Facebook And Users Emotional Health During Covid-19 Pandemic

Abstract

Social media mainly Facebook is used as an important source of information around the globe particularly during crisis such as Covid-19 pandemic. Increasing amount of information received through Facebook leads to emotional health hazards in Facebook users. The current study examines the relation between Facebook usage and emotional health, especially focuses on the infodemic effects on emotional health of Facebook users. Results indicate that an increase in the Covid-19 Information overload, fake news and hateful speeches are associated with the emotional stress, anger and nervousness of the Facebook user.

Keywords: Emotional Health, Facebook, Covid-19, Pandemic, Fake News, Hateful Speeches, Information Overload.

Introduction:

For the present society, information is vital for the day in and day out and it is difficult to ignore the information perceived using social media; as it has become inalienable and inevitable in most part of lives. People of acting society are relying on media to access and assess information of their interest area. In fact, during pandemic, people are more cautious and therefore desperately searching for
information regarding the novel corona virus, all they need to know is about the spread, research and
development. Bhattacharya in a report to Scroll reported that people are using social media and find it an easy-peasy source to information. Apart from searching for appropriate data, people who use new media are frequently exposed to fallacious facts and it is quite an alarming situation now. An exposure to this sensitive information is causing bizarre behavioural patterns in the users, leading to the jingoistic expression, hate speeches and fake news are now a great concern on social media than ever before.

Due to the worldwide quarantine orders, the use of Facebook and other social media interfaces have experienced a sudden surge and the average time of screen staring has increased tremendously far higher than usual along with an increase in bullying and harassment, according to a report published in The Verge. Facebook and allied social media interfaces such as Messenger, Whatsapp, Instagram do face the same dynamics. Although the growth is identified as temporary by Facebook team, but then surprised to see an increase of 50% more than average use of Messaging services and reported a record-breaking log of 700 million calls across Messenger and Whatsapp.

Social Media, apart from connecting people of different places, it has become an easy source of information regarding the updates on virus spread, stories of contamination and recovery from infection. User’s exposure to social media content have led to serious concerns and trends which is grabbing the attention of the researchers and academicians to further study in this area.

As per the Stat Counter Global Stats, Facebook is the leading social media used on all devices ranging from mobile to desktop. 86.75% of the users are using Facebook, followed by YouTube, Pinterest, Instagram, Twitter and LinkedIn as per the stats in India, July 2020. Statcounter reports have identified an increase in the use of Facebook, on par with other social media platforms after the
novel corona virus is announced pandemic. 84.94% of the users are recorded for the month of March 2020 and within two months of the total lockdown 90.06% is recorded for the month of May 2020 in India. Mobiles have dominated all the other available platforms for accessing social media networks except for YouTube. Mass media has covered this issue on a greater scale, people in general have given their attention to the new media or social media to read instant updates and keep them informed of the up-to-the-minute news about the spread and containment of virus. Social media on a mobile device has increased dramatically. Social media is catering to the information needs of the people, also contributing to the society in dysfunctional ways. Hate speeches, Fake news, Jingoism has become a new routine in social media platforms. Researchers and Academicians concerns in this area have resulted in a great volume of work in the form of research papers published on social media platforms to understand the information systems, patterns and usage of social media by peer groups. Social media in the lives of people have become an area of study for most of the scholars, because of its interactive and persuading characteristics. Social media is used for identity, conversations, sharing, presence, relationships, reputation and to form groups of shared experiences and schools of thought.

According to Digital 2020, a July Global Statshot Report, spotted a latest insight in the way people across the world use the internet, social media, mobile devices and ecommerce. 83% of the people reported that the Digital Media helps them to cope with covid-19 related lockdown (general), while 76% of the people agreed that the Digital Media helps them with their children education.

An average time period of 2 Hours 24 minutes per day is known as the time spent by social media users via any device. Facebook with a total 2,449 million visitors being the most visited social media, followed by YouTube and Whatsapp. Covid-19 has led to an increase in online and digital activities.
Watching more shows and films on streaming services are being the top engaging activity followed by spending longer than usual social media usage patterns.

Digital 2020 July, a Global Statshot Report has also unearthed an interested fact that there is an increase of over 10.5% of social media users to the existing base making Facebook the most sought-after social media. 3.96 billion active social media users, in which 99% (i.e. 3.92 billion) of users are accessing social media via mobile.

With the increase in the activity over social media during the crisis, there is also an increase in the concern for emotional health of its users, and time invested in obtaining true information. Attention to what is real, and fake is of a great concern. Average of 56% of adults with an age group of 18+ who say that they have concern for fake and real news in Digital Media.

World wide web has reduced physical distance amongst people and nations, thus making the global village with denizens of global exposure possible. While the physical distance is erased, there has been another bothering issue. Fake news and identification of the credibility of the material shared. According to Umberto Eco – an Italian semiotician said that when a lie is mass produced and circulated, it becomes truth in the real world. People are affected with Hyper-reality, unable to differentiate the difference between what is real and fake.

**Review of Literature:**

In an article published in the HEC, Paris Business School in the month of March 2015. Kristine de Valck, Associate Professor of Marketing at HEC Paris Business School, who is studying on the contribution of social media networks since 1999 found that there is a significant impact of social
media on its users. And her studies also focused on the research and teaching of how internet and social media are changing the behavior of its users.

She writes that “Online communities of consumption (OCCs) represent highly diverse groups of consumers whose interests are not always aligned. Social control of OCCs aims to effectively manage problems arising from this heterogeneity.” It clearly states that the online communities are different from one another and their needs are not aligned. Control exerted by a society is working to find solutions to the problems with this heterogeneity.

Joshua Green, Henry Jenkins and Sam Ford wrote a book titled “Spreadable Media: Creating value and meaning in a networked culture”. The book makes it clear about how the audiences are involved in the transmission of news rapidly.

Report from Saptak Ghosh states that the Facebook has initiated exclusive feature to help the people in a given community to get connected and protected with appropriate information. Community help hub is one feature that helps people to help, support and care for each other.

**Increase in the use of Facebook** - According to Gurupreet Kaur in her study, the key role played by the social media platforms are identified as helping in the process of spreading information pertaining to Covid-19 and safety precautions to contain the spread and infections. Facebook is also guiding public behavior towards everyday needs during pandemic, fundraising money to fight against the spread, social media user’s activity of posting pictures and videos of Covid related is increasing by leaps and bounds.

The use of social media has increased worldwide as people now seek solace in virtual social world.
To support this, Alex Schultz, Vice President – Analytics and Jay Parikh, Vice President of Engineering at Facebook wrote in an official blog that there is an increase in the FB Messaging by 50% over the last month. Voice and video calling has increased by double fold on Messenger and Whatsapp. Italy - The worst hit country after China has seen an increase up to 70% in terms of the time spent on Facebook in accordance to a report published in British Broadcasting Corporation. Joseph Johnson claims that there is also a two-fold increase in the calling activities.

While messaging is increased by 50% and time spent in group calling is increased by 1000% during the last month. A sudden surge in the use of group call time activity after February 2020, in Italy is reported.

**Connecting People with Authentic Information and Entertainment** - As per the information stated on Facebook blog by Kang-Xing Jin, Head of Health at Facebook. Facebook is supporting the global public health community work to keep its users informed and safe during the corona virus crisis. Facebook is providing access to appropriate information, connecting people by supporting crisis communication and efforts to contain and treat.

- To ensure every user has access to accurate information the Facebook and its allied apps. Facebook is investing over $100 million in the news industry to get the fact checking done on regular basis.

- Ensuring the health care products are not exploiting by blocking them from exploitative tactics in ads

- Facebook team is dedicated in providing credible information to its users by combatting COVID-19 misinformation communication.
Facebook is supporting the health and economic relief efforts by investing $20 Million in donation and $25 Million to support healthcare workers.

Facebook is investing $100 Million in small scale business, thus helping them to reach locally during lockdown.

Facebook is supporting its partners by providing with data and tools.

Health organizations and their communication is supported by Facebook with free ads.

Facebook is functional to the society during the covid crisis by being stable and reliable despite of increase in heavy use by netnography. The hackathon of Facebook has come up with new products exclusively meant to serve the needs of its users during and post-lockdown. COVID-19 Information Center and Workplace for free are few to cite.

**Facebook Promoting Emotional Health** - Emotional Health is an exclusive feature on Facebook that helps the users of Facebook to fight against various mental health challenges during pandemic. Facebook has partnered with advanced researchers to foster research in the area of mental health. As part of its efforts a show titled “Peace of Mind with Taraji” (working title) with a Golden Globe Award – winning actress Taraji P.Henson and Tracie Jade Jenkins are hosting on Facebook. Enabling WHO Health Alert Chatbot on Whatsapp, New sticker pack of WHO around mental health in circulation on Messenger, supporting crisis text line in support of initiating methods to reach people who are facing mental challenges. Shoumik Sen Bhattacharya for a Mashable India stated that Facebook has introduced an exciting feature Tournament in gaming to kill the boredom at home during pandemic.

**Combating Misinformation** - Facebook is committed to combat COVID-19 misinformation across our apps said in a blogpost by Nick Clegg, Vice President of Global Affairs and
Communications. Nick Clegg, former Deputy Prime Minister of United Kingdom in one of his blogs mentioned that after World Health Organization (WHO) announced COVID-19 as public health emergency, Covid-19 Information Center on Facebook, WHO Health Alerts on Whatsapp, giving unlimited free ads and millions in ad credits to help the right information is taken to right people at the right point of time. Facebook started working on fact checking of information since 2018 and as of March 2020 Facebook has deployed 55 fact checking parameters covering 45 languages to debunk the false claims that could lead to the physical harm of an individual and social disturbances.

In a detailed report of COVID-19 and Vaccine Policy Updates & Protections which has a list of key points to remove from COVID-19 content that contributes to the risk of real-world harm. Some of the policies such as Coordinating Harm Policy, Regulated Goods Privacy, Hate Speech Policy, Bullying and Harassment Policy, Community Standards are strictly in force for the removal and restriction of claims that are found misinformation during emergency.

Facebook identifies below list of points as false information and filters any content that is in support of the below mentioned points.

- Any information that deny the existence of COVID-19 disease or Pandemic
- Any information that ignores the severity of pandemic
- Any information that claims COVID-19 is no more than Flu or Cold
- Any information that claims no one has died because of COVID-19
- Any information that compare the mortality rate of COVID – 19 with seasonal influenza
- Any information that claims getting a flu shot is more dangerous than COVID-19
- Any information that exaggerates number of COVID-19 deaths than the actual figures
- Any information that is linking the cause of COVID-19 with 5G communication technologies
- Any information that claims COVID-19 is transmitted by mosquitoes and flies
- Any information that is claiming the guaranteed cure from herbal magical remedies
- Any information that is supporting the non-performance of vaccines
- Any information that claims COVID – 19 is made

Fact-checking program of Facebook check and rate all types of content pertaining to COVID -19 and vent the harmful and misleading texts from the feeds and restrict any such content from further spread.

Engaging the teenagers during and post-worldwide lockdown is interesting on Facebook. One of the groups titled “Zoom Memes for Self-Quaranteen” is a public group which is dedicated for the teenagers to share the interesting memes related to COVID-19. In an article written by Mehreen Shafqat said thatthe dark humor is used to pent-up accumulated stress during lock-down. The content in the group reflects the level of self-depreciation and depression. Though they seem humorous in an entertaining way, they profess people’s underlying fears and motivations who participate in any given facebook community by liking, commenting and sharing the fun filled, dark humored memes. To cope up with the accumulated stress, people are preferring to get engaged with dark humor stated in a report by Anoushka Pinto.

**Research Hypothesis:**

1. There is no association between Covid-19 Information Overload on the facebook and Emotional Stress and Nervousness of its users (H₀₁)
2. There is no association between Reading Hateful Expressions and Emotional Stress (H₀₂)
3. There is no association between Fake News pertaining to Covid-19 and Emotional Stress of Facebook user (H₀³)

4. There is no association between Age and Anger during Covid-19 Times (H₀⁴)

Materials and Methods:

The main objective of the paper is to study the relationship between Facebook and Emotional Health of its users during Covid-19 pandemic times. The research is carried out in Andhra Pradesh which is one of the densely populated southern states of India. The population of Andhra Pradesh is identified for the study. Sample size of 385 is determined for this study on the basis of W G Cochran sample size formula

\[ S = \frac{Z^2 p(1-p)}{e^2} \]

at a confidence level of 95% and Z-Value being 1.960. Estimated population proportion and margin of error as 0.5 and 0.05 respectively. Data is collected from January 2021 to June 2021. Respondents are of 15-55 years of age and users of Facebook are included in this study.

Ethical Issues:

Ethical clearance was obtained from the Research & Development Cell & Research Policy Advisory Committee of K L Deemed to be University, Vaddeswaram, Andhra Pradesh. The data is collected post the consent of subjects in study.

Results:

1. Pearson Chi-Square analysis is used to examine the association between two categorical variables. It was found that the p-value of the Chi-Square test is less than 0.05 for Covid-19 information overload on Facebook and emotional stress and nervousness at 5% significance level \( \chi^2 = 4.621^a, \) df = 1, p = 0.032). Hence, we reject H₀¹ and conclude that
the emotional stress and nervousness of the Facebook user significantly associated with Covid-19 information overload in Facebook.

Table 1: Association between Information Overload and Emotional Stress

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>p-value (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>4.621</td>
<td>1</td>
<td>.032</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>4.173</td>
<td>1</td>
<td>.041</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>4.621</td>
<td>1</td>
<td>.032</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td>4.609</td>
<td>1</td>
<td>.032</td>
<td>.033</td>
<td>.021</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>385</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 63.94.
b. Computed only for a 2x2 table

2. Pearson Chi-Square analysis is used to examine the association between two categorical variables. It was found that the p-value of the Chi-Square test is less than 0.05 for reading hateful expression and emotional stress during pandemic times at 5% significance level ($\chi^2 = 5.142^a$, df = 1, $p = 0.023$). Hence, we reject $H_0^2$ and conclude that the emotional stress during pandemic times is significantly associated with reading hateful expression.

Table 2: Association between Reading Hateful Expression and Emotional Stress

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>p-value (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>5.142</td>
<td>1</td>
<td>.023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>4.663</td>
<td>1</td>
<td>.031</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>5.117</td>
<td>1</td>
<td>.024</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td>5.128</td>
<td>1</td>
<td>.024</td>
<td>.030</td>
<td>.016</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>385</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 56.52.
b. Computed only for a 2x2 table
3. Pearson Chi-Square analysis is used to examine the association between two categorical variables. It was found that the p-value of the Chi-Square test is less than 0.05 for the fake news pertaining to Covid-19 in Facebook and emotional stress and nervousness of the Facebook users at 5% significance level ($\chi^2 = 12.873^a$, df = 1, p = <.001). Hence, we reject $H_{03}$ and conclude that the emotional stress and nervousness of the Facebook users significantly associated with the fake news pertaining to Covid-19 in Facebook.

Table 3: Association between Fake News and Emotional Stress

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>df</th>
<th>p-value (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>12.873$^a$</td>
<td>1</td>
<td>&lt;.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>12.113</td>
<td>1</td>
<td>&lt;.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>13.105</td>
<td>1</td>
<td>&lt;.001</td>
<td></td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Fisher’s Exact Test</td>
<td>13.105</td>
<td>1</td>
<td>&lt;.001</td>
<td></td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>12.839</td>
<td>1</td>
<td>&lt;.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>385</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 59.70.
b. Computed only for a 2x2 table

4. Pearson Chi-Square analysis is used to examine the association between two categorical variables Age and Anger during pandemic times. It was found that the p-value of the Chi-Square test is greater than 0.05 for the age and anger during pandemic times were at 5% significance level ($\chi^2 = .718^a$, df = 3, p = 0.869). Hence, we don’t have any evidence to reject $H_{04}$ and conclude that the anger during pandemic times of Facebook users not significant associated with the age of Facebook users.
Table 4: Association between Age and Anger

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>p-value (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.718(^a)</td>
<td>3</td>
<td>.869</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.718(^a)</td>
<td>3</td>
<td>.869</td>
</tr>
<tr>
<td>Linear-by-Linear</td>
<td>.122</td>
<td>1</td>
<td>.727</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>385</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) 0 cells (0.0%) have expected count less than 5. The minimum expected count is 13.96.

Table 5: Descriptive Frequency of Information Overload

<table>
<thead>
<tr>
<th>Covid - 19 News and Information on Facebook is overloaded</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Yes</td>
<td>204</td>
<td>53.0</td>
<td>53.0</td>
<td>53.0</td>
</tr>
<tr>
<td>No</td>
<td>181</td>
<td>47.0</td>
<td>47.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>385</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 6: Descriptive Frequency of Emotional Stress and Nervousness

<table>
<thead>
<tr>
<th>Did you feel stressed or nervous</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Yes</td>
<td>249</td>
<td>64.7</td>
<td>64.7</td>
<td>64.7</td>
</tr>
<tr>
<td>No</td>
<td>136</td>
<td>35.3</td>
<td>35.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>385</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 7: Descriptive Frequency of Hateful Expression

<table>
<thead>
<tr>
<th>Ever read any hateful expression</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Yes</td>
<td>225</td>
<td>58.4</td>
<td>58.4</td>
<td>58.4</td>
</tr>
<tr>
<td>No</td>
<td>160</td>
<td>41.6</td>
<td>41.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>385</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Discussion:

Infobesity, Infoxication, Information Anxiety, Information Explosion are the terms used to refer to Information Overload. It is the difficulty in comprehending an issue and taking informed decision when too much of information pertaining to the same issue is available abundant. The results of the present study on Facebook and Users Emotional Health during Covid-19 Pandemic revealed that the Emotional Stress and Nervousness of the Facebook users is significant association with the information pertaining to Covid-19 overload on Facebook. People could not able to consume the overload and gone sceptic while taking decisions. Out of 385 subjects for the study 53% of the subjects have reported that there is an overload of Covid-19 News and Information on Facebook while 64.7% of the subjects have suffered emotional stress and nervousness while reading Covid-19 updates on Facebook. In a study tilted “Prevalence and Psychological Effects of Hateful Speech in Online College Communities”, reported the negative repercussions of hateful speech over the psychology of an individual. 58.4% of the total respondents have reported that they read Hateful Expression against Covid-19. Results from the study state that Hateful Expression and Emotional Stress and nervousness of users are significantly dependent. Misinformation and Disinformation can be used to manipulate the views of users. Misinformation can take different forms; every form has its negative implications over public disclosure. Fake News whether with an intention to deceive or not, when it stems up, all that is seen is public distress. Fake news is one of the prevalent issues that digital natives are suffering today, and it is read from the study that Fake News and Emotional Stress and Nervousness of users are significantly dependent. Age and Anger are the two variables studied by most extensively. According to Schieman S findings from the two data sets of 951 physically disabled individuals from Southwestern Ontario and 1450 US respondents from General Social
Survey of 1981 and 1996 respectively found negative association between age and anger. Age and anger from the study were found to be independent. The Pearson Chi-Square analysis is used to identify the association between key variables of study. Descriptive frequencies are put in use to better understand the subject’s response in percentages and the same is presented in the results section.

Further Research:

A further research in the direction of Facebook impact on demographics of facebook users during Covid-19 pandemic is recommended to gain more insights into the relationship between Facebook and Emotional Health of its Users. Knowledge gained from studying the relationship between Facebook and Impact on Emotional Health of its Users would help in effective social media management for the Crisis and Emergency Risk Communication in the days to come.

Conclusion:

Emotional Health of the people is of paramount importance at any circumstances. It is essential that during the crisis and emergency, the emotional health of the people must be protected from various factors that can cause anarchism in any given society. From the current study, we observe that there is a connection between Facebook and Emotional Health of its users. While exposed to covid-19 information on Facebook, it is advised to be more selective in reading posts on facebook and strictly consider the sources of information. Avoiding information that contain hateful speeches, fake news from anonymous sources is recommended. Emotional health of an individual is everything and containing it encourages an individual to be optimistic and overcome these tough times caused by novel corona virus.
Conflicts of Interests:

There are no conflicts of interest.

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