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Role of Social Media on Covid-19 Pandemic

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Abstract: The 2019 novel coronavirus (2019-nCoV) is rapidly spreading and it originates from Wuhan City of Hubei Province of China which causes infectious disease Coronavirus disease (COVID-19). Most people infected with the COVID-19 will experience mild-to-moderate fever ,cough,sneezing and respiratory illness with no specific treatment available. With the internet, social media have become the most acclaimed tool for freedom of speech, democracy, truth and source of infotainment. In a pandemic situation like the Covid-19 outbreak ,social media has become the most searched venue for information gathering . There are thousands of people spreading information,sensationalism, rumours ,misinformation making it crucial for Governments and experts to fight the pandemic as well as infodemic.The way people use the internet and social media is changing slowly. The speed at which information spreads on social media is unimaginable nowadays. The aim of the study is to evaluate role of social media on covid 19 pandemic to understand whether social media is diffusing real information or fake information to the public about covid 19 pandemic.A questionnaire has been prepared regarding the role of social media on covid 19 pandemic and distributed to 100 General public. The resulting data have been analysed using statistical software.More than 70% of the participants(general public) having negative opinions on the role of social media on covid 19 pandemic .Based on the findings of the present cross sectional study, It can be concluded that most of the General public of them having a negative opinion on the social media role on covid 19 pandemic and they are aware about the impacts of fake news spreading in social media about covid 19 pandemic .The aim of the study is to evaluate the role of social media on covid 19 pandemic to understand whether social media is diffusing real information or fake information to the public about covid 19 pandemic.

Keywords: Covid 19 pandemic, Infodemic , Social media, Information, Misinformation.

INTRODUCTION

The 2019 novel coronavirus (2019-nCoV) or the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) as it is now called, is rapidly spreading from its origin in Wuhan City of Hubei Province of China to the rest of the world. Most people infected with the COVID-19 will experience mild-to-moderate fever ,cough,sneezing and respiratory illness with no specific treatment available (Ali and Bhatti, 2020) .Social media have become the most acclaimed tool for freedom of speech, democracy, truth and source of Information and for entertainment. There is an increased reliance of online users on social media as a main source of news and information. Researchers found that young social media users are particularly inclined to believe what they read without adequate verification of the information (Zarocostas, 2020) .The differential diffusion of all of the verified true and false news stories distributed on social media . The data comprises both true and false news (Crawford, 2020). Fake news diffused significantly farther, faster, deeper, and more broadly than the truth. That false news was more interesting than true news, which suggests that people were more likely to share fake information. Whereas false news will cause fear, true only causes sadness, joy, and trust. Robots accelerated the spread of true and false news at the same rate, but the false news spreads more than the truth because humans, not robots (Depoux *et al.*, 2020). In a pandemic situation like the Covid-19 outbreak, social media became the most-searched venue for information-gathering. So the thousands of people spreading information, rumours and misinformation and disinformation making it crucial to fight the pandemic as well as the infodemic. The educated individuals have more awareness and do know the correct information through government suggested websites and news channels (Ashwini, Ezhilarasan and Anitha, 2017). Within weeks of the emergence of the novel coronavirus disease 2019 (COVID-19) in China, misleading rumours and conspiracy theories about the origin circulated the globe and were all closely linked to the new market by social media. The information and

misinformation about the outbreak spreads rapidly and thus the panic that it created among the public. (Ashwini and Anitha, 2017).

The diffusion of information about the COVID-19 pandemic on Twitter, Instagram, YouTube, Facebook and WhatsApp were engaged and showed interest in the COVID-19 topic. The information spreading was different volumes of misinformation in each platform. However, information in social media does not present different spreading patterns (Everett *et al.*, 2020) .The role of media in shaping perception should be carefully studied to encourage compliance with government containment measures and engagement in preventive behaviour (Thelwall and Thelwall, 2020).Social media it is important that public health communication helps the media to better understand . Social media sometimes puts strong effort to ensure safety and knowledge about covid 19 pandemic (Chan *et al.*, 2020). The more worrisome aspect of social media is its potential to be used to spread news with people's decisions and behaviour leads to significant negative effects on society . Fake news comes in various forms however a type of fake news which succeeds in convincing the public by a culture's messages is obviously worrisome (Lakshmi *et al.*, 2015) . Disinformation and false reports about the COVID-19 have bombarded social media and stoked unfounded fears among the general public by confusing people and harming people's mental health (Sharma *et al.*, 2019). Many people expressed their negative feelings, such as fear, worry, nervous, anxiety on social media are contagious social networks. So, WHO's 'infodemics' team is working hand in glove with countries' communications departments to deliver correct information to the public (Karasneh *et al.*, 2020) . Preventing infection and promoting psychological well-being to front-line healthcare workers during an epidemic is essential and the negative psychological impact of SARS on healthcare workers was exacerbated by uncertainty with infection control measures (Kari, 2007). Well-designed infographics have the potential to provide concise and correct information regarding covid 19 pandemic to the general public (Ezhilarasan, Lakshmi, Vijayaragavan, *et al.*, 2017) .Knowledge translation by increasing true information . Moreover, making infographics easily accessible, engaging, reusable and modifiable and but requirements is to diffuse the truth about covid 19 for the current pandemic (Killeen *et al.*, 2020). Prince of Wales Hospital is a tertiary, academic hospital in Hong Kong affiliated with The Chinese University of Hong Kong. The clinical staff had substantial outbreak experience during the SARS pandemic. Utilising this experience, and through iterative systems testing and improvement using in-situ simulation, the unit developed an infographic on the principles of airway management focusing on infection control for staff and patient safety in the context of COVID-19(La *et al.*, 2020).

The method of dissemination of news about covid 19 pandemic was rapidly and well received by the international community (Perumalsamy *et al.*, 2018) . Collaborations with social media companies also enabled modifications of the fake information but they are trying to reduce the fake news about covid 19 pandemic (Mehta, Deeksha, Tewari, Gupta, Awasthi, Singh, Pandey, Chellappan, Wadhwa, Collet, Hansbro, Rajesh Kumar, *et al.*, 2019). More importantly, through social media platforms and personal communication, numerous reputable organisations have utilised the infographic as a resource for their respective healthcare communities (Ezhilarasan, Lakshmi, Nagaich, *et al.*, 2017) .This redistribution of the truth about covid 19 pandemic through additional highly accessed and trusted dissemination platforms markedly increases the value of the infographic (Ladan, Haruna and Madu, no date). The impact of media reporting has a strong influence on the public and private sectors in making decisions (Li *et al.*, 2020) . We need to unpack the influence of social media. The variability in the discussions on social media, specifically Twitter, is often not in line with the occurrence and intensity of the outbreak. (Ezhilarasan, 2018a).

World Health Organization (WHO) Director General Dr Tedros calls this the fight against 'trolls and conspiracy theories'. Misinformation causes confusion and spreads fear, thereby hampering the response to the outbreak. 'Misinformation on the coronavirus might be the most contagious thing about it' (Ezhilarasan, Sokal and Najimi, 2018a). Social media platforms such as Youtube and Twitter provide direct access to an unprecedented amount of content and may amplify rumors and questionable information. (Gheena and Ezhilarasan, 2019a). The Social media is taking various actions against this fake information spreading users (Menon *et al.*, 2018). Taking into account users preferences and attitudes, algorithms mediate and facilitate content promotion and thus information spreading (R, D and Waran, 2020) .

This shift of paradigm profoundly impacts the construction of social perceptions and the framing of narratives communication, as well as the evolution of public debate especially when issues are controversial (Rajeshkumar, Kumar, *et al.*, 2018) . Indeed users online tend to acquire information adhering to their world wide to ignore dissenting information and to form restricting the groups around shared narratives (Pennycook *et al.*, 2020) When restriction is high, misinformation might easily proliferate . However, this effect might be platform specific. (Safieddine, 2020) .The government and the social media companies also take numerous actions against fake information spreading individuals and they are also spreading truth information about covid 19 through videos, programs, animations etc.(Singhal, 2020) . Our team has rich experience in research and we have collaborated with numerous authors over various topics in the past decade (Deogade, Gupta and Ariga, 2018; Ezhilarasan, 2018b; Ezhilarasan, Sokal and Najimi, 2018b; Jeevanandan and Govindaraju, 2018; J *et al.*, 2018; Menon *et al.*, 2018; Prabakar *et al.*, 2018; Rajeshkumar, Kumar, *et al.*, 2018; Vishnu Prasad *et al.*, 2018;

Wahab *et al.*, 2018; Dua *et al.*, 2019; Duraisamy *et al.*, 2019; Ezhilarasan, Apoorva and Ashok Vardhan, 2019; Gheena and Ezhilarasan, 2019b; Malli Sureshbabu *et al.*, 2019; Mehta, Deeksha, Tewari, Gupta, Awasthi, Singh, Pandey, Chellappan, Wadhwa, Collet, Hansbro, Kumar, *et al.*, 2019; Panchal, Jeevanandan and Subramanian, 2019; Rajendran *et al.*, 2019; Rajeshkumar *et al.*, 2019; Ramakrishnan, Dhanalakshmi and Subramanian, 2019; Sharma *et al.*, 2019; Varghese, Ramesh and Veeraiyan, 2019; Gomathi *et al.*, 2020; Samuel, Acharya and Rao, 2020)

The aim of the study was to evaluate the role of social media on covid 19 pandemic and to understand whether social media is diffusing real information or fake information to the public about covid 19 pandemic.

MATERIALS AND METHOD

The survey focused on perceptions of social media on covid 19 pandemic. A Self structured questionnaire prepared has been typed in google forms and distributed to 100 general public members as a random sample of both gender through social networking sites. The survey had an overall response rate of 100. The resulting data have been analysed using statistical software.

RESULT AND DISCUSSION

An online survey, related to myths about covid 19 pandemic opinion in the community during the corona pandemic, was conducted. A total of 100 responses were recorded. The study included only those participants who understood English and had access to the internet. All the participants were above 18 years of age. The age of the participants were grouped into 4 groups I.e 18-25 years 50 members, 26-30 years 37 members, 31-35 years 8 members, 36- 40 years 5members [Fig 1] . Among the participants, 79 were females and 21 were males [Fig 2] and 55 students, 24 workers, 20 housewives, 6 retired officers . All the responders were passably aware of the basic elements of the covid 19 pandemic, as shown in[Fig.3] and most of the participants are using social media [Fig4]. Whatsapp, Instagram, Facebook and other social media are frequently used by all participants. 20 members using WhatsApp frequently, 50 members using WhatsApp and Instagram frequently, 30 members using WhatsApp, Instagram and Facebook frequently[Fig5]. For most participants (93 participants) social media is the major source of entertainment during lockdown and only for few (7 participants) social media is not a major source of entertainment during lockdown [Fig.6] . 60 participants stated that both real and fake news were spreading in social media,34 participants stated that only fake news were spreading in social media and 6 participants stated that only real news were spreading in social media but the real fact is both fake and real news spreading in social media [Fig.7]. 82 participants answered that only social media spreading fake news and 18 participants disagreed that social media alone spreading fake news in fact social media is one of the source spreading fake news and in social nowadays more awareness informations are also shared to make general public aware of covid 19 pandemic to fight against it[Fig8]. 89 participants were knowing that the news spreading through social media are reaching all the shades of peoples all around the world and very few (11 participants)not knowing [Fig.9] and also most of them(93 participants)knowing the impact of the news (either fake or real) among general public [Fig 10] . The association between the age of the participants and usage of social media , the age group 18 - 25 years(48%) are mostly using social media [Fig 11] . The association between the age of the participants and social media used frequently by the participants, 18-25years of age group mostly using two social media (whatsapp, Instagram) , 26-30years of age group are mostly using two social media (whatsapp, Instagram) , 31-35years of age group are equally using one and two social media , 36-40years of age group are using only one social media [Fig 12]. Covid 19 pandemic is a unique issue that brings out a variety of medical ,social and political viewpoints on social media spread of misinformation is masking healthy behaviour and promoting enormous practices that increases the spread of the virus and ultimately results in poor physical and mental health outcomes among individually (Tasnim, Hossain and Mazumder, 2020) . Due to the lack of awareness all of them are believing the information spreading in social media . Nowadays the world wide internet access was well established. So the misinformation is deleted immediately after detected by the concern (Karthiga, Rajeshkumar and Annadurai, 2018) . The social media having more responsibility to the public the information spreading in it is really making awareness also which is the good side of media other than spreading fake news (Vosoughi, Roy and Aral, 2018) . The corona virus misinformation and unverified rumors are creating fear and panic among the general public due to less awareness about covid 19 pandemic and their beliefs over the social media are more stronger due to the addiction. (*Website*, no date) . The immediate need for cooperating government measures for civil society and private individuals protection . So the necessity of spreading real and awareness making posts will help to reduce public fear about covid 19 pandemic so they know how to fight against it also (Rajeshkumar, Agarwal, *et al.*, 2018). We came to know most of the general public has sufficient knowledge about covid 19 pandemic and most of them have negative opinions on social media basically and for spreading misinformation regarding covid 19 pandemic. They also know the impact of fake news and misinformation about covid 19 pandemic .

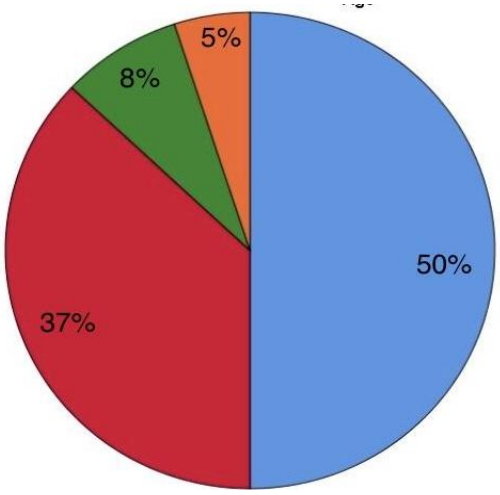

Fig.1: Pie chart showing the age group of the participants; where 50% are 18-25 years(blue), 37% are 26-30 years(red) , 8% are 31- 35 years (green) and 5% are 26-30 years(orange).

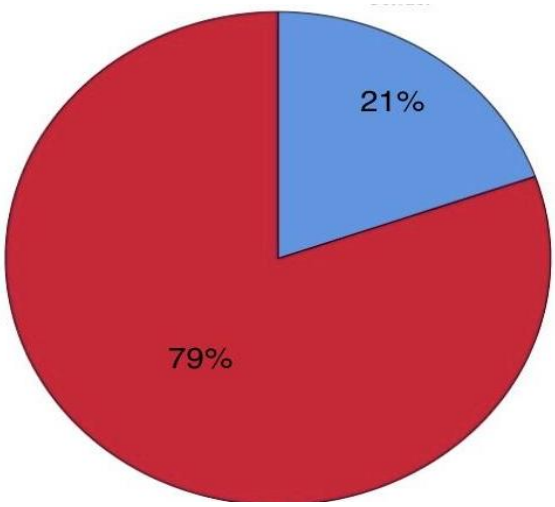

Fig.2: Pie chart showing the gender of the participants; where 79% are female (red) and 21% are male (blue)

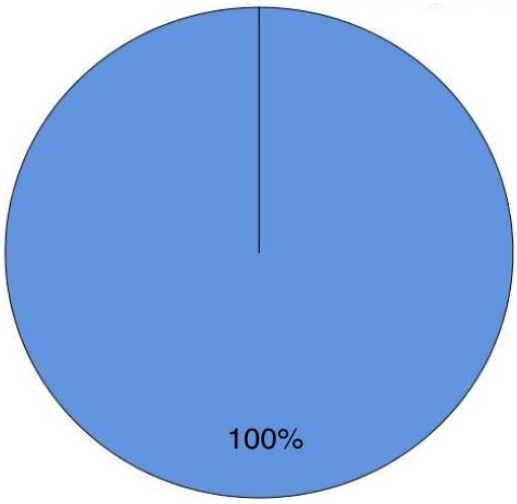

Fig.3: Pie chart showing the awareness among participants of covid -19 pandemic ; where (100%) - yes (blue) .

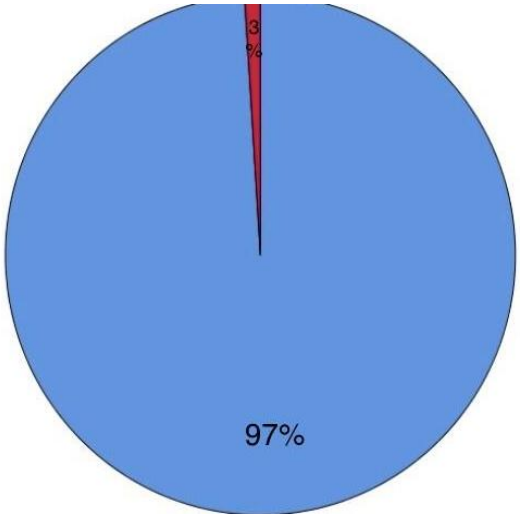

Fig.4: Pie chart showing the use of social media; where 97% are yes (blue) and only 3% are no(red) .

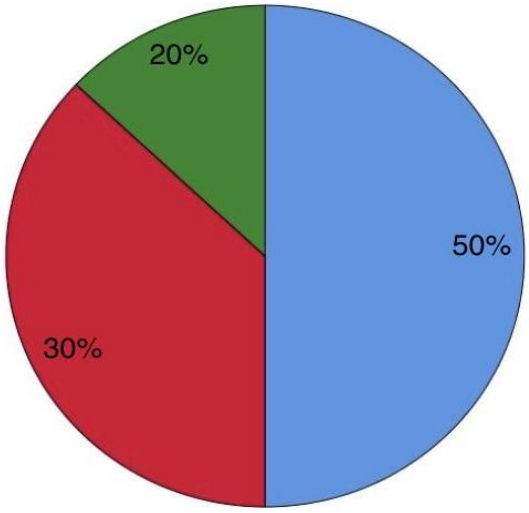

Fig.5: Pie chart showing the social media used frequently by the participants (W- whatsapp , I- Instagram , F- Facebook); Where 50% are whatsApp (blue) , 30% are whatsapp , Instagram (red) , 20% are whatsapp , Instagram and Facebook (green) .

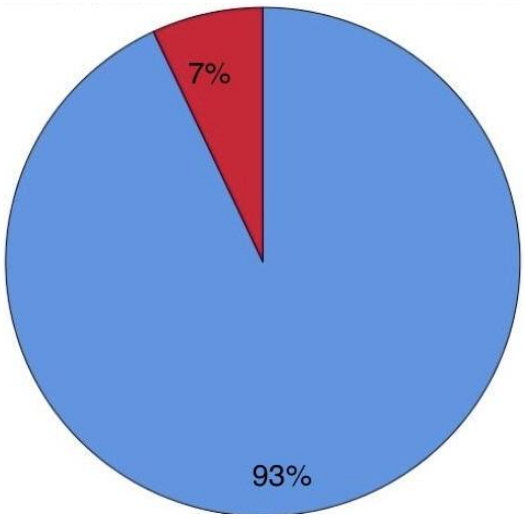

Fig.6: Pie chart showing responses to the opinion on social media being a major source of entertainment ; where 93% are yes (blue) and 7% are no (red) .

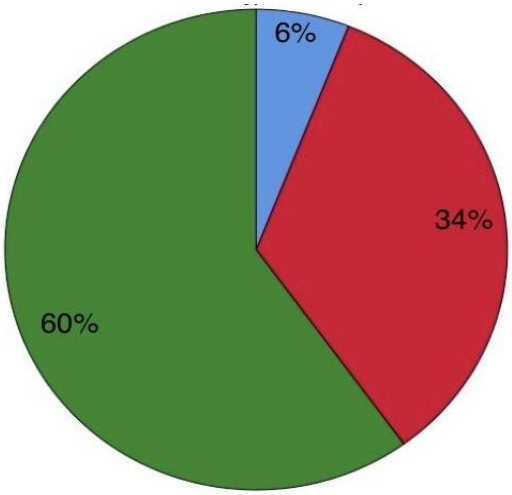

Fig.7: Pie chart showing responses to the opinion on type of news spreads in social media where 6% are reported real news(blue) , 34% are reported fake news (red) , 60% are reported both real and fake news(green) .

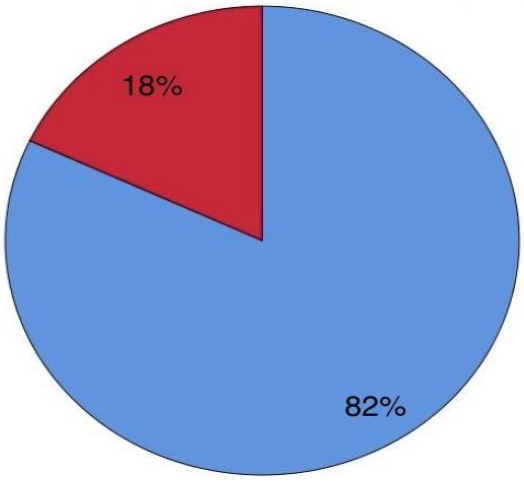

Fig.8: Pie chart showing responses to the opinion on through social media only spreading fake news about covid 19 pandemic where 82% are reported yes(blue) and 18% are reported no(red) .

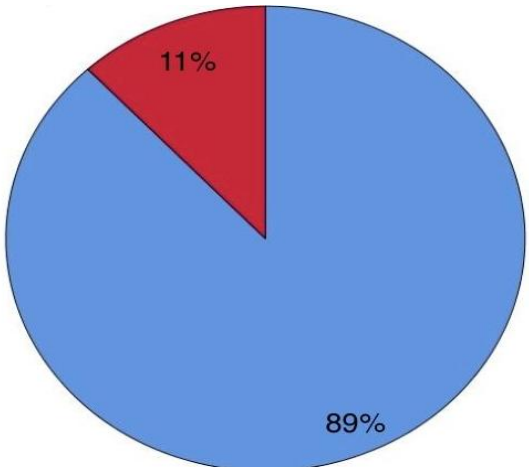

Fig.9: Represents the information about covid 19 pandemic sharing through social media reaches all shades of people; where 89% of participants are reported yes (blue) and 11% of participants are reported no(red)

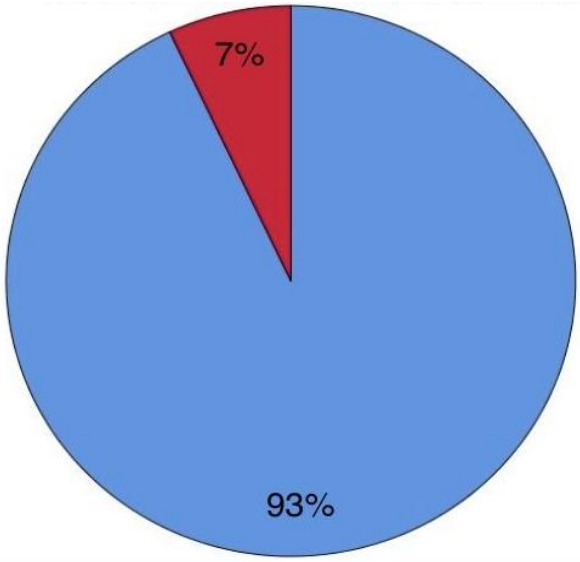

Fig.10: Pie chart showing responses to the impact of sharing fake news about COVID-19 pandemic in social media; where 93% are reported yes(blue) and 7% are reported no(red) .

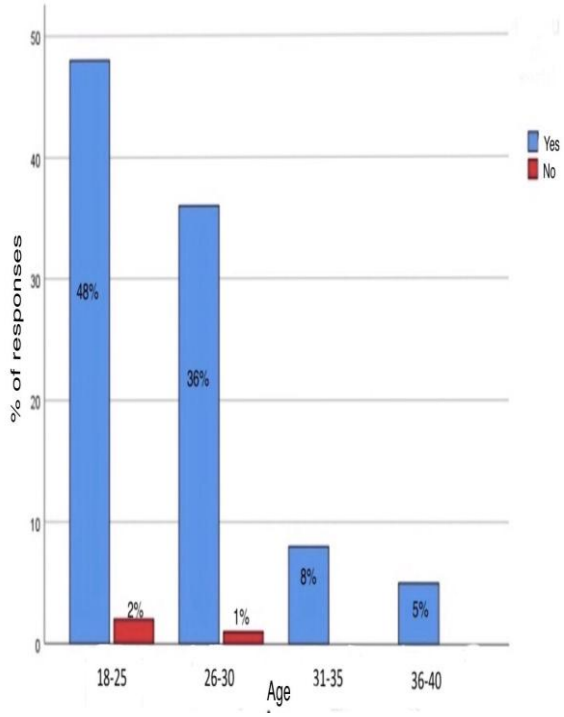

Figure 11 . Bar chart shows association between the age groups and usage of social media . X axis represents the age and Y axis represents the percentage of respondents for usage of social media .yes (blue), no (red). 18-25 years age group(48%) showed more usage of social media but was not statistically significant .Chi square test was done; p value= 0.900 (p >0.05) hence not statistically significant .

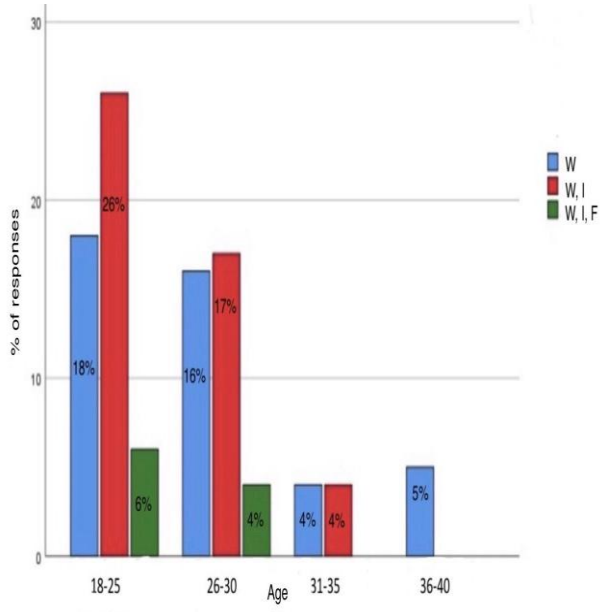

Figure 12. Bar chart shows association between the age groups and social media used frequently. X axis represents the age and Y axis represents the percentage of responses for social media used by the participants. (W- WhatsApp, I- Instagram, F- Facebook). WhatsApp(blue), WhatsApp and Instagram(red), WhatsApp,Instagram and Facebook (green).The 18-25 years age group were most frequently using whatsapp and instagram(26%) when compared to 36-40 years age group which used whatsapp and Instagram(5%) less frequently. Chi square test was done ;p value = 0.197 (p >0.05) hence not statistically significant .Our institution is passionate about high quality evidence based research and has excelled in various fields ((Pc, Marimuthu and Devadoss, 2018; Ramesh *et al.*, 2018; Vijayashree Priyadharsini, Smiline Girija and Paramasivam, 2018; Ezhilarasan, Apoorva and Ashok Vardhan, 2019; Ramadurai *et al.*, 2019; Sridharan *et al.*, 2019; Vijayashree Priyadharsini, 2019; Chandrasekar *et al.*, 2020; Mathew *et al.*, 2020; R *et al.*, 2020; Samuel, 2021)

CONCLUSION

The social media panic travelled faster than the covid 19 spread . Misinformation on corona virus might be the most contagious thing about it. But the government took lots of actions against the fake news about covid 19 pandemic and suggested the general public visit government approved websites to gather information about covid 19 pandemic . Based on the findings of the present cross sectional study , it can be concluded that most of the general public have a negative opinion on social media about covid 19 pandemic. Misinformation causes confusion and spreads fear . So we need to rapidly detect and respond to public rumors ,perception, attitude and behaviours around covid 19 and control measures .

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