

## Ripple Effect of Infodemic at the Time of Pandemic COVID 19

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### ABSTRACT

COVID -19 is an infectious disease caused by corona virus which is spreading like wildfire throughout the world. According to World Health Organization it's a pandemic virus affecting globally but simultaneously WHO declared it as an infodemic as well. If we go by dictionary Infodemics is an excessive amount of information concerning a problem which creates a state of confusion among the population. Confusion leads to fear which is more fatal than the real one and is more difficult to find its solution. Due to the world-wide lockdown people are staying at their places and all thanks to social media, the news of widespread disease is reaching us all at greater speed as compared to virus itself. The news and information shared by social media increases an individual's anxiety and stress levels. Research says that to combat any kind of viruses one needs to have strong immune system but such kind of information are immune depressants. The objective of the present study is to analyze the effect of social media on the development of stress, anxiety and resilient approach of the people who are working from home and the people who are workfree. The sample size of the group will be 100 and the age range of participants will be 20-50 years. The standardized questionnaires which will be used for this piece of work are social media engagement questionnaire: Everyday Technology Use Questionnaire by Christine McCauley (2013) Perceived stress scale by Sheldon Cohen (1994), State- Trait anxiety inventory by Charles Spielberger and Connor- Davidson Resilience scale: CD-RISC by Connor and Davidson (2003). The standardized tool which will be used for analyses will be t-test. The study recommends that people who are doing work from home are devoting less time on social media, low on stress, anxiety and high on resilience as compared to those who are workfree.

**Keywords:** COVID-19, social media, Stress, Anxiety and Resilience

COVID-19, the pandemic has turned the world upside down. This rampant has led to unanticipated loss in human lives across the world. Due to this pandemic, people are left with no option but to stay at home, which has had more impact on their lives than anyone can imagine. There is a pause in the outside world that has amplified the workload of all individuals at an unseen level. Students are attending online classes and employed are working from home who are under lot of stress whereas stay at home individuals are

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experiencing hard time due to the plethora of information provided by the different social media portals.

When everyone is cooped at home there is a need not only to fight with COVID-19 but also with the information bombarded on different social media portals named by WHO (2020) “Infodemics”. The Coronavirus is the first outbreak in history to make widespread use of technology and social media to keep the public safe, informed, efficient, and connected. Merriam-Webster (2014) defined social media as, “forms of electronic communication (as Web sites for social networking and micro-blogging) through which users create online communities to share information, ideas, personal messages, and other content (as videos).” At the same time, the technology we rely on to stay connected and informed is encouraging and magnifying an infodemic that is undermining global response efforts and jeopardizing pandemic-control measures. An infodemic is a situation in which there is an excess of information, both online and offline. It is therefore extremely hard to distinguish between authentic and misleading information. Mis- and disinformation can be harmful to people’s physical and mental health (Joint statement by WHO, UN, UNICEF, UNDP, UNESCO, UNAIDS, ITU, UN Global Pulse, and IFRC, 2020).

Stress, anxiety, fear and worry are natural responses influencing our mental and physical health to perceived or real threats, and whenever we are faced with unpredictability or uncertainty. It is perhaps normal and understandable that people are fearful in the regard of the COVID-19 outbreak. In addition, the social media, which is a major source of infodemics, is exacerbating the mental health issues among the general population. Therefore, this study has aimed to examine the effect of information present on social media in the development of stress, anxiety and resilient approach of the people who are working from home and people who are work free.

### **LITERATURE REVIEW**

The use of social media is now a normative part of our life. Observational studies have shown that spending more than a few hours a week using electronic media is negatively associated with psychological well-being, whereas off-screen activities are positively associated with (2012) psychological well-being (Twenge et al, 2018). Alter (2018) and Newport (2019), along with other academics and prominent Silicon Valley executives in the “time well-spent” movement, argue that digital media devices and social media apps are harmful and addictive. Furthermore, social media are the primary channel through which misinformation spreads online (Allcott and Gentzkow 2020).

Several studies find that digital media use is linked to lower psychological well-being among children, adolescents, and adults. Studies by Andreassen et al. 2015; Kross et al. 2013; Woods and Scott 2016 show the imprudent and immoderate usage of social media give rise to mental health symptoms. Moreover, it increases the anxiety and depressive symptoms (Stiglic and Viner 2019).

Social media, which refers to internet applications that enable users to generate and exchange content with others (e.g., Facebook; Kaplan and Haenlein, 2010), has become central to the lives of emerging adults. Approximately 90% of young adults use social media, with the majority using two or more social media sites and visiting these sites daily (Perrin, 2015). Findings suggested that higher daily social media use was associated with greater dispositional anxiety symptoms (Vannucci, A., Flannery, K. M., & Ohannessian, C.

M. (2017). The positive associations between social media use and anxiety that were found in the current study have important clinical implications.

Social media use has the potential to function as a source of stress or reinforce negative self-evaluations when individuals receive undesirable feedback from others or engage in negative social comparisons (Nesi and Prinstein, 2015). One hypothesis is that social media sites may serve as a source of stress that contribute to elevated anxiety symptoms and related impairment in emerging adults. Indeed, Facebook use has been associated with activation of the physiological stress response (Mauri et al., 2011) Social media use also could contribute to a general communication overload as individuals are bombarded simultaneously with information from multiple electronic channels, which has been associated with psychological distress (Chen and Lee, 2013)

The immersive experience created by the numerous distracting features of social media sites also may facilitate avoidant coping strategies and social isolation (Moreno and Whitehill, 2014), which may promote psychopathology. Therefore, this research is mainly aimed to analyze the impact of social media usage on the psychological well-being of an individual.

### *Objectives*

To analyze the group differences between work from home and work free individuals on the following:

- Social media engagement
- Perceived Stress
- State Anxiety
- Resilience

### *Hypotheses*

Following hypotheses were tested:

- Individuals working from home would be significantly low on social media engagement as compared to workfree individuals.
- Individuals working from home would be significantly low on Perceived stress as compared to workfree individuals.
- Individuals working from home would be significantly low on State Anxiety as compared to workfree individuals.
- Individuals working from home would be significantly high on resilience as compared to workfree individuals.

## **METHODOLOGY**

### *Sample*

Data was collected using convenience sampling method. Due to the restrictions imposed by lockdown, we were constrained to use online survey questions created on Google Forms. The inclusion criteria for participants were:

- The participants should be between 20- 50 years of age.
- Active familiarity of participants with the usage of social media.

### *Instruments*

**Everyday Technology Use Questionnaire by Christine McCauley (2013):** Consists of 21 items that evaluate the average time an individual spends on using technology. Few items are the following:

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- How often did you typically use – Facebook, Instagram, and WhatsApp?
- How much time did you spend doing the following activities- watching T.V, talk on phone?

Scoring: Each item on the scale is rated on the 8-point range of responses. The scale is rated based on how much the subject used technology over the past month. High score indicates higher level of technology use every day from last one month.

### **Perceived stress scale by Sheldon Cohen (1994)**

PSS consists of 10 statements, asking about the feelings and thoughts during the last month. Some of the statements are:

- In the last month, how often have you felt that things were going your way?
- In the last month, how often have you been angered because of things that were outside your control?
- In the last month, how often you felt nervousness or “stressed”?

Scoring: scores are obtained by reversing responses to four positively stated statements and then summing across all scale items, higher score exhibits greater perceived stress. The Cronbach Alpha Coefficient is 0.82 and validity coefficient is 0.93.

### **State anxiety inventory by Charles Spielberger (1983)**

Consists of 20 items that evaluate how respondents feel “right now” and “at this moment”.

I am presently worrying over possible misfortunes.

I feel confused.

I feel secure.

Scoring: scores are obtained by reversing responses to ten positively stated statements and then summing across all scale items, ranging from 20-80. Higher score reflects severe State Anxiety. The Cronbach Alpha Coefficient is 0.93 and the validity coefficient is 0.89.

### **Connor- Davidson Resilience scale: CD-RISC by Connor and Davidson (2003)**

CD-RISC consists of 25 items, for instance:

I think of myself as a strong a strong person when dealing with life’s challenges and difficulties.

Having to cope with stress can make me stronger.

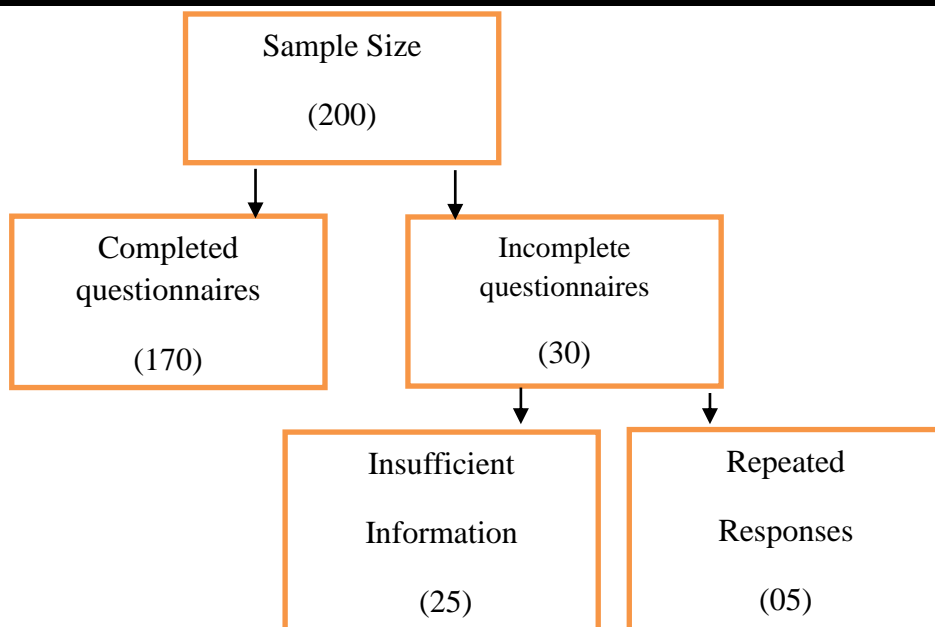
I am able to handle unpleasant or painful feelings like sadness, fear or anger.

Scoring: Each item on the scale is rated on the 5-point range of responses. The scale is rated based on how the subject has felt over the past month. The total score ranges from 0-100, with higher score reflecting greater resilience. The Cronbach Alpha Coefficient is 0.87 and validity coefficient is 0.76.

### ***Procedure***

t-test method of statistical analysis was used to analyze the effect of infodemic on the psychological wellbeing of individuals at the time of Pandemic COVID-19.

**RESULTS**

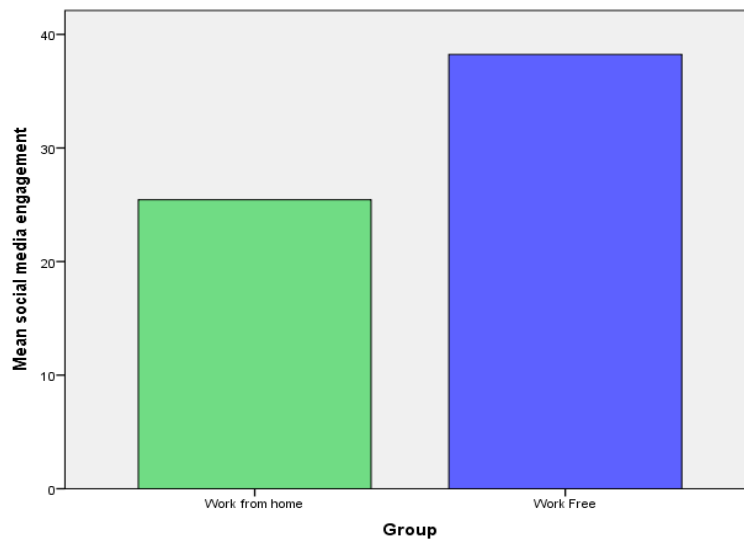


The online survey forms were completed by a total of 200 people. The number of females working from home were 39, while the number of males working from home were 46. The number of workfree females were 59, while males were 26. Following screening, there were 170 completed questions and 30 incomplete questionnaires due to insufficient information. The analysis of the data came out to be in line with hypothesis 1, hypothesis 2 and hypothesis 4. For Social media engagement there was a significant difference in the scores for work from home (M= 25.44, S. D= 11.58) and workfree individuals (M= 38.23, S. D= 14.71),  $p=.0002$ . (Table 1, Figure 1)

**Table 1: Showing difference between the levels of social media engagement among work from home and work free individuals**

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Social media engagement	Work from home	86	25.44	11.595	1.250
	Work Free	86	38.23	14.706	1.586

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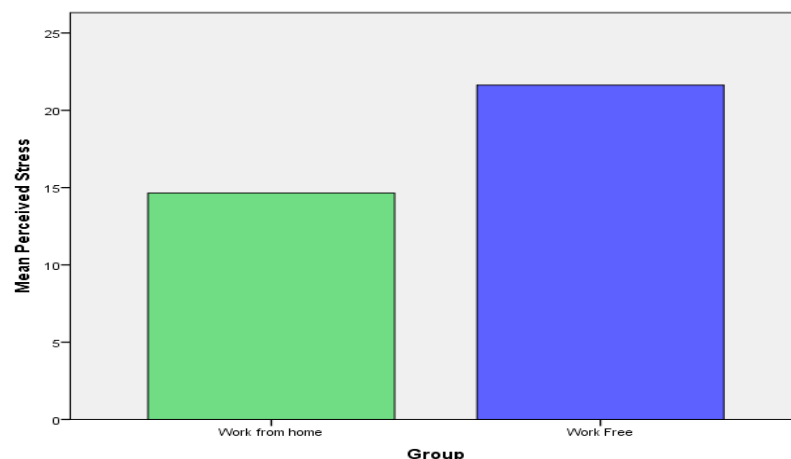


**Figure 1:** Bar chart demonstrates the difference between the levels of social media engagement among work from home and work free individuals

Table 2 and figure 2 shows the significant difference in the scores of Perceived stress for work from home (M= 14.65, S.D= 6.907) and workfree individuals (M= 21.63, S.D= 7.85), $p=.0002$ .

**Table 2:** Showing difference between the levels of perceived stress among work from home and work free individuals

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Perceived Stress	Work from home	86	14.65	6.907	.745
	Work Free	86	21.63	7.853	.847



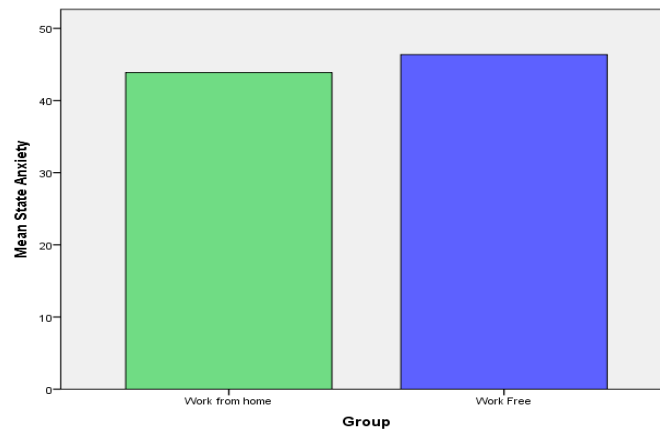
**Figure 2:** Bar chart demonstrates the difference between the levels of perceived stress among work from home and work free individuals

Table 3 and Figure 3 represents a no significant difference in the scores of State anxiety for work from home (M= 43.87, S. D= 46.83) and workfree individuals (M= 46.36, S. D= 11.55),  $p=.633$ .

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**Table 3: Showing difference between the levels of state anxiety among work from home and work free individuals**

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
State Anxiety	Work from home	86	43.87	46.832	5.050
	Work Free	86	46.36	11.554	1.246

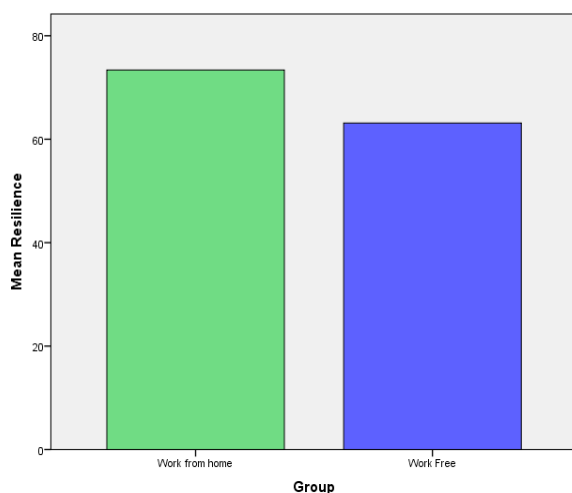


**Figure 3: Bar chart demonstrates the difference between the levels of state anxiety among work from home and work free individuals**

Table 4 and Figure 4 shows a significant difference in the scores of resilience for work from home (M= 73.38, S. D= 18.061) and workfree individuals (M= 63.14, S. D= 20.36), p=.001.

**Table 4: Showing difference between the levels of resilience among work from home and work free individuals**

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Resilience	Work from home	86	73.38	18.061	1.948
	Work Free	86	63.14	20.360	2.196



**Figure 4: Bar chart demonstrates the difference between the levels of resilience among work from home and work free individuals**

### DISCUSSION

Due to the widespread of COVID-19, Government has enforced the lockdown to halt the spread of the malignant virus. As the consequence of the lockdown, individuals are at home some are working from home whereas others are workfree. Individuals working from home are occupied with their official work however to pass time workfree individuals are spending more time and energy on social media which is overflowing with the myths, rumors, videos and hoaxes.

WHO (February, 2020) calls this “*Infodemics*” meaning an excessive amount of information concerning a problem which creates a state of confusion among the population. They can spread misinformation, disinformation and rumors during a health emergency. Infodemics can hamper an effective public health response and create confusion and distrust among people.

Moreover, WHO (2020) announced that “we are not just fighting a pandemic; we are fighting an infodemic”. Therefore, this study was designed to analyze the effect of social media on the development of stress, anxiety and resilient approach of the people who are working from home and the people who are workfree.

According to the findings of this study, the significant difference between the mean reveals that people who are not working from home (Workfree Individuals,  $M= 38.23$ ) use social media more than people who work from home ( $M= 25.22$ ). Furthermore, the results show a significant effect of social media usage on the psychological well-being of workfree individuals, as Pantic (2004); Richard, Caldwell and Go (2015), Steers (2016) also found that, excessive use of social media sites results in anxiety, depression, and low self-esteem. Excessive amounts of information, particularly from unreliable social media sources, can lead to confusion, which can then lead to fear, which is more deadly than the real problem and more difficult to overcome. People are staying at home due to the worldwide lockdown, and thanks to social media, news of widespread disease is reaching us all at a faster rate than the virus itself, leading to an increase in individual anxiety and stress levels. As a result, the results show that, when compared to those who work from home, workfree individuals have developed anxiety and stress since lockdown. Anxiety and stress, according to James-Lange theory (1885), can be an adaptive response when faced with an event that threatens one's survival. A fight-or-flight response is triggered in humans. Sensory feedback regulates emotional expression in general like anxiety and stress that is mild to moderate. High levels of anxiety and stress have been shown to impair psychological functioning, cause intellectual errors, and disrupt concentration and memory.

Furthermore, the significant difference between the means of perceived stress (Work from home,  $M= 14.65$  & Workfree Individuals,  $M= 21.63$ ), Resilience (Work from home,  $M= 73.38$  & Workfree Individuals,  $M=63.14$ ), show that people who are not working have a high level of stress, but a low level of resilience. Because of the fabricated videos, pictures, and posts explaining how the virus spreads, a growing number of cases have been impacting people's mental health, hampering their ability to bounce back (resilience), and making it difficult for them to recover. Skrove et al. (2012) discovered that resilience traits are linked to lower levels of anxiety and depression symptoms. According to Anyan and Hjemdal (2016), resilience mediated the relationship between stress and anxiety and depression symptoms. Therefore, overindulgence in social media, workfree individuals are confused with an abundance of information and are experiencing a variety of psychological issues such as stress, depression, frustration, and coping abilities. However, the findings of the



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study are not in line with hypothesis 3, due the no significant difference between the means of work from home (43.87) and workfree individual (46.36). Study by Morgan & Cotton, 2003 found that greater number of hours spent emailing and instant messaging (IM) or chatting in chat rooms was associated with lower symptoms of anxiety.

### CONCLUSION

The study's findings could indicate that individuals who were preoccupied with their work during the lockdown had less time to use social media whereas individuals who were not working, spent more time on social media and became victims of excessive and unauthentic information about the virus, which negatively impacted their mental health by causing anxiety, stress, and lowering resilience. Recommendations based on this study's findings are that for the COVID-19 update, official websites and sources should be used no more than twice a day to avoid confusion. According to an article titled "Self-Reflection: It's Time to Bridge the Gap Between Inner and Outer Self" (Kaur Mandeep and Kaur Jaismeen, April,2010), instead of worrying about the negative consequences, everyone should use this time to rejuvenate their relationships, hobbies, and spending time with their children, which they were unable to do due to life's hassles.

Stressed, anxious, or frustrated people should practice mindfulness, deep breathing, yoga, and relaxation techniques. If this does not help, seek the advice of a mental health professional.

Because of the increased use of social media, which is hampering people's mental health, government institutes, schools, and private organizations should hold workshops to raise awareness about the negative effects of social media on our mental health and emotional well-being. Furthermore, the counsellors of the respective organizations should assist and attempt to equip people regarding alternative ways to be socially connected.

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### **Conflict of Interest**

The author(s) declared no conflict of interest.

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