

BEHAVIORAL TREND AND INFLUENCE OF SOCIAL MEDIA ON YOUTHS AMID COVID19 PANDEMIC IN UAE

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***Abstract**— As per the situation report published by W.H.O (World Health Organization) on Jan 21, 2020, unknown pneumonia-causing etiology was detected in Wuhan city, Hubei province of China. It was later confirmed as the 2019 novel coronavirus (2019-nCoV). It caused a spiraling chain effect on social media wherein numerous facts, home remedies of curing coronavirus, vitamins, and mineral supplements were shared without any decisive research to assess their value in patients suffering from coronavirus. The study aims to assess the behavioral pattern of the youths while assessing social media in the United Arab Emirates (UAE) during the COVID19 pandemic. Also, to study the role of social media in discerning fake news and disinformation. The study was conducted using a questionnaire to evaluate the effect of social media among 7 emirates of UAE using a sample size of 407 youths. The data collected and analyzed using SPSS software using a content analysis method. The study shows a significant impact of social media on both male and female youths in the UAE amid the COVID19 pandemic. 75.19% of youths access social media via their respective smartphones. 48.40% agree that false information is disseminated via social media. The study shows the potential effect of social media is causing a negative influence on youths in the UAE. leading to the spread of misinformation and strengthening the rise of infodemic. Coordinated efforts are needed to flatten the infodemic curve. This study plays a strategic role in showcasing the behavioral pattern and influence of social media on youths amid the COVID19 pandemic. Facts need to be checked from trusted sources and any misinformation should be reported by educating youths in the UAE to credible resources.*

***key words:** COVID19; social media; UAE; misinformation; fake news; infodemic; mental health.*

INTRODUCTION

Severe acute respiratory syndrome coronavirus-2 is contagious and it has spread extensively after the first case was identified at Wuhan, Hubei province, China. The pandemic has created an environment of fear and anxiety among the youth and older adults given the healthcare, economic, and social structure [50], [42]. National health institutions around the world are taking bold initiatives to implement effective approaches to contain the spread of coronavirus among communities. At the same time, the local government in various countries are trying to create awareness against false and misleading information disseminated among the local population via

social media platforms like Facebook, Instagram, Snapchat, What's App, Twitter, TikTok, and others [6].

Misleading information about COVID19 can threaten the healthcare of millions of people. Public health authorities like the World Health Organisation (WHO), United States Center for Disease Control (U.S CDC), Food & Drug Authority (U.S FDA) and others local health authorities like Dubai Health Authority, Department of Health Abu Dhabi, United Arab Emirates Ministry of Health & Prevention, etc. are working to diffuse misleading COVID19 health information by delivering fast, accurate and reliable information directly to the public via social media platforms [50]. Coordinated efforts are needed to check the negative impact of social media which can cause critical problems like spreading rumors and affecting people's behavior and promoting social unrest and uncertainty.

During the sudden outbreak of coronavirus, the public was placed in lockdown wherein social media was being considered as one of the primary sources of information. A huge amount of information related to COVID19 was shared online daily [35]. Youths need to understand how to differentiate facts with reliable credentials and false rumors from unverified sources. To flatten the infodemic curve, everyone, especially youths needs to double-check their facts before posting or forwarding a rumor or misinformation to the group chat or masses.

Social media platforms are also responsible to limit the spread of rumors, fake news, or COVID19 misinformation to the public [14]. They can restrict certain accounts with unverified credentials and unknown agenda of disseminating healthcare knowledge with scare tactics, misleading reports, discrimination, and conspiracy to cause public outrage and uproar. Despite present-day challenges, we can use social media for our benefits by exposing myths like COVID19 home remedies, antibiotics, viruses, pneumonia vaccine, supplements, UV lamps, and vitamins, etc. which are rumored to stop the spread of the disease progression [43].

COVID19 in UAE

As per current U.S CDC directions, United Arab Emirates (UAE) is placed at level 4 wherein all travelers should restrain from traveling to the UAE as it will increase the chance of spreading the virus and contracting it [34]. Due to the rampant spread of rumors and conspiracy theories, people are being misled in a community which makes the situation worse. Confusion and fear led by such rampant misinformation can hamper the efforts of the government to control the situation at hand. COVID19 pandemic in the UAE has led to the closure of schools and universities. Most of the youths are studying from home through distance learning. In other words, they are relying more on social media like Youtube, Facebook, Whatsapp, etc. for the latest information related to the impact of COVID19 in the UAE [10]; [1] & [11].

The government of the UAE has introduced steep fines for spreading false information and rumors about the COVID19 pandemic. Densely populated communities in UAE suffered most specifically migrant workers living in packed quarters. Statistically, the number of confirmed cases rose drastically from Jan 29, 2020, to the present date [36]. The first case in UAE caught nationwide headlines when a 73-year-old Chinese woman came to UAE on holidays from Wuhan, China. She was diagnosed with positive COVID19. Schools and universities were closed

down to contain the spread of the virus. A lot of foreign nationals contracted the disease and were quarantined. The government implemented an active surveillance system to keep track of near and dear ones who contracted COVID19 [33]; [19] & [38].

People with underlying disease conditions like hypertension, obesity, diabetes, lung ailments, etc. suffered from the worst prognosis. Secondary manifestation occurred leading to an increase in mortality among patients [28]. On March 26, 2020; the government of UAE imposed a night curfew for disinfection. It led to an uproar on social media wherein youths shared their viewpoints and a volley of rumors was shared regarding the imposed curfew. People contemplated their future jobs as a substantial proportion of youths work in the public and private sectors respectively [32]; [7].

The global and local economy of the country suffered as well due to the ongoing COVID19 pandemic. Malls in UAE were shut down on March 23, 2020, leading to chaos among the public and business owners. Posts shared on social media led to increased apprehension and concern for the future as people were struggling to survive due to job loss globally. To mitigate economic turmoil, the government of UAE announced the merger of its ministries from July 2020 for broader restructuring. The worst-hit were migrant workers from low-income countries who didn't have any resources to survive including necessities like food and housing. They were abandoned by their employers due to economic downfall leading to a halt in construction projects. Several white-collar jobs were affected as well leading to ex-pats from several countries like Britain, U.S, and Australia heading back home for prospects.

After the positive screening of the first COVID19 case in UAE, the government implemented measures at one of the business airports - Dubai International Airport to screen passengers coming back from China including body temperature checks. The Dubai Health Authority (DHA) announced a campaign to introduce free COVID19 testing especially for people without insurance. It directed all hospitals to treat COVID19 patients free of charge and Crown Prince of Abu Dhabi - Mohammed Bin Zayed announced the opening of a new testing center for ease. Hundreds of people [1].

Popular Social Media Platforms in UAE

Whatsapp seems to be the most popular cross-platform messaging voice over internet protocol (VoIP) app among youths in the UAE. It has features like text messaging, voice and video calls, share media, documents, and location, create groups, and share with multiple people at a time [25]; [51]. The application is versatile to run on any mobile device along with the desktop app. It also has a separate version for businesses called What's App business app which allows companies to communicate directly with their clients on standard What's App. In 2013, UAE banned What's App video chat and voice over internet protocol (VoIP). It is a subsidiary of Facebook Inc. which brought What's App for the U.S \$19.3 billion with over 2 billion users worldwide. Whatsapp is often criticized for its inciting or malicious messages shared across masses to make the community hostile against each other. It can lead to communal uprisings, lynching, and political interruptions. As per the current statistical trend, Dubai remains a viable market for social media organizations. It is one of the biggest markets for Facebook. It is

estimated 90,000 new users were added during the ongoing 2020 COVID19 pandemic. Half of the users are married and the majority of them (89%) access social media like Facebook via mobile devices. Overall, 9.09 million users are present in the UAE which shows that 92% of the users have access to online social media content [4]; [47]. Instagram, another popular photo and video sharing app owned by Facebook Inc. has distinguished itself with a wide range of features [30]. It is used by 500 million users daily and it is one of the most downloaded apps. It has the potential to be misused as it is censored by certain countries for leaking out political information or posting inappropriate content. It has the potential to trigger a change in user behavior depending upon the way they engage with each post. Instagram plays a major role in creating an environment for social interaction and recreation.

Snapchat is a popular messaging app platform owned by Snap Inc. It has the potential to compete against Facebook's owned Instagram. The younger generation prefers using Snapchat as it is more inclined towards users interacting with stickers and augmented virtual reality. It has recorded over 229 million active users with 4 billion Snaps every day. Parents of younger kids are concerned about their privacy as Snapchat broadcasts live location using the user's map. Apart from that during the ongoing COVID19 pandemic, users with nefarious motivations can cause harm to users and persuade others as well [18].

Other social media platforms like Youtube, Facebook, Twitter, TikTok, and others have played their respective roles amid the COVID19 pandemic. It has led to increased awareness among social media users. Now, platforms like Facebook Inc. and Google-owned Youtube are trying to combat misinformation on COVID19 and notify users based upon their engagement and sharing. Following Facebook and Youtube, Twitter has started removing misinformation posts on COVID19 vaccination. They have termed their efforts as a significant and growing public health challenge to identify and scrutinize every post for removal given the local government's directive and initiative by concerned parents and public outrage.

Influence of Social Media over youths

Multiple reports state that posts shared and read on social media by youths has led to anxiety, depression, fear, and uncertainty among the youths. It has led them to be hopeless and xenophobic towards ethnicity and religion. Lots of individuals on social media blame the Chinese for the spread of COVID19 which has can discrimination in terms of availability of housing, food, and other necessities for Chinese and Non-Chinese nationals like South-East Asians. It can lead to social divide and discrimination against people as superspreaders [46].

During the onset of COVID19, the world community on social media shared their thoughts on the consumption of certain animal meat like bats, triggering the outbreak. It has led to racist and xenophobic sentiments towards certain cultures and food preferences. Social media has led youths to vent their frustration and anger through comments and threatening posts shared publicly online. It is high time that social media platforms like Facebook, What's App, Instagram, Snapchat, Youtube, TikTok, etc. take note of such abusive usage of social media causing uproar and disorderliness in certain regions, leading to a drastic effect on youths of UAE and worldwide.

Moreover, certain commercial entities like cruise liners have blatantly lied and convinced prospective travelers claiming that coronavirus doesn't exist in warm and tropical climates. Such rumors can spread like wildfire on social media and cause long-lasting damage by affecting unaware passengers with COVID19 infection and outbreak in a limited space. Also, Dubai International Airport has seen a record number of cases, despite being situated in a warm climate country which shows that false claims and misinformation on social media can cause serious issues in the public domain [2].

Significance of the study

Dissemination of fake news has increased rapidly over the last couple of months especially starting the onset of COVID19. Misinformation is being shared online through various social media without checking the facts which is leading to the proliferation of fake news across the web. Our study analyzes the data collected from youths all across the UAE and shows the significant factors associated with fake news sharing on COVID19 [26].

It shows that most users share posts and news without checking the authenticity of the information leading to significant practical implications. Most users prefer spending time on social media for entertainment motivation. They believe that sharing posts is an act of altruism that can lead to socializing and offer beneficial information to news seekers [41].

Our study shows that sharing information on social media can lead to the dissemination of fake news as large unfiltered content can lead to uncontrollable amounts of information leading to manipulation of public perception and luring the public, especially youths to believe false content that has no relevance to practical legitimate news. Our study shows the relevance of the government's initiative in engaging with the public via social media which suits its agenda to communicate with a larger audience [31].

Research Overview, Objectives and Importance of this study

COVID19 has affected millions of people globally with 1.93 million deaths reported by WHO. Currently, there are 90.2 million cases worldwide with 49.9 million recovered cases. In the United Arab Emirates (UAE), 228k cases are suffering from COVID19 and 702 deaths. 204k cases have recovered as reported by WHO Situation Reports. Our study intends to examine the determinants of proliferating fake news in social media [49]. The novelty of this study intends to find the factors associated with stirring panic and dissemination of fake news among youths in all 7 emirates of U.A.E along with the role of social media.

Our study researches social media users in the U.A.E and studies their news sharing behavior. It involves fake news and extending fake news as an act of altruism with others without checking the authenticity of the news. It can stir aggression among the public, political upheaval, and cause panic leading to the proliferation of fake news, discouraging medical advice from reputed sources, and increasing threats to public health. Several studies show that youths are more prone to circulate fake news via social media due to limited knowledge [17].

Social media like Facebook is easily accessible in the U.A.E as the top 5 cities with the highest concentration of FB users are Dubai, Abu Dhabi, Sharjah, Al Ain, and Ajman. Most of the users fall within the age group of 25-34 and 18-24 years old. Most of the users use mobile devices

compared to the desktop which shows easy accessibility and explosive nature of fake news during the COVID19 pandemic [3]. The study also shows social media user's rationale for sharing certain posts or media and how it played a role in pleasing their desire. Our theory shows how youths in the U.A.E use social media, it offers insights on what kind of platform they use over social media, what kind of news they follow, the primary reason behind using social media, whether they believe that social spreads rumors and other pertinent and information seeking research questions.

Overall, our study elucidates the motive of youths in the U.A.E for sharing social media posts indicating a lot of characteristics regarding communication approach, information seeking nature, gratification rationale, knowledge sharing behavior, and status-seeking. Our research also shows the youths in the U.A.E are also aware of the local government initiative along with administrative and medical perspectives [12].

Literature Review

Various studies show the role of social media in encompassing the need for digital socialization and building relationships in our lives. It shows the sense of belongingness and trust gained by users over the period through mutual sharing of posts and videos. Users with similar mindsets are inclined towards sharing similar content through which they are related to each other. It indicates a sense of gratification, relationship building, network, and the association between various users [23]. Moreover, they tend to disseminate information related to current affairs without checking facts or authenticity. Active social media users tend to comment and like posts as it enhances their sense of belongingness.

Role of Social Media in our lives and during ongoing COVID19 pandemic

Social media offers an alternate mode of entertainment, news sharing, socialization, and information sharing and seeking medium to satisfy our gratification needs and showcasing altruism. Our study model hypothesizes the relationship between youths in the U.A.E and their role in the dissemination of information via social media [45]. As the majority of social media users are youth, they tend to be altruistic by returning the favor to their peers through news or information sharing. This act of forwarding news articles or posts without seeking the true nature, intent, or genuinely can lead to dissemination of fake news leading to influencing communities with misinformation on COVID19.

Fake news sharing and associated factors

As per our study, we found that several factors can influence youths to engage with fake news, posts, and videos. For some, it offers a mode of escape from their everyday life about anxiety and stress. The fake news tends to entertain social media users engaging to amuse themselves in their past time. Moreover, fake hyped-up news propels them to incite action by sharing it with others. Dissemination of information online shows users an active member of the community as they feel a sense of positivity by contributing unknown facts and information with others [24].

Research model and theory

A lot of misinformation about the origin, prevention, treatment, and other aspects of the SARS nCoV-2 is rapidly appearing online on various social media platforms. It has sowed distrust and a feeling of uncertainty among the youths who forward such posts without verifying their true source and valid credentials [9]. It can lead to the spreading of fake news about the pandemic, causing a rise in the infodemic curve. A lot of commercial ventures are delving to take advantage of the current health crisis by claiming miracle cures, at-home COVID19 tests, protecting and shielding people from contracting COVID19 via certain devices, and asking communities to refrain from eating certain food or upgrading to certain cellular devices.

The World Health Organisation (WHO) termed the growing menace of infodemic as a global risk. The rise in posting and sharing unverified posts can risk the global community in overcoming health challenges [22]. A noticeable surge of posts is being shared every day that has led WHO to license all its infographics so that the masses are aware of it's trusted credentials. It will help WHO to flatten the infodemic graph and fight against misinformation.

Fake news sharing and the role of social media

As per several studies conducted, there is a growing concern for the negative effects of social media and private chats about COVID19 on youths worldwide. There are several conspiracy theories with bad health advice on COVID19 being shared with thousands of youths every day. It has led to several instances of misinformation on bioweapons, 5G technology, negative influence on behavior and health [37]. According to a study, fabricated health information on COVID19 was spun as true and authentic information directly from an accredited health organization or government body. Such posts were twisted with reconstructed information leading to media involvement along with prominent public figures.

Youths in UAE were targeted as well to believe in misleading or false claims and form a biased opinion against the government and healthcare agencies including the administrative services like a local police force Pappot, N. (2020). Various instances have shown a link between mental health and exposure to social media. International organizations like WHO and U.N bodies are working hard to contain the spread of falsified reports designed to increase infection and mortality by COVID19. Such rumors and misinformation have led to the collapse of local government bodies and the scapegoat of politicians involved in shaping government policies or the Ministry of Health.

Information seeking theory and the research concepts

As per our study, it was observed that a lot of individuals spend time on social media with an interest in the dissemination of unverified news or social media posts. We also noticed that many such youths in the United Arab Emirates believe social media as a major epicenter of dissemination of such fabricated news misleading communities amid the COVID19 pandemic. It also reveals the information-seeking nature of the youths to keep themselves entertained while they cope with the pandemic while spending time with their families at home. A study conducted by Lamos et al., 2020 [26], shows that our theory is indeed relevant to the current social media trend which offers youths up-to-date information on current affairs and a flurry of misleading news being circulated to thousands of individuals.

McGonagle, 2017 [31] also shows the role of social media in conveying fake and fabricated news to youths and deceiving them towards accepting it as a reality. Social media has engrossed individuals with unverified content that mimics legitimate news. It can create divergent views and deceptive content has led to the spreading of rumors, leading to falsified health reports and causing severe damage to public health.

Our study showcases the variables relevant as per research conducted with youths residing in the United Arab Emirates. It shows the relation of social media with the spread of misleading news reports related to the COVID19 pandemic causing deleterious health consequences. Apart from that, it shows the role of youths in the promulgation of false and misleading news reports in local communities.

METHODS

In this study, 407 youths from 7 Emirates of the United Arab Emirates (UAE) were sampled with questionnaires focused on exposing the infodemic curve wherein huge amounts of information was shared daily without differentiating reliability of the sources using various social media platforms like Instagram, Snapchat, Twitter, Facebook, TikTok, and others. Data from the questionnaire were compiled in an excel sheet format which was transformed for statistical data analysis using SPSS Version 25 (IBM Corp.) statistical software and STATA Corp. LLC [44]. Descriptive content analysis was performed. The questionnaire was focused on the behavioral pattern and influence of social media on youths in 7 member emirates of UAE during the COVID19 pandemic. It is aimed towards exposing the spread of misinformation and educating youths on double-checking facts from reliable sources before spreading any rumors on social media which would lead to flattening of the infodemic curve.

The survey consists of youths from various emirates of the United Arab Emirates namely Abu Dhabi, Ajman, Dubai, Fujairah, Ras Al Khaimah, Sharjah, and Umm Al Quwain. Most of the youths are between the age of 20 - 30 years old. Also, the majority of them are female. 44.99% of them are currently not working while 39.07% are working with the public sector. The research offers an overall overview of the current perspective and role of social media in spreading a flurry of news and posts about the current COVID19 pandemic. Davalbhakta, S. in 2020 [13] shows the impact of social media and its easy accessibility to youths. The technological innovations and smartphone technology leading to the propagation of fake posts and information easily accessible. Our study shows the relevant devices being used by youths and their applications leading to a devastating impact amid the COVID19 pandemic.

Studies conducted in the United Arab emirates like Gjylbegaj, V., 2020 and Shockley, B. et. al., 2020 [21] show the rising popularity of social media among youths and communities. It has led to influencing our daily content and internet usage. These studies also describe the role of social media in influencing women across the United Arab Emirates. Darwish, E. in 2020 [12] describes the role and efforts of the local government in the United Arab Emirates to communicate messages with the public through various social media platforms. Our study indeed shows the significance of the government's usage of social media as a tool to reach out to youths

and communities to promulgate verified news reports and diminish the effects of false and fabricated news.

Descriptive statistics were performed using SPSS statistics involving descriptive statistics. It involves summarizing statistics, quantitatively used to summarize a sample along with the observations. It involves quantitative summary statistics which form the basis for the initial description of the data. The data is summarized in a tabulated format.

Microsoft Excel sheets were used to clean the data and plotted using a 2D line graph which highlighted specific aspects of the data using the desired graph, axis, layout, and colors. It involved the creation of charts, changing the chart type, switch row or column, legend position, and data labels. It makes our data effective in visualization [48].

Results

Table 1 indicates the sociodemographic variables of study participants with a sample size of 407 individuals from 7 member emirates of the UAE. In our study, 332 (84.91%) participants were female and 59 (15.09%) participants were male. Majority of the participants were from the age group 20 - 30 years old (n = 167, 43.15%) while 117 (30.23%) participants were aged >= 30 and 103 (26.61%) participants were aged 12 - 19 years. Youths from 7 member emirates of UAE participated in the study namely - Abu Dhabi (n = 110, 28.13%), Ajman (n = 53, 13.55%), Dubai (n = 77, 19.69%), Fujairah (n = 27, 6.91%), Ras Al Khaimah (n = 63, 16.11%), Sharjah (n = 24, 6.14%) and Umm Al Quwain (n = 37, 9.46%) respectively. Most of the youths in the study were not working or employees of any private or public sector firm (n = 175, 44.99%), while 152 (39.07%) participants were working in the public sector and 62 (15.94%) were working in the private sector in the UAE.

Table 1. Sociodemographic variables of study participants (N=407)

Variables	N (%)
Gender	
Female	332 (84.91)
Male	59 (15.09)
Age	
12-19	103 (26.61)
20-30	167 (43.15)
>= 30	117 (30.23)
Participation of youths from various emirates of the United Arab Emirates	

Abu Dhabi	110 (28.13)
Ajman	53 (13.55)
Dubai	77 (19.69)
Fujairah	27 (6.91)
Ras Al Khaimah	63 (16.11)
Sharjah	24 (6.14)
Umm Al Quwain	37 (9.46)
Working Status	
Not Employee	175 (44.99)
Private Sector	62 (15.94)
Public Sector	152 (39.07)

Table 2 demonstrates behavioral patterns and the influence of social media on youths in the UAE amid the COVID19 pandemic. In terms of the social media platforms, Instagram was most popular with 121 (31.68%) participants using it. It was followed by What’s App (n = 144, 37.70%), Snapchat (n = 109, 28.53%) and other platforms like Twitter, TikTok, Youtube, etc. (n = 35, 2.09%). The majority of the youths spent more than 4 hours (n = 156, 40.41%) on these social media platforms, while 117 (30.31%) participants spent 1-2 hours and 113 (29.27%) spent 3-4 hours respectively. In terms of device used to follow these social media platforms, majority of the youth uses smartphone (n = 294, 75.19%) followed by tablet (n = 30, 7.67%), PC (n = 27, 6.91%) and other devices (n = 40, 10.23%).

Table 2 also demonstrates the type of news followed during COVID19 pandemic on various social media platforms such as Health News (n = 112, 29.02%) followed by COVID19 News (n = 85, 22.02%), Economic News (n = 49, 12.69%), Political News (n = 59, 15.28%) and Other News (n = 81, 20.98%). Preferred timings for using social media platforms are Afternoon (n = 140, 36.08%) followed by Evening (n = 130, 33.51%) and Morning (n = 118, 30.41%) respectively. Majority of the youths agree (n = 181, 48.40%) that social media platforms are being used to disseminate false information while 77 (20.59%) strongly agree, 70 (18.72%) are neutral, 25 (6.68%) disagree and 21 (5.61%) strongly disagree. Also, they agree (n = 148, 40%) over influence of fake news on social media, 91 (24.59%) strongly agree, 91 (24.59%) are neutral, 21 (5.58%) disagree and 19 (5.14%) strongly disagree.

Table 2. Social media behavioral patterns among youth amid COVID19 Pandemic

Variables	N (%)
Social Media Platforms	
Instagram	121 (31.68)
Snapchat	109 (28.53)
Whatsapp	144 (37.70)
All other platforms (Twitter/TikTok/Youtube/Others)	35 (2.09)
Duration of time spent on Social Media	
1-2 hours	117 (30.31)
3-4 hours	113 (29.27)
More than 4 hours	156 (40.41)
Type of Device used to follow News on Social Media	
Smartphone	294 (75.19)
Tablet	30 (7.67)
PC	27 (6.91)
Others	40 (10.23)
Types of News followed during COVID19 Pandemic	
COVID19 News	85 (22.02)
Economic News	49 (12.69)
Health News	112 (29.02)
Other News	81 (20.98)
Political News	59 (15.28)
Preferred Timings for using Social Media Platforms	
Morning	118 (30.41)
Afternoon	140 (36.08)

Evening	130 (33.51)
Dissemination of False Information via Social Media	
Strongly Agree	77 (20.59)
Agree	181 (48.40)
Neutral	70 (18.72)
Disagree	25 (6.68)
Strongly Disagree	21 (5.61)
Influence of Fake News over Social Media	
Strongly Agree	91 (24.59)
Agree	148 (40.00)
Neutral	91 (24.59)
Disagree	21 (5.68)
Strongly Disagree	19 (5.14)

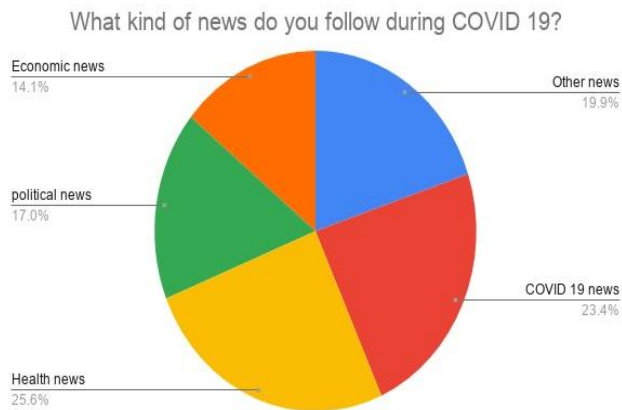


Figure 1: What kind of news do you follow during COVID19 Pandemic

Figure 1 demonstrates the kind of news followed by youths of the UAE. The majority of them focussed upon health news and COVID19 news while a substantial proportion of them preferred political, economic, and other news respectively.

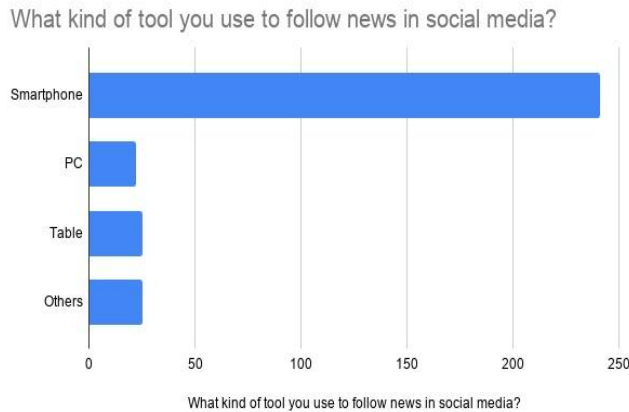


Figure 2: What kind of tool do you use to follow news on social media?

Figure 2 discusses the type of tool/gadget used by youths in the UAE to follow various news portals in social media. As per the data analysis, the majority of them use smartphones while the rest of them use PC, tablets, and others.

Table 3 discusses certain questions distinguishing rumors and social media and awareness related to the spreading of misinformation amid the COVID19 pandemic. The first question in this study asked participants “Do more rumors spread in social media during COVID19?”. As shown in Table 3, majority of the participants Agree (n = 233, 63.14%) followed by Neutral (n = 98, 26.56%) and Disagree (n = 38, 10.3%). The second question asked, “Do I know how to distinguish between rumors and facts in social media?”. Majority of the participants Agree (n = 239, 65.12%) followed by Neutral (n = 83, 22.62%) and Disagree (n = 45, 12.26%). The third question asked, “Do I always double-check news through social media during COVID19?”. Participants Agree (n = 240, 65.57%) followed by Neutral (n = 72, 19.67%) and Disagree (n = 54, 14.76%). The fourth question asked, “Do I pass the news through social media without checking the news?”. Participants Agree (n = 226, 61.58%) followed by Neutral (n = 77, 20.98%) and Disagree (n = 64, 17.44%). The fifth question asked, “I am aware of the spread of news on social media during COVID19?”. Majority of the participants Agree (n = 247, 66.94%) followed by Neutral (n = 83, 22.49%) and Disagree (n = 39, 10.57%).

Table 3. Descriptive statistics of questions

Variables	Agree	Neutral	Disagree
Do more rumors spread in social media during COVID19?	233 (63.14)	98 (26.56)	38 (10.3)
Do I know how to distinguish between rumors and facts in social media?	239 (65.12)	83 (22.62)	45 (12.26)
Do I always double-check news through	240 (65.57)	72 (19.67)	54 (14.76)

social media during COVID19?			
Do I pass the news through social media without checking the news?	226 (61.58)	77 (20.98)	64 (17.44)
I am aware of the spread of news on social media during COVID19?	247 (66.94)	83 (22.49)	39 (10.57)

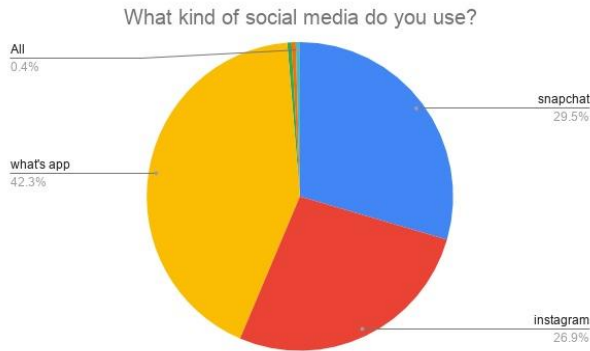


Figure 3: What kind of social media do you use?

Figure 3 discusses some of the most popular social media platforms being used by youths in the UAE. What’s App stands more appealing to use due to feasibility and simplicity followed by Instagram and Snapchat along with the rest like Facebook, Twitter, Youtube, TikTok, etc.

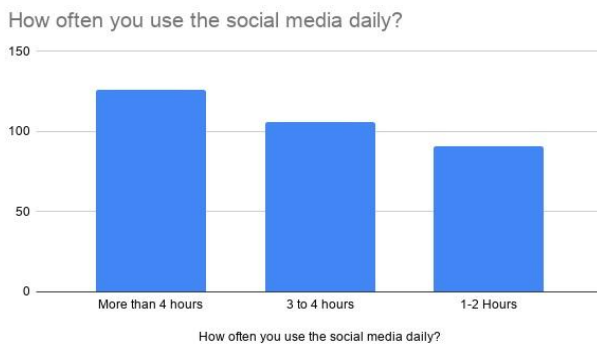


Figure 4: How often do you use social media daily?

Table 4 discusses behavioral trends among youth gender-based (female and male) towards their government, local police administration, and essential health care doctors amid COVID19 pandemic. The first statement asked the participants “I believe there is a synergy between Government and Social Media in the dissemination of information”. 184 (59.93%) females and 41 (74.55%) males responded positively. While 42 (13.68%) females and 2 (3.64%) males responded against it and 81 (26.38%) females and 12 (21.82%) males responded neutrally. The second statement asked the participants “The government used social media in the right way to make people aware about COVID19”. 202 (66.45%) females and 41 (74.55%) males responded positively. While 43 (14.15%) females and 6 (10.91%) males responded against it and 59

(19.41%) females and 8 (14.55%) males responded neutrally. The third statement asked the participants “I am very satisfied with the government regulations through social media”. 206 (67.98%) females and 50 (89.28%) males responded positively. While 33 (10.89%) females and 3 (5.36%) males responded against it and 64 (21.12%) females and 3 (5.36%) males responded neutrally. The fourth statement asked the participants “Police strongly use social media to inform people about COVID19”. 197 (64.59%) females and 38 (65.37%) males responded positively. While 41 (13.45%) females and 6 (11.11%) males responded against it and 67 (21.97%) females and 10 (18.52%) males responded neutrally. The fifth statement asked the participants “I followed many doctors on social media during COVID19”. 202 (66.23%) females and 43 (76.79%) males responded positively. While 39 (12.78%) females and 9 (16.07%) males responded against it and 64 (20.98%) females and 4 (7.14%) males responded neutrally. The last statement asked the participants “I chat with doctors through social media during COVID19”. 211 (68.50%) females and 40 (70.17%) males responded positively. While 46 (14.93%) females and 8 (14.03%) males responded against it and 51 (16.56%) females and 9 (15.79%) males responded neutrally.

Table 4. Social Media Gender-based Behavioral Trend on Local Government, Police, and Doctors during COVID19 Pandemic

Variables	Female, N (%)	Male, N (%)
I believe there is a synergy between Government and Social Media in the dissemination of information		
Agree	184 (59.93)	41 (74.55)
Neutral	81 (26.38)	12 (21.82)
Disagree	42 (13.68)	2 (3.64)
The government used social media in the right way to make people aware of COVID19		
Agree	202 (66.45)	41 (74.55)
Neutral	59 (19.41)	8 (14.55)
Disagree	43 (14.15)	6 (10.91)
I am very satisfied with the government regulations through social media		
Agree	206 (67.98)	50 (89.28)
Neutral	64 (21.12)	3 (5.36)

Disagree	33 (10.89)	3 (5.36)
Police strongly use social media to inform people about COVID19		
Agree	197 (64.59)	38 (65.37)
Neutral	67 (21.97)	10 (18.52)
Disagree	41 (13.45)	6 (11.11)
I followed many doctors on social media during COVID19		
Agree	202 (66.23)	43 (76.79)
Neutral	64 (20.98)	4 (7.14)
Disagree	39 (12.78)	9 (16.07)
I chat with doctors through social media during COVID19		
Agree	211 (68.50)	40 (70.17)
Neutral	51 (16.56)	9 (15.79)
Disagree	46 (14.93)	8 (14.03)

Table 5. ANOVA Analysis with chi-square and p-value results showing correlation and validation of the study along with the degree of freedom and mean square model

Source	<i>df</i>	F	<i>chi2</i>	<i>p-value</i>
I am aware of the spread of news on social media during COVID19?				
Age*	2	4.80	5.81	0.050
The Emirate ***	6	5.40	21.91	0.001
Working Place**	2	12.51	11.62	0.003
Social media disseminated false information*	4	25.24	9.14	0.050

Social media has a very active medium of spreading false information***	4	30.11	8.21	0.000
Low knowledge of technicalities involved affect my use of social media***	4	30.00	9.76	0.000
I believe that there is a synergy between government and social media in the dissemination of information**	4	33.39	11.88	0.018
I use social media platforms to spread information on COVID19***	4	27.79	32.89	0.000
Do rumours spread in social media during COVID19?***	4	25.13	13.38	0.010
I double-check the news through social media***	4	37.29	5.84	0.000
I pass the news through social media without checking the news**	4	23.35	14.48	0.006
I believe social media more than any other news source*	4	19.23	11.54	0.021
Social media is my main source to obtain information from various places***	4	80.12	25.73	0.000
The government uses social media the right way to raise awareness among people***	4	30.85	23.33	0.000
I am very satisfied with the government regulations through social media***	4	56.58	31.83	0.000
Doctors strongly use social media to raise awareness among people***	4	39.37	26.78	0.000
I believe all doctors through social media during COVID19*	4	14.35	10.41	0.034
I follow many doctors during COVID19**	4	24.98	17.06	0.002

Note: *** p-value < 0.001, ** p-value < 0.010, * p-value < 0.050;

df refers to degree of freedom and F-value refers to Mean Square Model divided by Mean Square Residual

Summary of the analysis

This section discusses the findings of the study as the ANOVA results are presented are statistically significant. The One Way Analysis of the Variance shows that the probability of the distribution of the response. The distribution of the residuals are normal as the means of the independent groups are compared using the F distribution. F refers to the mean square model divided by the mean square residual. Youths in the U.A.E who were aware of the spread of news on social media during COVID19 were compared with other groups. The significant results are only discussed. The null hypothesis is that the means of both of the groups are the same but the significant results reject the null hypothesis. The 3 age groups discussed in the study - 12-19; 20-30 and greater or equal to 30 are aware of the dissemination of news on social media along with youths. The F-value, chi-square, and p-value reported for age were as follows - 4.80, 5.81, and 0.050 respectively.

Similarly, the youths who are aware of the spread of news over social media believe that the synergy between local government bodies in the dissemination of information via social media can reduce the news from unverified sources and increase the credibility of the news being promulgated. The F-value, chi-square, and p-value analyzed are as follows - 33.39, 11.88, and 0.018 respectively. Studies like Lampos et al, 2020 [26] reported that false and fabricated information can cause harm and lead to severe health consequences such as using or drinking bleach can cure COVID19 or advising the use of saltwater etc.

Validation of the study using chi-square and p-value significance

Our study uses a one-way analysis of variance (ANOVA) with chi-square results mentioned along with significant p-values. It shows that our statistical model is valid along with associated factors as it rejects the null hypothesis. Our ANOVA results offer means between 2 categories and generalize T-test beyond these means. It describes the complex relationship between variables. For example, youths in the United Arab Emirates, who were aware of the spread of news on social media during the COVID19 pandemic, would pass the news without checking or verifying the facts to their peers or local communities online. Moreover, they are also aware of the fact that social media disseminates false information. Pennycook et al., 2020 [39] shows the spread of fake information during the COVID19 pandemic resulting in a deleterious effect on the health of the general population.

Theoretical discussion and comparison with previous studies

As per studies conducted by Apuke and Omar in 2020 [5], a lot of misinformation was shared online during the Ebola crisis as well wherein a lot of misinformation and erroneous content was shared with the public online. In our study, we emphasize the importance the highlighting such intricacies in conceptualizing fake news and raising awareness among the public to reduce the dissemination of unverified information with others.

As per McGonagle, 2017 [31], previously many researchers and scholars have deduced that the circulation of fabricated information can deceive communities and individuals leading to uproar and chaos among the general public especially youths and family members can happen due to content on social media. Studies conducted by Egelhofer and Lecheler ,2019 [16] states that the fabrication of content on social media to disguise original facts and valid sources can be

an intentional act. In our study conducted, we indeed validated the sources using research questions asked to local youths of the U.A.E in all seven emirates and establishing correlation using ANOVA and reporting chi-square and p-value significance based upon it.

Pulido et al. 2020 [40], reported that most of the news and posts classified as fake were reported on health topics which shows the relevance of our study as it is inclined with the current COVID19 pandemic. Our study strongly shows the correlation between instances wherein youths felt inclined to forward posts or content on social media unknowing as an act of altruism and without verifying its source. Apart from that, it also shows that youths felt the need to stay in touch with medical professionals and were satisfied with government initiatives.

DISCUSSION

As per the World Health Organisation situation report published on Jan 21, 2020, based upon credible ground surveillance and local health authorities, novel coronavirus (2019-nCoV) with unknown etiology, first detected in Wuhan City, Hubei province of China Gao, J., 2020 [20]. The United Arab Emirates (UAE) subsequently got its first case in the same month of January via infected travelers from Wuhan, Hubei Province China. It led to an uprising in cases as well as a rise in the sharing of COVID19 information across all major social media platforms like Instagram, Snapchat, What's App, Facebook, Twitter, TikTok, and others [39]. It influenced behavioral trends among youths due to imposed lockdown and gathering of all relevant information from social media leading to the spread of rumors and misinformation. The high volume of social media posts was shared every day without double-checking their facts or trusted sources. It led to an increasing trend of myths related to home remedies, medicines, vaccines, technological devices, supplements, and numerous other ways of claiming to eliminate the SARS nCoV-2 virus or reducing the risk of infection. Given the rising trend of infodemic, the World Health Organisation (WHO) asked for coordinated efforts in flattening the infodemic curve and stopping the spread of misinformation [8].

Our study plays a crucial role in limiting the spread of COVID19 rumors and creating awareness among the youths in 7 member emirates of UAE namely Abu Dhabi, Ajman, Dubai, Fujairah, Ras Al Khaimah, Sharjah, and Umm Al Quwain. It exposes the huge amount of COVID19 information shared daily and its influence over the youths leading to a behavioral trend of posting and sharing on social media without verifying the true source or credentials [29].

Social media plays a critical role as it has become the primary source of information in today's age. They also act as a platform for the dissemination of misinformation and fake news. Amid the COVID19 pandemic, specifically, youths should be aware of their roles in combating this menace of rising infodemic and master their social media skills to act responsibly. If social media platforms are used in the right way then it can lead to warm and conducive socialization among friends, family, and like-minded individuals for social and emotional support during such strenuous times. Local social media support groups can organize and create an amicable environment wherein they collaborate with local humanitarian government or private agencies and support families with food and necessities [15].

Amid the COVID19 pandemic, people turn to social media for support, entertainment, and sources of information. They can be misled to believe fake news leading to a chain of events in spreading fake news. Social media platforms are inept

Limitations

The study faced research limitations due to the ongoing COVID19 pandemic in terms of inducting more participants from 7 member emirates of the United Arab Emirates (UAE). Our research needed more volunteers to spread and propagate the questionnaire to youths in UAE who were more inclined to participate in the study and help evaluate the role of social media in influencing COVID19 information leading to the rising of the infodemic curve.

Conclusions

Our study can play a crucial role in the United Arab Emirates (UAE) to stop the spread of rumors, misinformation, and fake news to the masses, especially to youths who can suffer mental hurdles and emotional challenges leading to change in behavioral trends. As per the study, it was also evident that most of the youths spend more than 4 hours browsing various social media platforms like Instagram, Snapchat, Facebook, TikTok, Twitter, and others, sharing healthcare and COVID19 information without checking facts or trusted sources. Youths need to be educated on differentiating between rumors and facts based upon the volley of COVID19 information received every day and stopping the spread of misinformation among family and friends. Good and reliable information will eventually flatten the infodemic curve and build trust among communities to evaluate the current situation and overcome the challenges related to the COVID19 pandemic.

Acknowledgments

COVID19 pandemic has affected millions of people worldwide with countless youths being influenced by misinformation without valid credentials daily. This study will help stop the spread of misinformation and flatten the infodemic curve. Hence, we are thankful to the number of researchers who guided and advised us along the way towards formulating this study. We also express our gratitude to SPSS software developers and STATA Corp. LLC for their invaluable input in data analysis.

REFERENCES

- [1] Ahmad, A. R., & Murad, H. R. (2020). The impact of social media on panic during the COVID-19 pandemic in Iraqi Kurdistan: online questionnaire study. *Journal of Medical Internet Research*, 22(5), e19556.
- [2] Arafat, S. Y., Kar, S. K., Menon, V., Kaliamoorthy, C., Mukherjee, S., Alradie-Mohamed, A., ... & Kabir, R. (2020). Panic buying: An insight from the content analysis of media reports during COVID-19 pandemic. *Neurology, Psychiatry and Brain Research*, 37, 100-103.
- [3] Al-Jenaibi, B. (2011). The use of social media in the United Arab Emirates: An initial study. *European Journal of Social Sciences*, 23(1), 84-97.

- [4] Apuke, O.D., Omar, B., 2020. Fake news proliferation in Nigeria: Consequences, motivations, and prevention through awareness. *Humanities & Social Sciences Reviews* 8 (2), 318–327.
- [5] Apuke, O. D., & Omar, B. (2020). Fake news and COVID-19: modelling the predictors of fake news sharing among social media users. *Telematics and Informatics*, 56, 101475.
- [6] Cinelli, M., Quattrociocchi, W., Galeazzi, A., Valensise, C. M., Brugnoli, E., Schmidt, A. L., ... & Scala, A. (2020). The covid-19 social media infodemic. *arXiv preprint arXiv:2003.05004*.
- [7] Cinelli, M., Brugnoli, E., Schmidt, A. L., Zollo, F., Quattrociocchi, W., & Scala, A. (2020). Selective exposure shapes the Facebook news diet. *PloS one*, 15(3), e0229129.
- [8] Chan, A. K., Nickson, C. P., Rudolph, J. W., Lee, A., & Joynt, G. M. (2020). Social media for rapid knowledge dissemination: early experience from the COVID-19 pandemic.
- [9] Chew, C., & Eysenbach, G. (2010). Pandemics in the age of Twitter: content analysis of Tweets during the 2009 H1N1 outbreak. *PloS one*, 5(11), e14118.
- [10] Cohen, R. I. S., & Bosk, E. A. (2020). Vulnerable youth and the COVID-19 pandemic. *Pediatrics*, 146(1).
- [11] Courtney, D., Watson, P., Battaglia, M., Mulsant, B. H., & Szatmari, P. (2020). COVID-19 impacts on child and youth anxiety and depression: challenges and opportunities. *The Canadian Journal of Psychiatry*, 65(10), 688-691.
- [12] Darwish, E. (2020). Perceptions of the UAE's Government Communicators Regarding Social Media Roles. *International Journal of Customer Relationship Marketing and Management (IJCRMM)*, 11(4), 20-35.
- [13] Davalbhakta, S., Advani, S., Kumar, S., Agarwal, V., Bhoyar, S., Fedirko, E., ... & Agarwal, V. (2020). A systematic review of smartphone applications available for corona virus disease 2019 (COVID19) and the assessment of their quality using the mobile application rating scale (MARS). *Journal of medical systems*, 44(9), 1-15.
- [14] Del Vicario, M., Bessi, A., Zollo, F., Petroni, F., Scala, A., Caldarelli, G., ... & Quattrociocchi, W. (2016). The spreading of misinformation online. *Proceedings of the National Academy of Sciences*, 113(3), 554-559.
- [15] Depoux, A., Martin, S., Karafillakis, E., Preet, R., Wilder-Smith, A., & Larson, H. (2020). The pandemic of social media panic travels faster than the COVID-19 outbreak.
- [16] Egelhofer, J.L., Lecheler, S., 2019. Fake news as a two-dimensional phenomenon: a framework and research agenda. *Annals of the International Communication Association* 43 (2), 97–116.
- [17] Frenkel, S., Alba, D., Zhong, R., 2020. March 8). Surge of Virus Misinformation Stumps Facebook and Twitter, *The New York Times* <https://www.nytimes.com/2020/03/08/technology/coronavirus-misinformation-socialmedia.html>.
- [18] Ferrara, E. (2020). What types of COVID-19 conspiracies are populated by Twitter bots?. *First Monday*.

- [19] Gabriel, M. G., Brown, A., León, M., & Outley, C. (2020). Power and social control of youth during the COVID-19 pandemic. *Leisure Sciences*, 1-7.
- [20] Gao, J., Zheng, P., Jia, Y., Chen, H., Mao, Y., Chen, S., ... & Dai, J. (2020). Mental health problems and social media exposure during COVID-19 outbreak. *Plos one*, 15(4), e0231924.
- [21] Gjylbegaj, V. (2020). Role and Influence of Social Media on the PR Industry: Uses and Opportunities in UAE. *Media Watch*, 11(2), 356-362.
- [22] Hao, K. (2020, May 19). The coronavirus is the first true social-media “infodemic.” MIT Technology Review. <https://www.technologyreview.com/2020/02/12/844851/the-coronavirus-is-the-first-true-social-media-infodemic/>
- [23] Hou, Z., Du, F., Jiang, H., Zhou, X., Lin, L., Assessment, T., & Commission, N. H. (2020). Assessment of public attention, risk perception, emotional and behavioural responses to the COVID-19 outbreak: social media surveillance in China. Doi: 10.1101/2020.03.14.20035956.
- [24] Huynh, T.L.D., 2020. The COVID-19 risk perception: A survey on socioeconomics and media attention. *Economics Bulletin* 40 (1), 758–764. Introne, J., Gokce Yildirim, I., Iandoli, L., DeCook, J., Elzeini, S., 2018. How People Weave Online Information Into Pseudoknowledge. *Social Media and Society* 4 (3).
- [25] Ho, H. Y., Chen, Y. L., & Yen, C. F. (2020). Different impacts of COVID-19-related information sources on public worry: An online survey through social media. *Internet Interventions*, 22, 100350.
- [26] Ireton, C., & Posetti, and J. (2018). *JOURNALISM , ‘ FAKE NEWS ’ & Handbook for Journalism Education and Training*.
- [27] Lampos, V., Moura, S., Yom-Tov, E., Cox, I. J., McKendry, R., & Edelstein, M. (2020). Tracking COVID-19 using online search. 93, 4–9. <http://arxiv.org/abs/2003.08086>.
- [28] Liang, L., Ren, H., Cao, R., Hu, Y., Qin, Z., Li, C., & Mei, S. (2020). The effect of COVID-19 on youth mental health. *Psychiatric Quarterly*, 1-12.
- [29] Li, C., Chen, L. J., Chen, X., Zhang, M., Pang, C. P., & Chen, H. (2020). Retrospective analysis of the possibility of predicting the COVID-19 outbreak from Internet searches and social media data, China, 2020. *Eurosurveillance*, 25(10), 2000199.
- [30] Mavragani, A. (2020). Infodemiology and Infoveillance: Scoping Review. *Journal of medical internet research*, 22(4), e16206.
- [31] McGonagle, T., 2017. “Fake news”: False fears or real concerns? *Netherlands Quarterly of Human Rights* 35 (4), 203–209.
- [32] Mohamad, S. M. Creative Production of ‘COVID-19 Social Distancing’ Narratives on Social Media. *Tijdschrift voor economische en sociale geografie*.
- [33] Moore, S. A., Faulkner, G., Rhodes, R. E., Brussoni, M., Chulak-Bozzer, T., Ferguson, L. J., ... & Tremblay, M. S. (2020). Impact of the COVID-19 virus outbreak on movement and play behaviours of Canadian children and youth: a national survey. *International Journal of Behavioral Nutrition and Physical Activity*, 17(1), 1-11.

- [34] Nathiya, D., Singh, P., Suman, S., Raj, P., & Tomar, B. S. (2020). Mental health problems and impact on youth minds during the COVID-19 outbreak: Cross-sectional (RED-COVID) survey. *Social Health and Behavior*, 3(3), 83.
- [35] Quattrociochi, W. (2017). Part 2-social and political challenges: 2.1 western democracy in crisis. In *Global Risk Report World Economic Forum*.
- [36] Puri, N., Coomes, E. A., Haghbayan, H., & Gunaratne, K. (2020). Social media and vaccine hesitancy: new updates for the era of COVID-19 and globalized infectious diseases. *Human Vaccines & Immunotherapeutics*, 1-8.
- [37] Pappot, N., Taarnhøj, G. A., & Pappot, H. (2020). Telemedicine and e-Health Solutions for COVID-19: Patients' Perspective. *Telemedicine and e-Health*.
- [38] Power, E., Hughes, S., Cotter, D., & Cannon, M. (2020). Youth mental health in the time of COVID-19. *Irish Journal of Psychological Medicine*, 37(4), 301-305.
- [39] Pennycook, G., McPhetres, J., Zhang, Y., Lu, J. G., & Rand, D. G. (2020). Fighting COVID-19 misinformation on social media: Experimental evidence for a scalable accuracy-nudge intervention. *Psychological science*, 31(7), 770-780.
- [40] Pulido, C.M., Villarejo-Carballido, B., Redondo-Sama, G., Gómez, A., 2020. COVID-19 infodemic: More retweets for science-based information on coronavirus than for false information. *International Sociology* 0268580920914755.
- [41] Rampersad, G., Althiyabi, T., Warner-Søderholm, G., Bertsch, A., Sawe, E., Lee, D.D., Wolfe, T., Meyer, J., Engel, J., Fatilua, U.N., Rusmania, N., Jiang, Y., Bolnick, D.I., Kirkpatrick, M., Gyaisey, A.P., Afful-dadzie, A., Boateng, R., Boyd-Barrett, O., Perugini, M., Hage, R.-M., 2019. Birds of a Feather: Homophily in Social Networks. *Computers in Human Behavior* 9 (1), 1–9.
- [42] Russonello, G., 2020. Afraid of Coronavirus? That might say something about your politics. *The New York Times*.
- [43] Schmidt, A. L., Zollo, F., Scala, A., Betsch, C., & Quattrociochi, W. (2018). Polarization of the vaccination debate on Facebook. *Vaccine*, 36(25), 3606-3612.
- [44] Schmidt, A. L., Zollo, F., Del Vicario, M., Bessi, A., Scala, A., Caldarelli, G., ... & Quattrociochi, W. (2017). Anatomy of news consumption on Facebook. *Proceedings of the National Academy of Sciences*, 114(12), 3035-3039.
- [45] Shockley, B., Lari, N. A., El-Maghraby, E. A. A., & Al-Ansari, M. H. (2020, July). Social media usage and support for women in community leadership: Evidence from Qatar. In *Women's Studies International Forum* (Vol. 81, p. 102374). Pergamon.
- [46] Starbird, K., Maddock, J., Orand, M., Achterman, P., & Mason, R. M. (2014). Rumors, false flags, and digital vigilantes: Misinformation on twitter after the 2013 boston marathon bombing. *IConference 2014 Proceedings*.
- [47] Global Media Insight, UAE Facebook User Statistics 2020. <https://www.globalmediainsight.com/blog/uae-facebook-users/>
- [48] Viboud, C., & Vespignani, A. (2019). The future of influenza forecasts. *Proceedings of the National Academy of Sciences*, 116(8), 2802-2804.

- [49] World Health Organization (2020). Coronavirus disease (COVID-19) Situation Report – 114.
- [50] WHO COVID19 Situation Report. (2020). World Health Organization (WHO). https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200202-sitrep-13-ncov-v3.pdf?sfvrsn=195f4010_6.
- [51] Zhao, N., & Zhou, G. (2020). Social Media Use and Mental Health during the COVID-19 Pandemic: Moderator Role of Disaster Stressor and Mediator Role of Negative Affect. *Applied Psychology: Health and Well-Being*.