected your birthday in Facebook/wished you correctly inspite of the error whichever happened first?

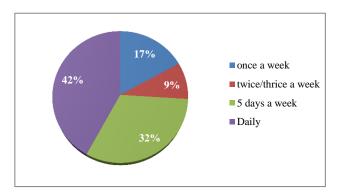


Figure 3: Frequency of Facebook access [N=469].

Of the 11% siblings who corrected the birthdays/wished correctly in spite of the wrong entry 68% were sisters and 32% were brothers.

Of the four hundred and sixty nine participants 17% (80) accessed Facebook once a week, 9% (42) accessed Facebook twice or thrice a week, 32% (150) accessed Facebook 5 days a week and 42% (197) accessed Facebook daily (Figure 3).

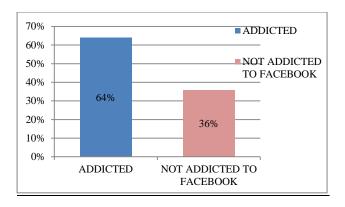


Figure 4: FAS/FAD-new psychological scale.

As per the FAS/FAD new psychological scale, 64% (300) were suffering from Facebook addiction syndrome or Facebook addiction disorder (Figure 4).

Almost all of the Forty two percentage participants who accessed Facebook daily were found to be addicted but it's not statistically significant.

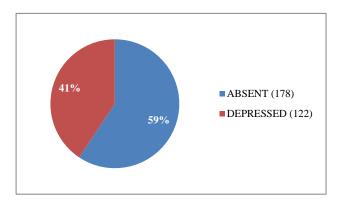


Figure 5: Depression in the last 7 days [N=300].

Of the 64% (300) suffering from Facebook Addiction syndrome or Facebook Addiction disorder 59.3% (178) had no signs of depression, 40.66% (122) had signs of depression (Figure 5).

DISCUSSION

Though all the participants had their birthdate error corrected by someone, it still doesn't support the fact whether we are dependent on Facebook. Using Facebook as a tool to meet one's goals is what leads to dependency on the site. But this dependency is not the same as an addiction. It's a known fact these days that day to day activities are being taken over by the internet. Gone are the days of newspapers. Most of us use Tabs to read the news and we get regular updates too. It's nice to be updated regularly, but it does hurt when we become dependent to it. Birthday reminders on Facebook, work updates and anniversaries in LinkedIn, To do notes and reminders have replaced stick it notes on the refrigerators and the list goes on. It still is very early to decide if we are becoming dependent to social networking sites. Not a

lot of studies have been done pertaining to that subject. But it never is too late. Only comforting thing noticed is parents have topped the list of people who corrected the birth date errors. But it also notes that all the participants got wishes on the error date which means lot of people follow whatever they receive on Facebook blindly.

Addiction is defined as a condition that results when a person ingests a substance or engages in an activity that can be pleasurable but the continuation of which becomes compulsive and interferes with ordinary responsibilities and concerns, such as work, relationships, or health.¹⁸

Sixty four percentages of the participants were found to be addicted to Facebook. Almost all of the Forty two percentages who accessed Facebook daily were found to be addicted but it's not statistically significant. It does show that the increase in frequency of usage leads to addiction.

In a study done by Błachnio from Poland, it was found that higher Facebook intensity is positively related to Facebook addiction. The more one uses Facebook the more prone one is to develop the addiction. This may be due to the process of habituation, characteristic for addiction. ¹⁹

The relationship between Facebook usage and academic performance where Facebook users were seen to spend less time studying than the other students was noted in a studies which lead to poorer grades.^{20,21}

But as mentioned earlier most of the studies have been done in adolescents and occasionally in young adults. Hence results from those studies do vary from this study a lot

Of the three hundred participants who were addicted to Facebook only one hundred and twenty two suffered from severe depression and one hundred and seventy eight participants had no signs of depression.

In a case Vignette: Marina, social networking addiction: An overview of preliminary findings the mother of Marina narrates as to how her daughter behaved after she was deprived time from Facebook, and how she became depressed.²² This could have been possible as Marina was nineteen years of age. It has been estimated that around fifty percentage of college students experience some form of mental illness, depression being the most common.²³

In another study done on seven hundred and eighty six college students, Facebook on its own didn't lead to depression. It doesn't cause people to be more depressed on its own. However, the more you use Facebook, the more you're likely to start slipping into the category of encouraging Facebook envy. The longer an individual is on Facebook, the more information they are likely to consume. They will see other users' news, photos and profiles. The more people consume others' personal

information on Facebook, the more likely they are to become envious, so that a person with a larger network of friends will also be more likely to feel envious than a person with a smaller network.²⁴

Prevention of FAS/FAD is a delicate topic. There is currently no standardized treatment for FAS/FAD. Unlike other addictions, the goal of FAS/FAD treatment cannot be total abstinence from using the internet *per se* since the latter is an integral element of today's professional and leisure culture.

Corrective strategies include:

- Content-control software
- Counseling
- Cognitive behavioral therapy

Following are the simple strategies to manage and treat FAD/FAS:⁹

- 1. Recognize the signs of a Facebook addiction.
- 2. Start questioning what you are doing on Facebook.
- Write down exactly how much time you spend on each site.
- 4. Decide what is of value on Facebook.
- 5. Give yourself a set time of the day to visit.
- Try giving up Facebook for a specific event to see how you fare.
- 7. Turn off email notifications.
- 8. Target solutions to enable smarter, brighter usage of Facebook in the future.
- Be careful of the race to have as many friends as possible.
- 10. Avoid being a Facebook automaton. Every time you feel like saying "I'll Facebook you", check yourself and rephrase that with "I'll see you", or "I'll call you". And mean it; it settles the catch-up time straight away.
- 11. Meditate as soon as the thought of Facebook arises.
- 12. Go out with people, to parks, social gatherings
- 13. Do activities that release Endorphins, whether from exercise or laughter, to fight depression

There is scope for further research as these topics are still under debate. A larger sample size should be considered. The sample size considered here does not represent the whole population of internet users. Since Social Networking is a global phenomena, comparative analysis of users from all ages within India and also of various countries can yield interesting findings, implying whether Facebook addiction exists in all users and also if it does is there a pattern in users that differs from region to region.

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Institutional Ethics Committee

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