Impact of mass media on the population as a precautionary prevention from COVID-19 in Iraq

Hussen BM [1,*], Qader SS [2], Aziz KF [3], Hazha JH [4], Qader AS [5], Jamal AL [6]

[1]College of Pharmacy, Hawler Medical University, Erbil, Iraq, [2]Kurdistan Board of Medical Specialties, Erbil, Iraq, [3]College of Nursing, Hawler Medical University, Erbil, Iraq, [4]Department of Biology, College of Education, Salahaddin University-Erbil, Erbil, Kurdistan Region, Iraq, [5]PAKY Hospital, Erbil, Iraq, [6]College of Business, University of Kurdistan Hawler, Erbil, Iraq

Corresponding author: Hussen BM, College of Pharmacy, Hawler Medical University, Erbil, Iraq. E-mail: Bashdar.Hussen@hmu.edu.krd

ABSTRACT

The aim of this study was to identify the impact of both traditional mass media and social digital media on the population to prevent the Corona virus disease-19 (COVID-19). Three hundred twenty participants were included. A questionnaire was prepared consisting of socio-demographic characteristics and the effect of traditional mass media and mobile digital media on the population. The sources used for information included TV (72.8 %), Facebook (71.2 %), health professionals (64.4 %), Instagram (28.1 %), Twitter (16.8 %), Radio (14.4 %) and mobile Apps (Viber and WhatsApp being 30.9 %). Social Media could be blamed for aiding the spread of stress and hysteria among people.

Keywords: Corona virus disease 19, people awareness, media, Kurdistan, Iraq

INTRODUCTION

The coronavirus disease 2019 (COVID-19) has affected the world since 2019, causing considerable health burden and hospitalizations with ICU overflow [1,2]. Globally, public and private healthcare officials and research institutions rushed to identify and unfold the identity of the virus. The negative impact of COVID-19 as a new global health challenge with high mortality led to misconceptions to take place on different platforms of social media. Moreover, previous experiences from other

outbreaks, e.g. Ebola and Zika, left similar effects on public awareness and social challenges [3-5]. Such consequences are alarming on the society and public health providers regarding the emergence of new policies, precautions, and behavior of the society in addressing the disease [6,7]. Misrepresentation can be described as a "declaration of truth", which is presently false because of a lack of clinical evidence and short age of the disease [6]. It propagates without constraints globally. This makes it ideal for spreading on social media and therefore growing to an unlimited extent especially during times of public panic, stress, and anxiety [8,9]. A proper emergency communiqué plan encourages network leaders and stakeholders to devise for the current COVID-19 outbreak. Before a virulent disease outbreak occurs, raising awareness and education about Non-Pharmaceutical Interventions (NPIs) and preventive strategies should be provided through network, broadcast and training courses [10]. The strategy should be early, empathetic, accurate, and effective. Transparency in exchange and release of data to the mass media in a scientific way enables the restriction of misinformation and rumors that leads to confusion and fear. Verbal exchange with professionals, specialists, and scientists empowers people and decreases

emotional turmoil. According to WHO guidelines, people are encouraged to get information and gather facts at regular intervals from well-known and accredited scientific sites and local health authority platforms, to distinguish fact-based records from rumors [10].

The objectives of this study were to study the impact of both traditional mass media and social media on the population for prevention, awareness, and attitude against COVID-19 in the Kurdistan Region, Iraq.

MATERIALS AND METHODS

Research design and samples

This descriptive, cross-sectional study was carried out in the Kurdistan Region, an independent area in the north of Iraq (five million people with different ethnic groups (Kurd, Arab and other minorities). It is composed of 4 cities; Erbil (the capital), Duhok, Sulaimani, and Halabja. It has its own Parliament and Ministry Council ruled by Kurdistan Regional Government (KRG), which is an official independent government, accredited by Iraqi Central Government.

During this period, COVID-19 was spread throughout the region, and quarantine was implemented strictly in the area.

Randomized sampling technique was used by selecting the first 20 names of each letter in the alphabet of the contact lists in our phones. 500 persons were called or informed through online applications (Messenger, Viber, and WhatsApp), however, only 320 individuals were agreed to be included in the study. Data was collected by sending out a specially made google form by the usage of an online application.

All subjects who had the interest to participate in the study were recruited after a full explanation of the study. The participants were above 18 years old, had access to one of the online applications mentioned above, and were able to read or had someone to help them read and fill in the form.

A special questionnaire was designed for the study. It consisted of three main parts:

1. Socio-demographic characteristics: age, sex, civil status, educational status.

2. Role of mass media for prevention of COVID-19 depending on the scoring system below: 1 for yes, 2 for not certain, and 3 for not.

3. Level of satisfaction about mass media regarding COVID-19: 1 for satisfied, 2 for satisfying sometimes, and 3 for never satisfy.

Ethical considerations
The study was confirmed and approved by the

Research Ethics Committee, Kurdistan Board of Medical Specialties, Erbil, Iraq. The information was kept confidential, and the data was only used for this study. Both written and verbal consent was taken from the participants. The study was explained in the native languages (Kurdish or Arabic) of the people involved in the study. The right to withdraw from the study at any point was explained to each person.

Analysis of findings
The data of this study was analyzed using the SPSS (Statistical Package for Social Science) Version 23 and included descriptive statistical analysis, frequency, and chi-square.

RESULTS

The socio-demographic features of the participants included 58.4 % female, 27.8 % young (between 19-24 years old), 52.8 % married, and 58.1 % university graduates (Table 1). The sources used for information were as following: TV (72.8 %), Facebook (71.2 %), health professionals (nurses, physicians, and others) (64.4%), Instagram (28.1 %), Twitter (16.8 %), Radio (14.4 %) and other sources of communication such as mobile Apps (Viber, WhatsApp) reaching 30.9 % (Figure 1). The subjects had been influenced by mass media as 96 % (p<0.0001), 66 % of them think that the

technology and communication have a role in decreasing fears among people, On the other hand, 81 % (p<0.001) think that mass media increases stress, 66% think that they received false information against COVID-19, 93 % think that there should direct intervention from authorities in controlling information in mass media, 52 % stayed calmer due to social media, 50 % think that the mass media closed the gap of information regarding COVID-19, 80 % (p<.001) believed that there is spread of false information in mass media, 72 %

(p=0091) received sufficient knowledge regarding the prevention of COVID-19, 50 % stayed calmer due to local mess media, 76 % (p=0.0071) changed their lifestyle to fight against coronavirus, 78 % (p=0.0033) got benefit in applying guideline set by the Ministry of Health and 72 % (p=0.0091) believe that mass media slowed the spread of COVID-19 (Table 2).

Table 1. Socio-demographic characteristics

Socio-demographic Data		Frequency	Percent
Gender	Male	133	41.6%
	Female	187	58.4%
Age (Mean ± St. Deviation)		32.76 ± 12.11	
Age Group	18-30	138	43%
	31-42	118	36.9%
	43 years or older	64	20.0%
Family Status	Single	149	46.6%
	Married	169	52.8%
	Divorced	2	0.6%
Education level	High school	10	3.1%
	Undergraduate	101	31.6%
	Postgraduate	186	58.1%
	Others	23	7.2%

Table 2. Impact of mass media on population regarding COVID-19

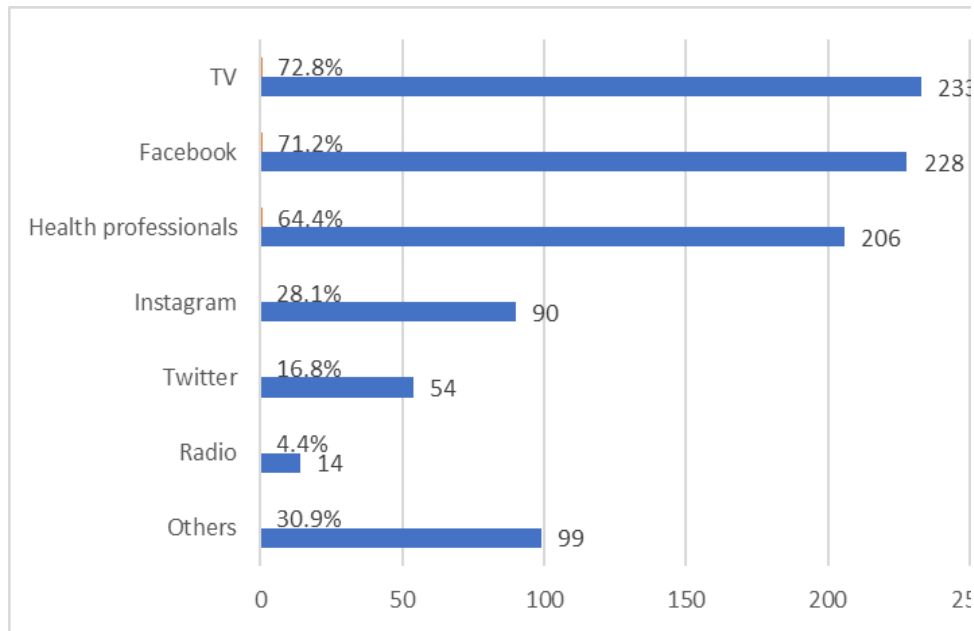|		Total	Percent
Does Mass Media have an effect on protecting people from COVID-19	Yes	308	96.25%
	NO	12	3.75%
Do technology and communications have roles in decreasing fear among people?	Yes	210	66.24%
	NO	107	33.75%
Does Mass Media have a role in increasing fear and stress among people?	Yes	259	81.44%
	NO	59	18.55%
Have you received false information on COVID-19?	Yes	208	65.6%
	NO	109	34.38%
Do you agree that there should be direct intervention from medical media in controlling false information from different social media?	Yes	296	92.8%
	NO	23	7.2%
Have you benefited from social media to stay calmer?	Yes	165	51.56%
	NO	155	48.43%
Has Mass Media closed the gap of information for COVID-19?	Yes	159	50%
	NO	159	50%
Do you think false information is spread on Social Medias regarding COVID-19?	Yes	257	80.81%
	NO	61	19.18%
Have you have obtained sufficient knowledge for prevention from COVID-19 through Mass Media?	Yes	229	72%
	NO	89	28%
Has the local Mass Media helped you stay calm?	Yes	159	50.3%
	NO	157	49.7%
Has Mass media changed your lifestyle to fight against COVID-19?	Yes	243	76.17%
	NO	76	23.82
Has Mass Media helped you apply the guidelines set by the Ministry of Health in your daily activities?	Yes	249	78%
	NO	70	22%
Has Mass Media slowed the spread of COVID-19?	Yes	244	72%
	NO	87	28%

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Figure 1. Sources of information from different mass media tools

Younger age group (18-30 years) (43 %, p= 0.023) believed a necessity of a direct intervention in controlling the source of information in social media (Table 3).

Females were more affected by mass media than men as shown: 33 % of women benefitted from mass media to stay calmer, 47% of them changed their lifestyle with the help of mass media, and 48 % could apply medical guidelines from the Ministry of Health with the aid of mass media. However, the ratio of men for the same criteria as above showed 19 % (p= 0.05), 29 % (p= 0.05) and 30 % (p= 0.02) respectively (Table 4).

Table 3. Association between age and mass media

Do you agree that there should be direct intervention from medical media in controlling false information from different social media?	Ages			Total	*p* value
		Yes	NO		
	18-30	123	15	138 (43%)	
	31-42	111	7	118 (37%)	
	42 or older	63	1	64 (20%)	0.02
	Total	296	23	320 (100%)	

Table 4. Association between gender and mass media

Have you benefited from social media to stay calmer?	*Gender*	*Yes*	*No*	*Total*	*p* value
	Female	104 (33%)	83	187	0.05
	Male	61 (19%)	72	133	
	Total	165	155	320	
Has Mass media changed your lifestyle to fight against COVID-19?	Female	151 (47%)	36	187	0.05
	Male	93 (29%)	40	133	
	Total	243	76	320	
Has Mass Media helped you apply the guidelines set by the Ministry of Health in your daily activities?	Female	155 (48%)	32	187	0.02
	Male	95 (30%)	38	133	
	Total	249	70	320	

DISCUSSION

The majority of participants were in young age range (43.1 %), which is expected because most of them are educated (58.1 %) and use the internet regularly, in contrast to other age groups, who were mostly illiterate (~50 %) [11].

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People in Kurdistan Region (96.25 %) get health information either through direct contact with health professionals (64.4 %) or by the use of traditional or online mass media (TV and Facebook being 72.8 % and 71.2 %, respectively). These led them to stay home, stay calmer, and change their lifestyles (50.3 %, 51.56 %, and 76.177 % respectively) to follow guidelines to decrease exposure. This is in agreement with another study who reported that 88.5% who agreed to follow the guideline and stay home [12]. This is a substantial achievement in 2020, which will provide us with tools to help remediate any epidemics and/or control any chronic non-communicable disease in the future [13].

In adiition, 72 % of the people think that they got sufficient information from mass media. On the other hand, 80.81 % think that there was a spread of false information from these media. Hence, 81.44 % of them felt stressed and anxiety. This number is higher than the number of citizens who reported feeling stressed and panic 42.4 % due to exaggerated news reports that brought fear, stress, and anxiety disorders [12]. The difference is due to that the study was conveyed on a larger sample size. When people get different information and from different sources which are different

in their value and accuracy. They get panicked and stressed. Exaggerated news reports globally especially from social media will be blamed more than the traditional mass media. Therefore, media reporting on health crises and even any health issue should be based on scientific data and recommendations without exaggeration or falsification to prevent panic, stress, and anxiety among people. This is mainly true because the traditional mass media is more professional and run by people who are expert in this field while online mass media (Facebook, WhatsApp, Tweeter and Instagram) is more popular and everyone can use it without any degree of control by the government [12,14]. This is in agreement with other studies done for other epidemics e.g. monkeypox outbreak in Nigeria and the Ebola virus in United State in 2014 that were dramatized by media and led to increased anxiety in the population [9,15]. This is a serious issue that must be studied extensively and planned because of repeated happening possibility for another health challenge in the future [16].

We reported that 92.8 % of the participants believe that there should be direct control by the health authorities on mass media to provide a correct health education for the

population also indicated by others [12]. Misinformation caused by digital or online social media can harm the governmental strategy for prevention, promotion, and rising social awareness about any disease pandemic [10]. This is because media has a direct or indirect impact on the public's behavior.

Older participants (above 30 years) think that there should be direct intervention from the health authorities on the mass media to get correct information (p= 0.02), this is because of the higher sense of social responsibilities in this age group towards themselves, families, and their community. In addition, people learned that COVID-19 is more serious, complicated and fully threatening for older people.

Female participants think they got sufficient information from mass media to stay calmer (p< 0.05), and changed their lifestyle as a protective measure and that the mass media helped them to apply the guidelines from the Ministry of Health (p< 0.05). This is because a female in the Kurdistan Region has more time, is more educated and is mainly not employed, so they use digital and traditional mass media more than others. A previous study revealed that the Mass media is a major source of information about pandemics and

epidemics [17]. Another study exhibited that among a total of 2086 completed responses, higher perception of susceptibility, severity, self efficiacy and perceived control or intention to carry out prevention measures were significantly associated with use of Mass media [18]. As infectious diseases are important in the country [18-25], It seems that Mass media plays a substantial role in improvement of life and awareness against various infectios diseases during pandemics. It has been stated that hospitalization, older ages and prior contact to contaminated sources play a critical role for spread of major nosocomial pathogens, hence hygienic protocols should be adhered in these settings for CoVID-19 [25-31].

CONCLUSION

We conclude that people use both traditional mass media and online social media as a source of information against COVID-19. Social Media are populated by ordinary people and therefore could be one reason that the social media will be guilty of aiding and abetting ill-informed hysteria among people if not controlled or used by health authorities. Digital technology is a substantial tool to be used as a

governmental and health strategy against chronic disease to help in controlling these diseases in the future. The problem of this study is that this pandemic is a new health challenge, which needs urgent global reaction and adaptation. This involves changing the lifestyle and behavior of people through daily information they receive from the officials and mass media. Therefore, the accuracy of the information regarding the spread in these different channels is crucial and correlates with scientific bases and both ethical and international health standards without magnifying the challenge.

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