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Influence of Electronic Media on the spread of Information and Development of Opinion Related to Covid-19 among the Medical Students of Islamabad

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Abstract

Background: The objectives of this study were to assess the role played by and the impact of electronic media in the formation of viewpoints for COVID-19 among medical students of Foundation University, Islamabad.

Methods: After obtaining ethical approval, we conducted a cross-sectional study using non-probability consecutive sampling over a period of 06 weeks. A 28 closed-ended item questionnaire was used to collect data from students of first to final year MBBS. Data was analysed using SPSS version 20.

Results: Out of 232 respondents, 26.3% were male and 73.3% were female. Nearly all (99.6%) had access to electronic media, and the majority (93.5%) received information and updates about COVID-19 through it. Most students (91.8%) felt that it is the right tool to spread awareness regarding COVID-19, and 90.5% felt it could help slow the spread of disease by promoting healthy behavioural practices. Most (80.2%) concurred that electronic media has a more beneficial than harmful influence on its users during the pandemic. However, 70.3% of students felt that unverified and exaggerated news resulted in fear, panic and stress. More female students believed that electronic media promoted panic buying (85.9%, p = 0.03), leads to mental health problems (84.8%, p = 0.014), hence requires regulation (93.5%, p = 0.03) compared to male students.

Conclusion: Electronic media played an important role in the spread of information regarding COVID-19. However, regulation of the integrity and volume of information is required to prevent panic, stress and fear.

Keywords: COVID-19, electronic media, social media, medical students

Introduction

The outbreak of coronavirus infection caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) has resulted in a catastrophe for humans. The Novel Coronavirus emerged in the province of Wuhan, China in 2019, and in March 2020 the World Health Organization (WHO) declared it as a potential pandemic (1). The most common symptoms at the onset of COVID-19 illness are fever, cough, and fatigue. This virus spreads rapidly through droplets as well as through contact with a contaminated object (2).

In the current pandemic, electronic media is broadcasting a cornucopia of information regarding COVID-19 (3). It is a powerful tool that can disseminate such campaigns to provide some relief from panic and boost the morale of the public, as well as educate the public on how to prevent and reduce the spread of the disease (4).

Electronic media platforms, including television, internet websites and applications, create a powerful means of communication that can be used for creating public health awareness related to infectious diseases including COVID-19 (5). The concerned authorities, including governmental, non-governmental and international organizations are continuously updating the public regarding daily updates, active cases, prevention and control of this viral illness using tools like various social media applications and websites (6).[6] Electronic media can be used as a tool for mass awareness, as it has been known to positively influence behavioral changes related to healthcare (7). It is also advantageous in monitoring the public's response toward an epidemic (8).

However, as with any tool, there are certain disadvantages. Overuse of electronic media can lead to the spread of unnecessary and superfluous information, distortion and fabrication of facts may result in anxiety, depression and stress in the general public (9). Spreading fake news during the epidemics creates unrest (10). According to WHO, speculations and false news, especially via social media, leads to fear and panic (11). Studies have shown that mass media has been a source of falsified information, and has been a tool for spreading unease and apprehension in times of instability, such as during disease outbreaks or war (10). It has also been shown to spread myths and rumors in addition to facts (12).

Studies have shown that increased exposure to information media during the COVID-19 pandemic has a detrimental effect on mental health (13,14). Tackling this "infodemic" will require close observation and ensuring that any fact put forward on mass media is accurate and verified (15).

Conspiracy theories regarding COVID-19 are also running rampant, where Pakistanis seem to believe that COVID-19 is a foreign agenda. Studies have also shown that people from Pakistan have a lower knowledge regarding COVID-19 than other countries in the area (16). Pakistanis also believe that COVID-19 can be overcome easily (17). Therefore, electronic media's role in shaping perceptions should be carefully studied to encourage compliance with government containment measures and engagement in preventive behaviors (18).

The vast majority of college and university students are frequent electronic media users. A study from a medical college in Multan showed that the majority of students were using some form of electronic media. The students on average spent 60 and 300 minutes per week on social media sites and applications. The bulk of participants believed that electronic media effectively influences academic performance, and can be a valuable tool for health education and promotion (19).

To develop and implement effective policies for health education, there needs to be commitment on the part of health professionals as well as governmental and non-governmental authorities. Only then can we educate the public while also curbing the spread of fabricated news, myths and rumors (20).

Methodology

We conducted a cross-sectional study over a period of 06 weeks using non-probability consecutive sampling, from September 2020 to November 2020. A self-developed, closed-ended 28 item questionnaire on Google Forms was sent to all students via MS Teams, after obtaining ethical approval from Foundation University, Islamabad. The questionnaire included demographic questions such as age, year of study, gender and area of residence, as well as questions pertaining to the use of electronic media and how it influenced people's thinking during the COVID-19 pandemic. Reliability analysis was performed after the pilot study, which showed a Cronbach's Alpha of 0.755

Data was analysed using SPSS version 20. Descriptive statistics were presented as frequencies, percentages, mean and standard deviation. The Chi-Square test was applied to check for an association between the variables.

Results

Out of 232 respondents, 26.3% were male and 73.3% were female. The mean age of respondents was 21.89 +- 1.5 years. Most respondents (39.6%) were from fourth-year MBBS, followed by third-year (31.8%), second-year (13.3%), first-year (8.2%) and final year (6.9%). (Table 1)

Table 1. Demographics of respondents

Variable	Number (n)	Percentage (%)
Gender		
Male	61	26.3
Female	171	73.7
Year of Study		
First Year	19	08.2
Second Year	31	13.4
Third Year	74	31.9
Fourth Year	92	39.7
Final Year	16	06.9
Total	232	100

Table 2. Questionnaire- Information obtained from electronic media

Question	Total	
	Yes (%)	No (%)
Did you first learn about Covid-19 from any form of electronic media?	217 (93.5)	15 (6.5)
Do you use electronic media as an information source for Covid-19 updates?	216 (93.1)	16 (6.9)
Has the information been useful to you?	217 (93.5)	15 (6.5)
Are you getting sufficient information about Covid-19 from electronic media?	190 (81.9)	42 (18.1)
Have you learnt about symptoms of Covid-19 through electronic media?	219 (94.4)	13 (5.6)
Have you learnt about high-risk groups through electronic media?	207 (89.2)	25 (10.8)

Table 3. Questionnaire- Influence of electronic media on opinions regarding COVID-19

Question	Total		Males		Females		P-value
	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	
Do you think electronic media is the right tool to spread awareness about Covid-19?	213 (91.8)	19 (8.2)	58	3	155	16	0.278
Do you think electronic media coverage about a pandemic can help slow the spread of disease?	210 (90.5)	22 (9.5)	55	6	155	16	0.913
Do you think electronic media reports induce positive healthy behavior?	216 (93.1)	16 (6.9)	53	8	163	8	0.026*
In your opinion does electronic media keep us updated about the disease/its current situation?	218 (94)	14 (6)	55	6	163	8	0.146
Do you think electronic media is generating fear and panic due to unverified rumors and exaggerated claims during Covid-19 pandemic?	163 (70.3)	69 (29.7)	39	22	124	47	0.208
Do you think the overloading of news on electronic media networks is leading to mental health problems like depression and anxiety among users?	188 (81)	44 (19)	43	18	145	26	0.014*
Do you get stressed, confused or frightened by Covid-19-related news going on electronic media?	145 (62.5)	87 (37.5)	34	27	111	60	0.204
Do you think repeated electronic media exposure of the Covid-19 situation is resulting in panic buying of essential consumer items?	192 (82.8)	40 (17.2)	45	16	147	24	0.030*
Do you think interventions should be made to regulate the spread of news about Covid-19 on electronic media?	209 (90.1)	23 (9.9)	49	12	160	11	0.003*
Would you say that electronic media has a more beneficial than harmful influence on its users during this time of crisis?	186 (80.2)	46 (19.8)	49	12	137	34	0.972

*indicates significance at $p<0.05$

Nearly all (99.6%) had access to electronic media. Most students (90.1%) used electronic media daily, whereas 8.6% and 1.3% used it weekly and fortnightly respectively.

The majority of students (93.5%) initially learned about COVID-19 through electronic media, while 93.1% reported using electronic media as a source of information for COVID-19, with 94.4% saying they learned about the signs and symptoms of the disease from electronic media. The vast majority of respondents stated that the information gathered from electronic media has been useful (93.5%) and sufficient (81.9%). (Table 2)

Most students (91.8%) felt that it is the right tool to spread awareness regarding COVID-19, and 90.5% felt it can help slow the spread of disease by promoting healthy behavioral practices.

Most (80.2%) concurred that electronic media has a more beneficial than a harmful influence on its users during the pandemic. However, 81% of the respondents felt that overloading of news on electronic media leads to mental health issues such as anxiety and depression. While 70.3% students also felt that unverified and exaggerated news resulted in fear, panic and stress. 62% students reported feeling frightened, confused or stressed due to seeing news about COVID-19 on electronic media. (Table 3)

In our study regarding panic buying of essential items, including hand washes and sanitizers, 82.8% of respondents felt that repeated exposure to news by electronic media promoted it. Other studies have also shown the increase in buying of medical supplies & essential items have increased by 670% in March 2020.

More female students believed that electronic media promoted panic buying (85.9%, p = 0.03) and leads to mental health problems (84.8%, p = 0.014), hence requires regulation (93.5%, p = 0.03) compared to male students. (Table 3)

Discussion

Studies have shown that electronic media has acted as a vital tool in the spread of information regarding the COVID-19 pandemic (21). Facts and statistics have disseminated rapidly to reach the general public all over the globe. It has played an important and positive role in educating the public regarding preventive Standard Operating Procedures (SOPs) including handwashing and social distancing (14). This is in consistent with our findings.

A study from Hong Kong showed that electronic media has enabled to share valuable preventive and management techniques to a vast audience in limited amount of time (22). This is in consistence with our study.

Studies show that the COVID-19 pandemic, and news related to it, is a cause of mental health issues, including anxiety and stress (13), as well as fear and stress (14). The findings of our study are in line with this.

A national study conducted in two Pakistani University populations in Lahore concluded that health care agencies should use electronic and social media to create more awareness related to COVID-19, but the information should be regulated (23). A study from Brazil also stated that while electronic media is a useful tool for spreading information related to the COVID-19 pandemic, it should be used responsibly (21). Both these findings are consistent with our study.

An international study conducted by students of a public university of the Kurdistan Region of Iran concluded that media played a significant role in spreading panic related to COVID-19 (24). This is in line with our findings.

We found that in our research that attitudes towards panic buying of essential items due to overloading of news by the electronic media differed by gender. This was in line with a study conducted in Brazil, which concluded that panic buying was gender-dependent, with females being more prone (25). Electronic media has also played a role in panic buying and stockpiling of essential goods during the COVID -19 pandemic (26). This is also in line with our findings.

We noted that the spread of information through electronic media has a great potential. A recent study by Basch et al also emphasized on the importance of Media (27). But at the same time, Electronic Media has been responsible for spreading false information, therefore WHO has made a section on its website to stop the propagation of myths and false information (28).

Conclusion

It is concluded that electronic media has had an important role in spreading information during the COVID-19 pandemic, but steps should be taken for the regulation of information that is passed on to avoid the spread of false information so that anxiety and panic buying caused by electronic media could be reduced.

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