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Exploring Information Seeking Behavior of the People during COVID-19 Outbreak in India

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Abstract

The world is in great chaotic condition due to the outbreak of COVID-19 caused by a novel coronavirus. People are facing havoc in every corner of the world. As it is an actual novel virus, people search everywhere on the internet and other platforms to know much about this lethal virus. This paper examines various aspects of information-seeking behavior and pattern among ordinary people in India through online mode. The data were collected from August to November 2020. This paper also seeks to identify different areas of information need among common people and their problems while searching for desired information. The primary objectives of the paper include examining the users' activeness towards social media usage, identifying the most preferred information sources by users, and investigating different purposes for seeking information related to COVID-19 by users.

Keywords: Information Seeking Behavior, COVID-19, Coronavirus, Information need

1. INTRODUCTION

The world is encountering a pandemic situation by a novel virus named "severe acute respiratory syndrome coronavirus-2" (SARS-CoV-2) (Moreno, Fuentes-Lara & Navarro, 2020). The outbreak of the novel coronavirus was first identified in China (Wuhan) and it was rather denoted in India (Kerala) on January 28, 2020, when the virus emerged and spread rapidly worldwide. The COVID-19 was declared as a global pandemic by the World Health Organization (WHO) on March 11, 2020 (WHO, 2020); as of February 20, 2021, the total number of cases reported was 106,685,660, and 2,327,308 deaths had been reported worldwide

(https://www.worldometers.info/coronavirus/). The WHO issued a guideline for retraining the spread of coronavirus outbreaks.

The latest information related to coronavirus's rapid development of information and communication technologies has enabled television channels and social media to broadcast health information. The partially attributed to the successful prevention education facilitated seeking treatment of suspected coronavirus patients at the specialized center. People could stay up to date on the latest news/information about the COVID-19 at their convenience, check facts when encountering uncertainties, and obtain informational Seeking Behaviour for health issues. The primary purpose of using social media is to gather the information and techniques to tackle the pandemic situation of Covid-19.

Information Seeking Behaviour of the people during COVID-19 is essential in controlling the pandemic. Social Media (WhatsApp, Facebook, Instagram, YouTube, Twitter, Telegram, and LinkedIn) are a means of communication that can provide health-related information that potentially impacts people's behavior during COVID-19 outcomes large scale in India. (Gesualdo et al., 2010) suggested that digital media have become prominent in driving the change of preventive behaviors and minimizing the risk of pandemic threats due to the disseminating information. It results from the association between health-related information consumption and disease control behaviors. (Liu, 2020) found that during the COVID-19 health crisis, timely and adequate information kept the public informed and helped curb the future outbreak of the disease. It was also found that seeking COVID-19-related information on MSNs, SLSSs, and online news media was associated with increased preventive practices.

The emerging digital media platforms include social media, mobile social networking apps (MSNs), and online news media are now preferred for health information seeking. Many scholars have drawn attention to Social media platforms, and mobile apps can seek and share information. For example, (Scheibe, Fietkiewicz, & Stock, 2016) analyzed the information behavior on Social Live streaming services. They found that YouNow users like to watch streams, chat while watching and reward performers by using emoticons. It also seemed that participants want to stream actively as well. The main motive for using YouNow is a simple fact that this system is efficiently utilized. SLSSs play an increasingly vital role in spreading information. Despite the emergence as sources of health information of increasingly diverse digital media platforms, relatively few studies have differentiated various digital media channels and explored their effects on behavioral performance.

2. METHODS

2.1. Procedure

This study is a retrospective analysis of results from online surveys conducted in India. The online questionnaire made using Google form and distributed among different social media platforms. The participants were asked to participate in the online survey and fill the questionnaire.

2.2. Participants

This study was conducted online using social media platforms. The link of the survey form was sent to the participants and asked them to forward the link to other people. All participants have explained the purpose of the study and individuals who agreed to this study were asked to complete the survey, otherwise, they can leave the survey. The survey takes only 5 minutes to complete. The data were collected from August to November 2020.

2.3. Statistical analysis

The data were initially analyzed by frequency count and percentage of the data. The second step for data analysis was the making rank analysis. The most prominent rank-based normalization procedures are those attributed to Van der Waerden, Blom, Bliss (the Rankit procedure), and Tukey. Van der Waerden's formula was thought to improve on percentiles by computing quantiles (equal unit portions under the normal curve corresponding with the number of observations in a sample) not strictly based on ranks but according to the rank of a given score value relative to the sample size (Soloman & Sawilowsky, 2009).

Blom's method:

$$s = \Phi\left(\frac{r - 3/8}{n + 1/4}\right)$$

-Where s is the normal score for an observation, r is the rank for that observation, n is the sample size and Φ(p) is the p^{th} quantile from the standard normal distribution (Altman, 1991).

3. OBJECTIVES

The study objectives to exploring information Seeking Behaviour of the people during the COVID-19 Outbreak in India. The specific objectives are as follows;

1. To examine the users' activeness towards social media usage during the COVID-19 outbreak;
2. To ascertain different areas of information needs of users during the COVID-19 outbreak;
3. To identify the most preferred information sources by users for seeking COVID-19 related information;
4. To investigate different purposes for seeking information related to COVID-19 by users.
5. To identify the problems faced by users while seeking information about COVID-19.

4. ANALYSIS OF DATA

4.1. Demographic Profile of the Respondents

The data comprises a wide range of demographic characteristics because of online data collection.

4.1.1. Category-wise distribution of the respondents

Designation	Frequency	Percent	Cumulative Percent	Proportion Estimate Rank	Fractional Rank Percent
Students	74	46.54	46.54	.7759	85.71
Academician	42	26.42	72.96	.6379	71.43
Administrative	12	7.55	80.50	.3621	42.86
Technical employee	11	6.92	87.42	.2241	28.57
House Keeper	7	4.40	91.82	.0862	14.29
Unemployed	13	8.18	100.00	.5000	57.14
Total	159	100.00		.9138	100.00
Std. Deviation		16.66223			
Mean		16.6683			

Table – 1: Category-wise distribution of the respondents (Proportion Estimate of using Blom's Formula)

Table - 1 shows the category-wise distribution of the respondents. The data shows that 46% of the respondents are students, 26.42% from Academician, 7.55% are

from Administrative post, 6.92% are Technical employees, and 4.40% are House Keepers. The data also comprises 8.18% of respondents from the Unemployed category.

4.1.2. Age-wise distribution of the respondents

Age	Frequency	Percent	Cumulative Percent	Proportion Estimate Rank	Fractional Rank Percent
16 – 25	58	36.48	36.48	0.7400	83.33
26 – 35	45	28.30	64.78	0.5800	66.67
36 – 45	34	21.38	86.16	0.4200	50.00
46 - 55	18	11.32	97.48	0.2600	33.33
56 - 65	4	2.52	100.00	0.1000	16.67
Total	159	100.00		0.900	100.00
Std. Deviation		13.4469			
Mean		20.000			

Table – 2: Age-wise distributions of the respondents

Table - 2 shows that the population selected for the study comprises a majority of respondents from the 16-25 age group with 36.48%. The 28.30% respondents are from the 26-35 age group, 21.38% from the 36-45 age group, 11.32% from the 46-55 age group, and 2.52% of respondents from the 56-65 age group.

4.1.3. Gender-wise distribution of the respondents

Gender	Frequency	Percent	Cumulative Percent	Proportion Estimate Rank	Fractional Rank Percent
Female	76	47.8	47.8	0.1923	33.33
Male	83	52.2	100.0	0.5000	66.67
Total	159	100.0		0.8077	100.00
Std. Deviation		3.11127			
Mean		50.000			

Table – 3: Gender-wise distributions of the respondents

Table 3 shows the gender-wise distribution of the respondents. The data reveal that 47.8% of respondents are female and 52.2% of respondents are male. It shows that the male population in the internet-using community is slightly more than female.

4.1.4. Educational profile of the respondents

Qualification	Frequency	Percent	Cumulative Percent	Proportion Estimate Rank	Fractional Rank Percent
Intermediate	10	6.29	6.29	0.3621	42.86
Diploma	1	0.63	6.92	0.0862	14.29
Graduate	36	22.64	29.56	0.5000	57.14
Post Graduate	68	42.77	72.33	0.7759	85.71
M.Phil	4	2.52	74.84	0.2241	28.57
Ph.D	40	25.16	100.00	0.6379	71.43
Total	159	100.0		0.9138	100.00
Std. Deviation		16.45709			
Mean		16.6683			

Table – 4: Educational profiles of the respondents

Table 4 shows the educational qualification of the respondents who participated in the study. The data shows that 6.29% of respondents have Intermediate (10+2) as their educational qualification. There are 0.63% diploma holders, 22.64% are graduate, 42.77% are post graduate, 2.52% are M.Phil and 25.16% are Ph.D. degree holders. The finding shows that the majority of people have acquired higher education and others are still studying in the schools. It is worth mentioning that the population comprises one-fourth population of having a doctorate.

4.2. Time spent searching about Covid-19 related information

Time spend	Frequency	Percent	Cumulative Percent	Proportion Estimate Rank	Fractional Rank Percent
<1 Hour	11	6.92	6.92	0.4200	50.00
1 - 3 Hours	83	52.20	59.12	0.7400	83.33
4 - 6 Hours	59	37.11	96.23	0.5800	66.67
9 - 12 Hours	5	3.14	99.37	0.2600	33.33
>12 Hours	1	0.63	100.00	0.1000	16.67
Total	159	100.00		0.9000	100.00
Std. Deviation		23.23863			
Mean		20.000			

Table – 5: Time spent searching about Covid-19 related information

Table 5 shows the time spend by the people for searching COVID-19 related information in a day It is found that 6.92% of respondents spend less than 1 Hour whereas 52.20% of respondents spend 1 - 3 Hours in a day searching COVID-19 information. 37.11% of the respondents spend 4 - 6 Hours and 3.14% of respondents spend 9 - 12 Hours for searching information about COVID-19. The data trend shows that most of the people spend 1 – 6 hours searching about COVID-19 related information whereas very few people spend beyond this time duration. A very few 0.63% of respondents spend more than 12 hours in a day for searching COVID-19 related information.

4.3. Social media activeness during the COVID-19 outbreak

Social Media Platform	Frequency	Percent	Proportion Estimate Rank	Fractional Rank Percent
Whatsapp	155	97.48	0.9000	100.00
Youtube	146	91.82	0.7400	83.33
Facebook	136	85.53	0.5800	66.67
Telegram	126	79.25	0.4200	50.00
Twitter	102	64.15	0.2600	33.33
Instagram	87	54.72	0.1000	16.67
Std. Deviation		16.48286		
Mean		78.8250		

Table – 6: Social media platform used for seeking information about Covid-19

Table 6 shows people's activeness over different social media platforms for seeking COVID-19 related information. The respondents are allowed to mark more than one social media they are using. The data shows that the majority of respondents use WhatsApp for seeking COVID-19 related information with 97.48%, followed by Youtube with 91.82%. It is also observed that 85.53% of respondents use Facebook, 79.25% use Telegram, 64.15% use Twitter and 54.72% use Instagram for seeking COVID-19 related information.

4.4. Information needs in the pandemic situation of Covid-19

Purpose	Frequency	Percent	Proportion Estimate Rank	Fractional Rank Percent
Signs and symptoms of the Coronavirus	159	100.00	.8279	86.67
Causes and treatments of illness	159	100.00	.8279	86.67
the standard advice for individuals having corona virus-like symptoms	149	93.71	.7623	80.00
Prevention and control of coronavirus	148	93.08	.6967	73.33
Procedure for seeking treatment of suspected coronavirus patients at the specialized centre.	142	89.31	.6311	66.67
Procedure for seeking treatment of suspected coronavirus patients at the specialized center.	142	89.31	.6311	66.67
Information about the proper procedure for washing hand and using sanitizer	142	89.31	.6311	66.67
Updated number of coronavirus infected cases across the world	139	87.42	.5656	60.00
Availability of medicines and vaccination in the country	137	86.16	.5000	6.67
Updated information about coronavirus hot-spot areas in the country	132	83.02	.4344	46.67
The updated list of coronavirus affected cities in India	128	80.50	.3689	40.00
Coronavirus protection products and their availability	124	77.99	.3033	33.33
Coronavirus vulnerable groups and the level of risk	117	73.58	.2377	26.67
Controversies about the political agenda of coronavirus outbreak	115	72.33	.1721	20.00
Information about Government plan for preventing the pandemic.	112	70.44	.1066	13.33
Updated number of fatalities and recoveries from coronavirus in India	103	64.78	.0410	53.33
Std. Deviation	10.71943			
Mean	84.1087			

Table – 7: Types of Information need in the pandemic situation of Covid-19

The question was designed to access the type of information people search over the internet and social media platforms. The respondents were allowed to select more than one option provided. The findings show that all of them search Signs and symptoms of the Coronavirus and Causes and treatments of illness. 93.71% of respondents search the standard advice for individuals having corona virus-like symptoms and 93.08% search for Prevention and control of coronavirus. 89.31% of

respondents seek information regarding the Procedure for seeking treatment of suspected coronavirus patients at the specialized centre and Information about the proper procedure for washing hands and using sanitizer. 87.42% of respondent seek the list of Updated number of coronavirus infected cases across the world, 86.16% seeks Availability of medicines and vaccination in the country, 83.02% seeks Updated information about coronavirus hot-spot areas in the country and 80.50% seeks information regarding. The updated list of coronavirus affected cities in India. 77.99% of respondents search Coronavirus protection products and their availability related information, 73.58% search Coronavirus vulnerable groups and the level of risk, 72.33% search about Controversies about the political agenda of coronavirus outbreak, 70.44% search for Information about Government plan for preventing the pandemic and 64.78% about the Updated number of fatalities and recoveries from coronavirus in India.

4.5. Most preferred information sources for seeking COVID-19 related information

Preferred information sources	Frequency	Percent	Proportion Estimate Rank	Fractional Rank Percent
Dedicated websites of Corona Virus	32	20.1	0.7162	77.78
Family Members/Friends/Colleagues	22	13.8	0.6081	66.67
Medical Staff	21	13.2	0.5000	55.56
News websites	18	11.3	0.3919	44.44
Newspapers (online/print)	13	8.2	0.2838	33.33
Posters/Brochures	7	4.4	0.0676	11.11
Social Media (WhatsApp, Facebook, Instagram, YouTube, Twitter, Telegram, LinkedIn)	34	21.4	0.8243	89.89
Television	9	5.7	0.1757	22.22
Total	159	100.0	0.9324	100.00
Std. Deviation	6.21609			
Mean	12.2625			

Table – 8: Most preferred information sources

Table – 8 shows the most preferred information sources people used to search for their required information during the COVID-19 outbreak. The data shows that most

of the people prefer (21.4%) Social Media for searching information, 20.1% prefer dedicated websites of Coronavirus and 13.8% of respondents prefer to ask from Family Members/Friends/Colleagues. There are 13.2% of respondents prefer to contact Medical Staff, 11.3% visit News websites and 8.2% respondents prefer Newspapers (online/print). A very few numbers of respondents (5.7%) prefer Television and 4.4% prefer Posters/Brochures issued by the government and various organizations.

4.6. Purpose of seeking Covid-19 related information

Purpose	Frequency	Percent	Proportion Estimate Rank	Fractional Rank Percent
To remain vigilant and adjust my precautionary measures	151	94.97	0.9138	100.00
To find out the medicine to improve immunity	142	89.31	0.7759	85.71
To find out the information about safety products for Covid-19	139	87.42	0.6379	71.43
To find out the latest information related to coronavirus	136	85.53	0.5000	57.14
To help someone who was looking for information	117	73.58	0.3621	42.86
To prepare advisory and circular related to coronavirus for distribution within my organization	39	24.53	0.0862	14.29
To find out information about coronavirus for research and development	81	50.94	0.2241	28.57
Std. Deviation	25.64752			
Mean	72.3257			

Table – 9: Purpose of seeking information

Table – 9 shows the data regarding the purpose of seeking COVID-19 related information. The question was designed to allow respondents to choose more than one option. The data shows that 94.97% of respondents seek information to remain vigilant and adjust their precautionary measures, 89.31% seek information to find out the medicine to improve immunity and 87.42% of respondents seek information to find out the information about safety products for Covid-19. 85.53% of respondents seek to find out the latest information related to coronavirus, 73.58% seek information to help someone who was looking for information and 50.94% to find out information about coronavirus for research and development. 24.53% of respondents seek information to prepare advisory and circular related to coronavirus for distribution within my organization.

4.7. Problems faced searching COVID-19 information

Problem	Frequency	Percent	Proportion Estimate Rank	Fractional Rank Percent
Non availability of required information	125	78.62	0.2600	33.33
Credibility or authenticity of information on coronavirus	148	93.08	0.7400	83.33
Too much repetitive information available on the Internet	114	71.70	0.1000	16.67
frequent changes in information and content	139	87.42	0.5800	66.67
Difficulty in understanding corona virus related information	132	83.02	0.4200	50.00
Information is not available in my native language	152	95.60	0.9000	100.00
Std. Deviation	8.99961			
Mean	84.9067			

Table – 10: Problems faced while searching Covid-19 related information

Table – 10 shows the problem people faced while searching Covid-19 related information. The question was designed to allow selecting more than one option. The data shows that 95.60% of respondents said that Information is not available in their native language while 93.08% of respondents face problems regarding the Credibility or authenticity of coronavirus information. 87.42% of respondents face the problem because of frequent changes in information and content whereas 83.02% admit that they faced Difficulty in understanding corona virus-related information. 78.62% of respondents said that they face the problem of Non-availability of the required information and 71.70% of respondents facing the problem of too much repetitive information available on the Internet.

5. DISCUSSION

The study compromises a variety of nature of participants, including most of the students followed by Academician, Unemployed, Administrative people and Technical employees in decreasing order. It includes most respondents from the 16-25 age group, followed by the 26-35 age group, 36-45 age group, 46-55 age group, and 56-65 age group. The study has almost half the participation of males and half the participation of female respondents. The study has a large portion of highly educated people. Nearly half of the respondents are graduates, and one-fourth are Postgraduate and Ph.D. respectively.

The data shows that people spend a reasonable amount of time daily searching

for COVID-19 related information. It shows that people are curious and worried about the disease and want to know about the disease outbreak. The data shows that people are spending more time over social media platforms to search COVID-19 related information. They also search videos of doctors and medical professionals to gather the required information. Instant messaging apps like WhatsApp and Telegram are the most preferred medium of sharing information regarding COVID-19. The trend shows that people follow official Twitter accounts of WHO and the Ministry of Health getting quick information.

The findings show that people are curious about searching for information about Signs and symptoms of the Coronavirus and the Causes and treatments of illness. They also seek standard advice for individuals having corona virus-like symptoms and Prevention and control of coronavirus disease. They search the information about the procedure for seeking treatment of suspected coronavirus patients at the specialized center and Information about the proper procedure for washing hands and using sanitizer. People are more curious about looking at the list of coronavirus infected cases, fatalities and recoveries, coronavirus hot-spot areas nearby and the availability of medicines and vaccination in the country.

The findings show that people prefer Social Media for searching information, dedicated websites of Corona Virus, News websites, Newspapers (online/print). The results reveal that people are using the internet for getting COVID-19 related information rather than Television. People seek information to remain vigilant and adjust their preventive measures, find out the medicine to improve immunity and safety products for COVID-19. People are curious about finding the latest information, research, and development about coronavirus.

The study revealed that people are facing problems due to the non-availability of their required information. The second problem is information is available mainly in English and hard to understand by them. People also have doubts about frequent changes in information. It is also worth mention that there is too much repetitive information available on the internet, so credibility or authenticity of information is a major issue.

6. CONCLUSION

The study was aimed to find the information Seeking Behaviour of the people during the COVID-19 Outbreak in India. The analysis revealed that people are more curious about the finding of COVID-19 related information. It is also found that people are more using social media platforms instead of traditional information sources. It is also found that educated people use the online platform to see real-time information rather than

Newspapers and Television. It shows that people are now more aware of health-related information seeking and trying to update their knowledge during the pandemic outbreak. The study revealed the changing information-seeking behavior of the people during an outbreak. This study may help inform future researchers as well as information providers to deliver specific information services during the pandemic situation.

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