

Psychological effect of mass media during initial stages of COVID-19 pandemic amid lockdown in India

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ABSTRACT

The 2019 Coronavirus disease (COVID-19) pandemic is an International emergency as posted by WHO, and poses a challenge in terms of psychological effects. Research data is important to understand the influence a pandemic has on the people. The present study tries to examine the Psychological impact of Media exposure related to COVID-19 on Depression, Anxiety and Stress, in terms of time spent on COVID-19 updates through various media channels during the first week of April, when the total case count is below 4500. The data will be used for future reference. A total of 139 participants filled the questionnaire through online mode. DASS-21 scale is used to measure the emotional states of Depression, Anxiety and Stress, which is being correlated to time spent on watching news, and time spent on watching news about COVID-19. The results showed a positive relation. No difference between males and females is noted. Another finding from the study shows the exposure to media in general has a significant positive relation with anxiety and stress. It is thus, concluded from study that during the initial phases of COVID-19, Mass media exposure in terms of time spent in COVID-19 news updates is positively related to psychological effect in terms of Depression, Anxiety and Stress. The relation is though, not a significant one, which can be devoted to factors like people's attitudes, risk perception, perceived vulnerability, perceived severity and self-efficacy during the initial phases of disease outbursts.

Keywords: Covid-19, Depression, Anxiety, Stress, Media Exposure, Perceived Vulnerability, Self-Efficacy

A major defining global health crisis of our times is the COVID-19 pandemic. According to WHO, Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. The major symptoms experienced by most of the patients are mild to moderate respiratory illness and recover without requiring special treatment. But more serious illness may develop in the case of older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer. It is important to have the best of information about the COVID-19 virus, the disease it causes and how it spreads. This will help in prevention and decreased rates of transmission of the disease. (WHO)

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Respiratory etiquette (for example, by coughing into a flexed elbow) is important as the virus spreads primarily through droplets which can be of saliva or discharge from the nose when an infected person coughs or sneezes. Protection is possible by washing hands or using alcohol based sanitizers and also, by avoiding touching face. Currently, no vaccines or specific confirmed treatment is available. Though, many clinical trials are taking place. (WHO).

In India, to reduce the spread of disease the entire nation is being put under a lockdown. This has led to a situation of public alarm thus, creating a state of urgency in the entire nation. This lockdown has had a huge impact not only by giving the time required by officials to increase their supply of human and other resources, but by breaking chains of transmission overall, reducing the spread. But this has led to a major setback in the minds of people of India. It has completely changed how people think and perceive things. Resultant is a constant state of distress in the minds of people.

As the situation is unfolding, the 21-day lockdown being imposed has caused a state of unpleasant feeling and emotions impacting daily activities, this is called Psychological Distress. Psychological Distress is just a psychological discomfort that interferes with daily functioning of the individual, which includes depression, anxiety, stress, psychosis, PTSD, substance abuse in disaster populations.

Previous studies have very well proven the psychological burden of such events in the lives of people. In the study ‘Factors influencing psychological distress during a disease epidemic: Data from Australia’s first outbreak of equine influenza’ indicated that certain groups were more vulnerable to high psychological distress; specifically younger people, and those with lower levels of formal educational qualifications. In the study, Study findings indicated that this affected population had highly elevated levels of psychological distress especially in higher risk zones. (Taylor et.al, 2008)

In the current study, Psychological Effects covered mainly are depression, anxiety and stress. Depression can be understood as a feeling of low mood persistent for at least 2 weeks or more, characterised by lack of interest in activities or earlier enjoyable activities. Symptoms may also include disturbed sleep and appetite, tiredness and poor concentration. Suicide ideation or suicide attempts may also be present along with (ICD-10).

Anxiety is an emotion characterised by feelings of tension, worried thoughts and physical changes like increased blood pressure. (APA). Anxiety refers to anticipation of a future concern and is more associated with muscle tension and avoidance behaviour. Anxiety disorders can cause people into try to avoid situations that trigger or worsen their symptoms. Job performance, school work and personal relationships can be affected (ICD-10).

Stress: “A mentally or emotionally disruptive or disquieting influence, or alternatively, a state of tension or distress caused by such an influence (stressor).” According to Selye stress is a process, which is resultant or outcome of the causative agent ‘stressor’, which is a trigger for this process. (Selye,1976). Humans respond to stress at physiological, behavioural and cognitive levels. Chronic stress in an individual has most deleterious health effects.

The sequence of events, in the past month, can have a huge impact on the mental health of an otherwise healthy person. In the most recent research in China: ‘A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and

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policy recommendations' by Qiu, Min et. al. first nationwide survey for peritraumatic psychological distress during the epidemic was done through especially designed self-report questionnaires. Out of a total of 52730 almost 35% of the respondents experienced psychological distress. Females showed significantly higher stress levels than male counterparts. (March, 2020)

With respect to mass media, it has long been recognized as one of the most powerful forces and indeed has proven to be the one in a crisis like this. Today's media landscape, in which individuals are exposed to a diversity of messages anytime, anywhere, and from a great variety of sources on an increasing number of different media platforms. It is thus evident that the youth is not bound to gather information or news updates through news channels on T.V so social media platforms also become cardinal. It has complicated the measurement of media exposure even more. (Vreese & Neijens, 2016)

Mass media is a source of providing important information to the public, and in turn, can induce positive healthy behaviour practices (i.e., handwashing, social distancing) in the individuals, that will reduce the probability of contracting the disease (Collinson et.al,2015). Along with this, comes a negative impact of information on the health of people. It is quite clear that over exposure to negative big events can lead to media malaise, which can further have a deep psychological effect, which is why screening for the same at the earliest is required. So the research aims to understand the role mass media, in terms of time spent on watching news about COVID-19 and its effect on psychological distress.

Several psychological studies have already looked into the ill effects of televised exposure to specific major news events. In a 2007 study 'Negative psychological effects of watching the news in the television: relaxation or another intervention may be needed to buffer them!' By Szabo and Hopkinson, subjective measures of state anxiety, total mood disturbance (TMD), positive affect, and negative affect were obtained before and after a random 15 mint news broadcast, as well as following relaxation exercise or the lecture which was given after broadcast. The results show that state anxiety and TMD increased, whereas positive affect decreased in both groups after watching the news and 15 min later they returned to baseline (pre-news) only in the relaxation group, whereas they remained unchanged in the control group. These findings demonstrate that watching the news on television triggers persisting negative psychological feelings.

These effects were observed in an experiment using random news, the effects can be troubling in cases where a daily update on the number of deaths, number of active cases, constant poll and debate of what went wrong, what could be done. This can create a state of panic in an individual.

Therefore, it is important to understand the role played by the media on psychological effect in a pandemic affected population.

MATERIALS & METHODS

Objective :

1. To find the effect of watching news on Depression, Anxiety and Stress.
2. To find out the effect of news about COVID-19 Pandemic and Depression, Anxiety and Stress
3. To compare psychological distress between males and females.

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Hypothesis:

- H₁: There will be a significant relationship between time spent on watching news about COVID-19 and Depression in the adult population.
- H₂: There will be a significant relationship between time spent on watching news about COVID-19 and Anxiety in the adult population.
- H₃: There will be a significant relationship between time spent on watching news about COVID-19 and Stress in the adult population.
- H₀: There will be no significant difference in time spent on watching news about COVID-19 and Psychological Distress between male and female population.

Research design:

Correlational design is being used.

Sample:

The sample consists of 140 participants between the age group 19-39 years, majorly from the state of Punjab. The data collection took place after the announcement of lockdown by the Government of India during the first week of April.

Inclusion criteria:

1. Ages between 19-39 years are included in the study
2. The sample consists of both male and female population
3. Only people in the lockdown are being included.
4. The sample well versed in English language were chosen.
5. The sample consisted of people who are in lockdown condition, that is are not moving in and out of their homes.

Exclusion criteria:

1. People having any previous chronic or acute psychiatric diagnosis were excluded from the study.
2. People having any psychotic diagnosis were excluded.
3. Sample consisting of people who are working as volunteers during lockdown, constantly making movements have been excluded from the study.

Psychological tools:

Depression Anxiety Stress Scales (DASS)-21: The University of New South Wales in Australia, developed The Depression, Anxiety and Stress Scale - 21 Items (DASS-21), which is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic nonspecific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient. Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items.

Procedure:

The present study is conducted through following steps:

Questionnaire Construction: The questionnaire was made online through Google Forms. The questionnaire consists of three parts. The first part consists of Consent Form, which is filled

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up by each individual before the other details and personal data sheet is used to elicit all the demographic details regarding respondents age, gender, occupation etc. The second part has questions related to the media and time spent on watching news. These questions are self-made to assess the time spent and its psychological impact. In the third part, DASS-21 has been used to measure depression, anxiety and stress.

Data collection:

The Google Form was circulated through online channels. About 300 forms were circulated in first week of April, out of which only 139 people were screened as per the inclusion criteria, in which 52 were males and 87 females. The data from current study will be used to compare for further research, in times when a peak state will be attained with respect to COVID-19 in India.

Statistics:

After the data collection was over, correlation and t-test was done using SPSS's Pearson's Product Moment Correlation and t-test.

RESULTS & DISCUSSION

Table 1: Correlation between time spent on watching news and three subscales of DASS-21 and correlation between time spent on watching news about COVID-19 and three subscales of DASS-21

		DASS (Depression)	DASS (Anxiety)	DASS (Stress)	DASS (Total)
Time spent in watching news	Pearson Correlation Sig. (2-tailed)	0.34 0.000	0.24 0.004**	0.29 0.001**	0.33 0.000
Total Time spent in watching news about COVID-19	Pearson Correlation Sig. (2-tailed)	0.08 0.362	0.10 0.228	0.06 0.478	0.09 0.301

**Correlation is significant at 0.01 level (2-tailed)

Interpretation :

If the p-value<0.01 or p-value<0.05, correlation is considered significant, and Alternate Hypothesis is accepted and Null Hypothesis is rejected. But on the basis of above scores, it is interpreted that the following Alternate Hypothesis are Rejected.

- H₁: There will be a significant relationship between time spent on watching news about COVID-19 and Depression in the adult population.
- H₂: There will be a significant relationship between time spent on watching news about COVID-19 and Anxiety in the adult population.
- H₃: There will be a significant relationship between time spent on watching news about COVID-19 and Stress in the adult population.

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Table 2: Comparison of Time spent on watching news about COVID-19 and Psychological Distress among Male and Female.

	Female	Male
Sample Size (N)	87	52
Mean	13.045	14.76
T- value	-0.907	
P(T<=t) two-tail	0.365	

Interpretation :

If the p-value > 0.01 or p-value > 0.05, Alternate Hypothesis is rejected and Null Hypothesis is accepted. On the basis of above scores, it is interpreted that the following Null Hypothesis is Accepted.

Ho: There will be no significant difference in time spent on watching news about COVID-19 and Psychological Distress between male and female population.

DISCUSSION

From the findings it is evident that, the correlation coefficient between Time spent in watching news since last 2 weeks and Anxiety and Stress subscale of DASS-21 is positive and significant individually. ($r = 0.29$, $p < 0.01$), (*Table 1*) by which it can be observed that as time spent in watching news increases, anxiety increases. In a 2015 research in Israel ‘Anxiety-Inducing Media: The Effect of Constant News Broadcasting on the Well-Being of Israeli Television Viewers.’, a two week survey was performed on 500 Jewish participants and it was observed that increased frequency of viewing newscasts was associated with reported anxiety which was reflected in uncontrolled fear, physiological hyperarousal, sleeping difficulties, and fearful thoughts. (Bodas, Siman, Peleg, Solomon, 2015). In another study it was observed that News media exposure and anxiety were positively related at low levels of irrationality. (McNaughton-Cassil, 2001). However, no relation is predicted with Depression. It is in sync with the results from study ‘The news media and psychological distress.’, where media exposure was not found predictive of depression but, news media exposure and anxiety were positively related. In this very research it was found that level of news media exposure is also linked to stress (McNaughton-Cassil, 2001).

There is insufficient evidence from many studies that media consumption intensity in times of disasters can yield clinically significant range reactions or enduring emotional reactions. (Betty Pfefferbaum, 2014) In the view of COVID-19, a positive correlation can be observed between time spent on watching news on its content within last 2 week and Depression ($r = 0.08$, $p > 0.05$), Anxiety ($r = 0.10$, $p > 0.05$), and Stress ($r = 0.06$, $p > 0.05$), independently. It is indicated from above that, as there is an increase in time spent watching about COVID-19, it can increase in levels of depression, anxiety and stress respectively. Another research which shows similar results was, ‘Study on the public psychological states and its related factors during the outbreak of coronavirus disease 2019 (COVID-19) in some regions of China’ 600 participants were examined for Anxiety and Depression during February 6-9. And the results showed that during the outbreak of COVID-19, 562 people (93.67%) did not have any symptoms of anxiety and 38 people (6.33%) felt anxiety. 497 people (82.83%) had no

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symptoms of depression and 103 people (17.17%) were depressed. (Wang et. al., March, 2020). This can be compared to the study ‘A Longitudinal Study on the Mental Health of General Population During the COVID-19 Epidemic in China’, in which 1738 respondents were surveyed twice - during the initial outbreak, and the epidemic's peak four weeks later and moderate-to-severe stress, anxiety and depression were noted in 8.1%, 28.8% and 16.5%, respectively during the initial evaluation, and there were no significant longitudinal changes in stress, anxiety and depression levels. (C. Wang et. al., April, 2020). It is quite evident that during February there were stable psychological states observed in people. But in the month of April, a longitudinal study showed a rise in the psychological states experienced especially in anxiety. Thus, it elucidates the above results that, no pathological states are being observed as a result of media exposure. The pattern of results can be linked to people’s attitudes, risk perception, perceived vulnerability, perceived severity and self-efficacy. During the Avian Influenza (AI) epidemic in Netherlands, which had a potential for pandemic, a study was conducted to investigate perceived vulnerability, severity and precautionary behaviour related to AI in the Netherlands during seven consecutive surveys in 2006 - 2007 as well as possible trends were found in risk perception and self-reported precautionary behaviours. The results of the study showed that perceived vulnerability was much lower and decreased slightly during one-year period. But perceived severity of AI was high and remained so over time. also, it was found that Self efficacy was a stronger predictor of precautionary behaviour. (Zwart et.al, 2010)

During the time of research, there were less than 4500 cases and about 3600 active cases of COVID-19 in India, spread across different states and union territories, so it can be said that perceived vulnerability and risk perception were low, which contributed to no psychological active states due to COVID-19 media exposure. But there is insufficient research evidence to prove it.

In *Table 2*, a comparison between males and females show no significant difference in resultant Anxiety, Depression and Stress, related to COVID-19 news exposure.

CONCLUSION

The findings of this study shows that during the initial phases of COVID-19, Mass media exposure in terms of time spent in COVID-19 news updates is positively related to psychological effect in terms of Depression, Anxiety and Stress. Though, this initial data has shown a weak and insignificant relation. It is also evident from the study that as media exposure in terms of time spent in watching news increases leads to an increase in Anxiety and Stress.

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Conflict of Interest

The author declared no conflict of interest.

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