

COVID-19 INFODEMICS AND MISINFORMATION RESILIENCE AMONG YOUTH IN THE UAE

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ABSTRACT

This paper examines resilience to misinformation among young people in the UAE during Covid-19 pandemic. It subscribes to a constructivist interpretation of resilience as a complex and dynamic process involving individual and societal factors that allows people to overcome adversity resulting from information disorder. In doing so, the paper explores the complex role of the digital news literacy and other demographic variables affecting youth's attitudes towards infodemics in the context of a "paternalistic" state such as the UAE.

The paper adopts a mixed method approach, using both surveys and focus groups, in order to increase the reliability of results. A survey was administered first (N=425) to examine general trends and attitudes towards misinformation and infodemics and was followed by focus groups to further probe some key findings of the survey, and to better understand the role of users' agency and personal attitudes in shaping resilience to misinformation.

Results did not show a strong correlation between trust in news sources and perception of and attitude towards covid-19 misinformation. They also indicate that age group, nationality, and educational background can play an important role in determining youth's resilience against misinformation. The results also confirm that while the macro variable of trust is important, it does not on its own determine the level of resilience against misinformation among youth.

The paper highlights the complex process of resilience among youth that is equally shaped by structural and societal conditions as by individual agency and level of exposure to critical thinking.

Keywords: Infodemics, Misinformation, Covid-19, Resilience, Digital Literacy, Youth, UAE.

INTRODUCTION

The Internet-fuelled fake news phenomenon has disrupted the information ecosystem to a level that scholars and commentators routinely warn that we are now living in the age of digital disorientation, alternative facts, and post-truth where the meaning of reality itself has become seriously challenged. Scholars have cited numerous factors that have exacerbated this problem, chief among them political populism, the erosion of trust in democratic system in postmodern societies, accelerated globalization, and mass adoption of new communication technologies (Stover, 2018). Researchers argued that the unprecedented surge of fake news poses real threat to the survival of democratic institutions De-Blasio & Selva (2021), and that "*the spread of uncertainty, fear, and racism are only some of the consequences of disinformation*" (Kapantai et al., 2021). This threat has become even more critical during the covid-19 pandemic where

countries around the world have been striving to contain one of the most devastating health and economic crises in modern era. Scholars and experts have warned against the pernicious impact of infodemics, or the “*overabundance of information that makes it hard for people to find trustworthy sources and reliable guidance when they need it*” (World Health Organization, 2021).

Recently, the concept of resilience has emerged as an important notion that can clarify the factors determining how people process and react to various forms of information disorders. In this body of research, many scholars have focused on “*structural factors related to different political, media, and economic environments*” (Humprecht et al., 2020). Other scholars have, on the other hand, interpreted resilience in terms of socio-psychological factors that shape individuals’ response to misinformation (Comber et al., 2018). It also was defined as a process involving the empowerment, engagement, and education of individual users (Fernandez & Alani, 2018). So far, however, few studies have attempted to examine resilience as a phenomenon rooted in both macro and micro factors (Vasu et al., 2018). The fact that most studies have examined this issue exclusively in the context of Western countries makes the need for understanding this phenomenon in other cultural environments even more urgent.

This paper examines resilience to misinformation among young people in the UAE. It conceives resilience as a complex process involving individual and societal factors that allow people to overcome adversity resulting from information disorder. Resilience in this sense involves “*a transactional dynamic process of person-environment exchanges*” that can be influenced “*by diversity including ethnicity, race, gender, age, sexual orientation, economic status, religious affiliations*” (Greene et al., 2004). This allows us to account for diverse factors shaping how young people negotiate meaning interpretations as they deal with news and information under covid-19 conditions. The present study specifically addresses the extent to which trust in mainstream media and government institutions affect youth’s resilience against covid-19 misinformation in the UAE. It explores the complex role of the digital news literacy and other demographic and cultural variables affecting youth’s attitudes towards covid-19 misinformation in the UAE. The mixed method approach through the use of survey and focus group approaches provides novel insights into the dynamic process of resilience among youth that is equally shaped by individual attributes as by societal variables and exposure to critical thinking.

LITERATURE REVIEW

Technological of Freedom or Misinformation

Scholars have stressed the key role that new communication technologies, such as social media and mobile handsets, play in the circulation and consumption of news and information. The Internet, for instance, has permitted easy production and dissemination of news, thus contributing to the development of participatory communication and alternative media. Yet, this new communication model has also led to “*the erosion of long-standing institutional bulwarks against misinformation in the internet age*” (Lazer et al., 2018). With rapid advances in digital technologies, fake news has become at once much easier to produce and share and more difficult to detect. The new communication ecosystem has, indeed, supplanted a traditional system where institutional-professional gatekeeping had a significant control over the information flow with a

“*networked-algorithmic*” model that is eroding trust in journalism and democratic values (Van-Dijk & Alinejad, 2020). Researchers have thus highlighted the responsibility of big Internet corporations such as Facebook and Google, in the spread of fake news and misinformation. These global companies’ reliance on AI-generated algorithms to harvest data and customize user online experience contributes to the spread of disinformation, which favors the formation and reinforcement of dystopian networks and biased communities (Guarda et al., 2018).

Conceptualizing Fake News of Information Disorder

Many researchers consider the phenomenon of misinformation to be too complex to be reduced to the term fake news (Zuckerman, 2017; Wardle & Derakhshan, 2017) argues the term has been appropriated by politicians who use it to refer to news organizations they find disagreeable. Researchers have associated fake news with such concepts as “*deceptive news*”. Satire news (Tandoc et al., 2018; Adam, 2016; Conroy et al., 2015). In the same vein, Tandoc et al. (2018) identified various notions connected to fake news including news fabrication, photo manipulation, news parody and propaganda. Lazer et al. (2018) contends that ‘*fake news*’ can be understood as “*fabricated information that mimics news media content in form but not in organizational process or intent.*” He further argues that the term overlaps with other ‘*information disorders*’ such as misinformation and disinformation.

To overcome such conceptual confusion, a number of scholars proposed taxonomies to better define the terms associated with information disorder. Barua et al. (2020) for instance, identified three characteristics to apply to “*information disorder*” terms, namely (i) authenticity (containing any non-factual statement or not), (ii) intention (aiming to mislead or entertain the public), and (iii) whether the information is news. A widely discussed taxonomy of fake news is the one proposed by Wardle & Derakhshan (2017). They propose a conceptual framework that consists of three parts: types of information disorder (dis-information, mis-information and mal-information), phases of information disorder (creation, production and distribution), and elements of information disorder (agent, message and interpreter). One key element to consider is intent to cause harm. Agents may use false information to deliberately cause harm (dis-information), may use false information with no intent to cause harm (mis-information), and may use information based in reality to deliberately cause harm (mal-information). While Wardle & Derakhshan’s taxonomy is very useful to our research, we choose to use hereinafter the term misinformation to refer to various forms of information disorder because as Ha et al. (2021) succinctly point out, “*the intention of the message is difficult to be ascertained by the receiver who may be the subsequent propagator of the message, misinformation is an appropriate descriptor of false information until it is confirmed as disinformation*”.

Response Strategies to Counter Information Disorders

Researchers and institutions dealing with information disorders have proposed various strategies aiming at detecting and combatting this threat. Mertoglu & Genc (2020), propose three main categories, namely reader awareness, fact-checking organizations and websites, and automated detection system. Kozyreva et al. (2020), identify four realms of interventions to cope with misinformation. The first type deals with interventions that belong to the realm of law and ethics, such as legislative regulations and ethical guidelines. The second one belongs to the technological realm and cover structural solutions “*introduced into online architectures to*

mitigate adverse social consequences” (Wineburg & McGrew, 2016). The third set of interventions comes from the realm of education that are directed at users and producers of information. The final one is derived from *“psychological and social sciences and includes behavioral and cognitive interventions”* that aim to *“empower people and steer their decision-making toward greater individual and public good”*. Scholars have noted that the role of automated detection, artificial intelligence and hybrid solutions are central in countering misinformation (Conroy et al., 2015; Wang, 2017). Scholars have also noted various challenges associated with this type of interventions. Since their success depends on a number of variables where speed, credibility and readability play important roles (Moshirnia, 2020).

In addition to developing AI tools to detect misinformation, it has been argued that the focus should be on developing training and educational programs that teach critical skills (Neely-Sardon & Tignor, 2018). As well as how to use *“self-produced and self-distributed digital and social media and participating in peer-centered special interest groups”* (Hobbs et al., 2013). In this context, scholars, educators and media practitioners have called for the need to increase efforts aiming at enhancing users’ digital information and news literacy.

The Stony Brook University’s Center for News literacy defines news literacy as *“the ability to use critical thinking skills to judge the reliability and credibility of news reports from all media: print, TV, radio or the web”*. News literacy is considered a subfield of media literacy that *“focuses on understanding the news production process and developing critical news consumption skills”* (Vraga & Tully, 2015). Scholars have also noted that news and media literacy, on the one hand, and information literacy, on the other, share common characteristics since they are all *“are concerned with evaluating and using information ethically and mindfully”* (Cheney, 2010).

Youth’s Attitudes towards Misinformation

Although people from all age groups are susceptible to misinformation, researchers and experts have argued that young people remain among the most vulnerable online users. Numerous studies found that young people have difficulties distinguishing between factual news and various forms of information disorders (Nygren & Guath, 2019). Because they tend to be heavy users of social media, young people are more exposed to misinformation, and they often face difficulties assessing credibility of information (Figueira & Oliveira, 2017). Studies have also found that *“convenient access to information is a more powerful predictor of college students’ media use than credibility, and students seldom verify the information”*. What’s more, a pioneering study performed at Stanford University concluded that although young people may possess the skills to navigate through the online sphere, *“in reality, students are often much less skilled at evaluating the accuracy of the information they find”*. Younger generations may be digital natives; nonetheless they can be *“easily duped”* online. This can be accounted for by what scholars call *“third person effect”* whereby *“individuals tend to overestimate the influence that media have on the attitudes and behaviors of others and underestimate the same influence on them”* (Corbu et al., 2020).

The Case of the UAE

As mentioned above, the UAE is ranked among the top countries globally in terms of response effectiveness and resilience towards covid-19 pandemic (Hong et al., 2021) In parallel

to the country's vast and quick response to curb the spread of the pandemic, such as the deployment of a mass inoculation program, the country has also acted fast and strong to crack down on misinformation and fake news. A case in point was the arrest and sentencing to prison of an Abu Dhabi TV channel's journalist for reporting, in August 2020, a fabricated story about the death of five family members after contracting covid-19. The court stated that the "*incident negatively affected society, afflicted members of the community and left them in a state of confusion and fear of the outbreak*". In addition to the reporter, the court also jailed the man who falsely claimed the death of members of his family. This case illustrates the country's tough stance on the circulation and sharing of misinformation, a fact that is clearly mandated in the UAE's media laws and regulations. The UAE federal penal law stipulates that "*those violating online laws face jail sentences ranging from three years up to life in prison or fines that can reach up to Dh3 million, the authorities added*" (Sebugwaawo, 2020). The law also punishes those circulating "*such rumors exaggerating the number of cases of people infected with covid-19 in the country [that] trigger fear and unnecessary panic among members of society*". Despite the strong legal measures, false news continued to be circulated on social media platforms during the pandemic. According to various reports and news updates regularly issued by the National Emergency Crisis and Disaster Management Authority (NCEMA) and Ministry of Health, some rumours and misinformation have been reported between March and October 2020. These rumours relate to the origin of the pandemic, how to develop immunity against it, curing the disease, and also official policies such as travel restrictions and lockdown periods. Because much of the misinformation circulating online is shared on private accounts and groups, such as WhatsApp groups Javid et al. (2020), these rumors can escape detection before they become viral.

Theory and Research Questions

In this study, we draw on the concept of resilience to examine the ramifications of misinformation for youth in the UAE. Though this concept has only appeared within communication studies in the last few years, it has been applied in social science fields at least since 1990's. The concept's dominant interpretation is rooted in Holling (1973) who defined it as "*a measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables*". Two interpretations of resilience corresponding to distinct conceptual paradigms, namely the paternalistic and adaptive, have been identified in the literature. Within the paternalistic paradigm, resilience "*means bouncing back or restoring homeostasis*" (Romanova et al., 2020). The approach considers the state's role crucial in restoring balance even if it involves interfering with the individual's liberties and using coercive methods. The adaptive paradigm interprets resilience as bouncing forward where "*functions are delegated to citizens, whereas the state merely outlines local-level practices*".

Numerous scholars have applied the concept of resilience to examine how people respond to misinformation. Barua et al. (2020) for instance, focused on the role of individual psychological factors in determining resilience strategy, i.e. people's capacity and aptitude to evaluate credibility and deal with misinformation, which can allow them "*to move forward in an insightful way to recover from misinformation stress and respond favorably regarding COVID-19*". However, a significant body of research has stressed the need to consider resilience as a

collective characteristic rather than an individual one. From this perspective, resilience tends to be understood as “*the capacity of groups of people bound together in a community or nation to sustain and advance their well-being in the face of challenges to it*” (Humprecht et al., 2020). For instance, conceive resilience “*as a collective characteristic that transcends the individual level.*” Building on this interpretation, they identify seven macro level factors impinging on nations’ collective resilience against adversity such as disinformation, namely a) the degree of political polarization, b) the existence or not of a populist media, c) level of trust in news media, d) strength of public service media, e) the degree of fragmentation of audiences over small and alternative media, e) the existence of a large online ad market, and f) high social media use (Hall & Lamont, 2013).

Taking issue with what they perceive as a monolithic interpretation of resilience, numerous scholars have pointed out that the concept refers to a complex and dynamic process, and that focusing on one aspect of it can only be done at the expense of the multifarious nature of societal resilience (Walker & Salt, 2012; Sakurai & Chughtai, 2020). Within this paradigm, researchers highlighted the importance of individual resilience in the fight against misinformation, specifically through boosting the level of awareness and digital literacy among people to help them better process online news and information. Scholars have examined both individual and organizational resilience, as well as the role of states and citizens in the process (Walker et al., 2014).

Building on the above discussion, we subscribe to an interpretation of resilience as a complex and dynamic process involving individual and societal factors that allows people to overcome adversity and be successful despite exposure to high risk.

Cognizant of the role of macro factors in shaping resilience against misinformation, the current study opted to focus on the factor of trust in media and government institutions in this process. Scholars have identified trust or lack of it as a key factor in predicting resilience against misinformation. Media trust can be defined as the “*faith in news media actors to fulfill journalistic expectations*” Vanacker & Belmas (2009), and it “*plays a crucial role in how citizens and stakeholders perceive information*”. Researchers have indicated that distrust of professional news and institutions “*can lead to selective exposure because source credibility affects the interpretation of information*”. For this purpose, we advance the following research question:

RQ1: To what extent does trust in mainstream media and government institutions affect youth’s resilience against covid-19 misinformation in the UAE?

Central to a holistic interpretation of resilience is the key role that digital and media literacy plays in empowering users to navigate safely through misinformation. Accordingly, the paper raises a second question:

RQ2: To what extent does digital and news literacy among youth determine their resilience to covid-19 misinformation in the context of the UAE?

Finally, and since resilience is a dynamic process that can be shaped by diverse demographic and socio-cultural factors, the third question that the paper seeks to answer is:

RQ3: What are the main demographic and personal variables affecting youth’s attitude towards covid-19 misinformation in the UAE?

METHODOLOGY

Study Design

In this paper, we employed quantitative and qualitative methods, namely a survey and focus groups. The survey method allowed us to examine the relationship between the degree of resilience to covid-19 related misinformation, i.e. the ability to identify process and critically deal with this phenomenon, and two major independent variables, namely trust in mainstream media and government, on the one hand, and media and news literacy, on the other. It also permitted us to examine trends and attitudes towards misinformation, and compare them against key demographics such as age, gender, and nationality. The survey was followed by focus groups to further probe some key findings of the survey, and to better understand the role of users' agency and personal attitudes in shaping resilience to misinformation.

Survey Method

Sampling: A combination of both purposive and convenience sampling was used in the study in which both graduate and undergraduate students in three UAE universities, two private and one public. An online questionnaire was administered via SurveyMonkey.com and was disseminated through email addresses. The data was collected between December 15, 2020 and January 20, 2021.

Procedure

The research instrument was duly approved by the research ethics committee at the University of Sharjah, and participation in the survey was voluntary and anonymous. The total number of valid questionnaires that were collected was 425 (Table 1). The collected data was captured and analyzed using SPSS software. Using a five-scale Likert questions, the questionnaire covered four major themes: a) general media consumption habits and preferences; b) trust in media and news sources, in general, and in covid-19 related news, in particular; c) covid-19 misinformation, rumours and facts; d) media and news literacy skills; e) demographics.

		Frequency	Percent
Gender	Male	183	43.1
	Female	242	56.9
Age	18-25	282	66.4
	26-35	143	33.6
Nationality	Citizen	229	53.9
	Resident	196	46.1
Specialization	Human, Social sciences	239	56.2
	Engineering, Medicine, and Health Sciences	186	43.8
Education level	Undergrad	208	48.9
	Bachelor	217	51.1

Focus Group

After the collection and analysis of survey data, two focus groups were used to probe in more depth the research questions and to follow up on the main trends identified through the quantitative analysis. A key advantage of the focus group method is that it allows researchers “*to draw upon respondents’ attitudes, feelings, beliefs, experiences and reactions in a way in which would not be feasible using other methods*”. Due to Covid-19 restrictions, the focus groups were conducted online on MS Teams during February 2021, with one-week interval between them. Purposive sampling was followed to recruit male and female participants from two undergraduate university general requirement courses. This allowed us to meet the criteria of recruiting participants from diverse academic disciplines, and at the same time ensured that the composition of the group create a level of homogeneity that can help generate active exchanges and discussion about a sensitive topic Wimmer & Dominick (2000) Ten students participated in each group, and the focus group discussions lasted 60 minutes and 80 minutes for the first and second groups respectively. Participants were duly informed of the objectives of the research, and their consent was obtained prior to recording the online sessions, which were transcribed verbatim for analysis.

RESULTS

Survey Results

Using News Media: Results indicate that the majority of respondents are not heavy consumers of news media online with almost 58% of them accessing news media less than one hour on a daily basis. This is in contrast to research studies that have indicated that news consumption has skyrocketed during covid-19 pandemic globally (Newman et al., 2021). In comparison, results show that the majority of respondents share news on social media (more than half of them share news on either daily basis or at least several times a week).

Table 2		
ONLINE NEWS MEDIA USE FREQUENCY		
	Frequency	Percent
Frequency of accessing online news media per day		
Less than one hour	246	57.9
From one to three hours	130	30.6
From four to eight hours	38	8.9
More than nine hours	11	2.6
Total	425	100
Frequency of sharing news on social media		
Less often	76	17.9
Once a week	127	29.9
A few times a week	66	15.5
Daily	156	36.7
Total	425	100

Types of used News Media

The results in Table 2 consumption trends above seem to be corroborated by those on the most used news media sources (Table 3). Clearly, young people rely much more on social media to get news than on traditional media sources and institutions, which is also compatible with global trends over the last decade that witnessed a sharp decline in traditional media audience share, particularly print media. Results also demonstrate that young people are getting news from a variety of online sources, including government platforms, and personal networks (friends and family).

News Sources	Mean	Std. D.
Social media private accounts	3.68	1.333
Government platforms and official accounts	3.56	1.283
Friends and family	3.49	1.406
News media social media accounts	3.4	1.084
International organizations such (WHO)	3.25	1.213
Social media influencers accounts	3.06	1.437
Online newspapers websites	2.88	1.428
TV news channels	2.29	1.357
Radio news stations	1.83	1.015
Print newspapers	1.51	0.827

Trusted News Sources

More importantly, results indicate that the frequency and intensity of use do not necessarily correlate with trust. In fact, though respondents may rely more on social media and peer communication to get news, the majority highly trust mainstream media, government sources and international organizations, such as WHO, with official information platforms emerging as the most trusted sources, and social media influencers the least trusted ones (Table 4).

News Sources	Mean	Std. D.
Government/official platforms & accounts	3.88	1.201
International organizations	3.64	1.283
Print newspapers	3.04	1.266
News TV channels	3.03	1.24
Online newspapers	2.94	1.153
Radio station	2.86	1.248
Friends and family	2.53	1.23
Private social media accounts	2.04	0.948
Social media influencers accounts	1.98	1.003

These results corroborate research findings in other countries that found that while use of traditional mainstream media has been in decline in recent years, this trend has reversed under covid-19 pandemic as people are seeking information from more reliable sources. According to one report that covered European countries, for instance, trust in mainstream media, such as newspapers and TV networks, “*was more than twice the level for social networks, video platforms, or messaging services when it came to information about COVID-19*”.

Understanding the Notion of Fake News

The results indicate that respondents are wary of all forms of misinformation regardless of intention or degree of deceit. While the results do not necessarily prove that young people possess sharp critical skills allowing them to deal with various forms of misinformation, they, at least, show that all deviation from truth is considered as a sign of fake news. But this wariness can also lead to conflation between what can be a legitimate expression of journalistic opinion and fake news (Table 5).

Fake News is	Mean	Std. D.
Fabricated and unfounded news (Rumors)	3.97	1.092
News that provides false information about real events	3.92	1.228
News intentionally intended to cause harm to individuals or society	3.79	1.226
News providing false interpretations of real facts	3.76	1.129
News alleging events in places other than where they really happened.	3.65	1.161
News that includes fake photos and videos	3.62	1.305
News based on incomplete facts or facts without context	3.6	1.213
News conveying personal opinion and interpretations and not just objective facts	3.57	1.067

Detecting COVID-19 Related Fake News

Equally important, the participants’ perceptions of some of the most commonly held covid-19 related misinformation indicate a satisfactory level of awareness of these ‘news’ deceptiveness. Still, results also show that a quite significant number of young people, albeit a minority, believe in these claims (Table 6).

Fake news	Mean	Std. D.
Some vaccination is more effective than others	3	0.737
Covid-19 virus Can be transmitted by pet animals	2.89	1.107
Covid virus was released by pharmaceutical companies to sell vaccine	2.57	1.2
Flu vaccine can protect against the Covid virus	2.36	1.108
Covid pandemic is a Chinese conspiracy aiming to control the world	2.24	1.025
Drinking anise (yanson) tea provides immunity against the virus	2.22	0.981
Covid-19 was caused by G5 telecommunication towers	1.96	0.995

What’s more, given that the first statement in the cluster “*some vaccination is more effective than others*” describes a valid fact, the level of news literacy and skills needed to

distinguish between factual and fake news is likely to be higher than the results indicate. Given that various campaigns have warned against most of the covid-19 related fake news on the list, the results prove the relative effectiveness of these campaigns. Nonetheless, young people remain vulnerable to fake news, especially those that are difficult to detect and debunk because they are shared through closed social networks on- and offline.

Perception of Causes behind Fake News Proliferation

Likewise, results indicate that respondents overwhelmingly think that users and audiences of them equally blame the dynamics peculiar to online news production and dissemination that have marginalized the role of traditional news gatekeepers and filters. Yet, respondents also find the media themselves sharing some of the responsibility as they are not doing enough to expose misinformation.

Causes	Mean	Std. D.
Lack of awareness and skill to distinguish between true and false news	4.09	0.953
People are nonchalant about the dangers of fake news	3.95	0.936
Sharing fake news on personal social media accounts and SMS platforms	3.85	1.022
Attention seeking inclination that leads to posting or sharing news without verification	3.84	1.05
Rapid development of events and decisions and clarity of the situation	3.83	0.858
The amount of news published online is too big to verify	3.74	0.997
Insufficient information provided by news media	3.47	0.985

Correlations and Differences

Results of a Pearson Correlation revealed a positive moderate correlation between understanding the notion of fake news (Table 7) and perception of the causes exacerbating fake news (Table 8) $r=0.355$, $P<0.000$.

		Defining fake news	Fake news causes	Covid-19 information	Trust in media
Defining fake news	Pearson Correlation	1	0.355**	0.189**	-0.102*
	Sig. (2-tailed)	-	0	0	0.036
	N	425	425	424	425
Perception of causes	Pearson Correlation	0.355**	1	0.121*	-0.095*
	Sig. (2-tailed)	0	-	0.013	0.05
	N	425	425	424	425
Covid-19 fake news	Pearson Correlation	0.189**	0.121*	1	0.257**
	Sig. (2-tailed)	0	0.013	-	0
	N	424	424	424	424
Trust in media	Pearson Correlation	-0.102*	-0.095*	0.257**	1
	Sig. (2-tailed)	0.036	0.05	0	-
	N	425	425	424	425

It also indicated a positive weak correlation between understanding the notion of fake news, on the one hand, and detecting fake news $r=0.189$, $P<0.000$, and trust in media $r=0.102$, $p<0.036$, on the other. Similarly, data indicate a negative weak correlation between perception of causes and trust in media $r=-0.095$, $P<0.05$.

A Cohen's calculation reveals that age group among participants can have a weak positive effect on perception of fake news $p<0.006$ ($d=0.282$) as participants from the older group (26-35) seem to be slightly more inclined to identify misinformation (Table 9). The results indicate that gender is not a significant variable with perception of fake news.

Sample	N.	Mean	Std.D.	t-test	Sig.	Cohen's d
Male	183	29.73	7.932	$t=-0.336$	0.734	
Female	242	29.99	7.837			
18-25	282	29.14	8.625	$t=-2.749$	0.006	0.282
26-35	143	31.34	5.873			
Citizen	229	29.13	7.941	$t=-2.142$	0.033	0.208
Resident	196	30.76	7.713			
Hum & soc sci	239	28.62	7.672	$t=-3.803$	0	0.372
Eng. & h. sci	186	31.5	7.844			
Undergrad.	208	30.49	7.602	$t=1.568$	0.091	
Postgrad.	217	29.29	8.093			

The t-test calculations indicate that gender ($p<0.001$), university major ($p<0.000$), and educational level ($p<0.033$) have a positive effect on perception of fake news causes, though a Cohen calculation shows that this effect is not very significant ($d=0.332$, $d=0.600$ and $d=0.208$ respectively) (Table 10).

Sample	N.	Mean	Std. D.	t test	Sig.	Cohen's d
Male	183	27.72	4.655	$t=3.394$	0.001	0.332
Female	242	26.05	5.266			
18-25	282	26.89	5.46	$t=0.701$	0.483	
26-35	143	26.52	4.219			
Citizen	229	26.63	5.335	$t=-0.607$	0.544	
Resident	196	26.93	4.759			
Hum & soc. sciences	239	25.49	4.67	$t=-6.133$	0	0.6
Eng. & hea. sciences	186	28.41	5.112			
Undergrad	208	27.3	4.903	$t=2.140$	0.033	0.208
Grad	217	26.25	5.192			

Focus Group Results

News Media Sources and Pattern: The focus group data confirmed the survey results on the news and media preferences of young people. The majority of participants, in fact, stated that they got most of their news from social media platforms. However, data also show that young people draw on a variety of sources, mixing traditional media with other sources, including interpersonal communication. Jude, a Jordanian 3rd year student in communication studies, stated: I mostly follow Twitter because people there are ruthless mostly what they say is from the midst of events and they transfer what happens as it happens via Twitter (...). I [also] get news from Jordan because my relatives are living there so we get news on a daily basis [from there] and we also have few [Jordanian] websites that we follow.

Jude's testimony clearly demonstrates how media and news consumption is interwoven in the experience of youth's diaspora experience in the UAE where non-citizens constitute almost 90% of the population. By using the plural pronoun we to refer to her news habits, Jude emphasized the collective experience of news consumption that goes beyond getting information to feeling connected to the home country. Similarly, Roufaida, a 3rd year communication student expresses the same insights about news consumption as a multidimensional social and cultural experience where identity reflexivity intersects with news savviness: *"the sources I usually go to are WHO CNN and Algerian channels, because I'm Algerian and that's what will be on the TV most of the time"*. In the same vein, Khalid, an Arab expat student in Engineering, asserts that:

"I use mostly Instagram. I make sure to use the pages that are well known the page I use is mostly 3 ameed news because it's the most consistent news outlet on Instagram. I use the TV when following the US elections. I use different news outlets Al-Arabiya BBC, CNN."

Khalid's statement confirms not only the primacy of social media as the prime source of news, but also the popularity of numerous commercial news aggregators active mainly on social media platforms, such as 3 ameed, that relay news in addition to posting ads. These news accounts are very popular in the country and the number of their followers surpasses by far many traditional news media's. Khalid's testimony also indicates that youth's news media consumption hinges on the type of issue at hand insofar as youth are consumers of diverse media, too, especially English, such as the BCC and CNN.

Still, a number of participants indicated that they relied primarily on closed personal circles and private social media accounts to get news. Noura, an Emirati communication student stated: I personally have some [online] groups in which we share some news that happen inside the country and in other countries, but I always try to find sites and sources that are related to the topic, and I'm the kind of person who prefers to consume news in audio-visual format.

Noura's statement, actually, sheds light on the role of social networks on and offline in the dissemination and consumption of news in the context of collectivist communities where kinship, clanship and friendship can take primacy over mass communication channels.

Trust in Media and Checking News

News consumption pattern among respondents is closely linked with the level of trust in various media sources, although young people can be very pragmatic in the way they deal with

the media in the sense that consulting diverse media platforms may not always reflect degree of trust in them. For instance, Roufaida, a 3rd year communication student, stressed.

I don't think there is one specific source that one should just consider as the Holy Grail and it is the credible source. I think it's just a combination of multiple sources you can't just take one source you have to read all over to make sure that you have the full story.

Roufaida' statement reflect an awareness of the issue of fake news, as well as wariness of all news sources, including mainstream media, compared to trusting peer and interpersonal communication to validate information. Although all respondents share the same wariness of news media, they do not all agree on trusting interpersonal networks as viable sources, nor on which media sources can be rated as the most credible ones. Khalid, for instance, asserts that

I don't trust the news that my friend share. Sometimes it's not true. They share from, like, not trusted account. They share anything. I get [news] from trusted accounts like Barq or 3 ameed. (...) a lot of accounts share the same news and also on the news channels. So of course, [the news] will be true'

On the other hand, Alaa, a health sciences student, indicated that she trusted more international news sources: "*BBC has a channel on YouTube. Usually, they don't lie with news. It's always a trusted source... not any place.*"

Media Sources and Trust during Covid-19 Pandemic

Most participants remain skeptical about news media in general, a perspective that gained new momentum under covid-19 pandemic. This stance seems to be more of a defense mechanism to deal with the overwhelming volume and variety of information and news disseminated on social media about the pandemic than it is evidence of refined critical media skills per se. In the context, Khalifa states:

"My friends post a lot of things about the news and when the Covid came out, however, most of us don't trust it 100%, we just acknowledge it. But we don't trust it 100% we just send it to each other."

Although respondents indicated they rely on social media networks to get news about covid-19, they, nonetheless, trust more established sources, such as governmental platforms, along with other authoritative sources, such as the WHO. While the data obtained from the survey indicate quite a high trust in governmental and mainstream media sources, this trust does not apply equally to all issues related to covid-19 pandemic. Tobiyat pointed out: I don't know, I just have this weird feeling about the vaccine I just feel like maybe in the nearest future it's going to be harmful for me, so I didn't take the vaccine. My mom asked me to but I refused because I'm just afraid. Maybe I'm going to have it later or maybe something is going to come up.

However, a number of other participants have stressed that they trusted vaccination mainly because it was supported by official and governmental sources. For instance, Khalifa stated: It's real, why would they fake it? I mean, the first people who took the vaccine were the government and the army and the first defense. Like, why would they do that if it's fake?

Overall, although the survey results above indicate quite a satisfactory level of awareness of misinformation, the focus group discussions reveal a less assured prospect, showing how young people might overrate their skills and knowledge, which is a clear evidence of 'third person effect' marking youth's experience with and perception of misinformation.

Responsibility for Proliferation of Fake News

While participants expressed divergent opinions about trust in news media and how to access reliable information, most of them agree that the responsibility of fighting fake news falls on the government and users themselves.

The participants, however, stressed even more the responsibility of users themselves in combating fake news. As Khalifa pointed out, *“I think us the users are responsible... since everybody is responsible for themselves and they should know what's right and what's fake”*. His opinion is also shared by a number of other respondents, such as Sara who mentioned that users *“have a responsibility to check whether the source is reliable or not, because we have a lot of sources especially on social media”*. Still a minority of participants also maintained that social media platforms have their own share of responsibility.

News Literacy Skills

To probe their news literacy skills, the participants were shown various news posts taken from diverse social media platforms and were asked to comment on them. The news examples that were used contained both fake and accurate information sources from both mainstream media and personal social media accounts. Prompted to respond to a Twitter post that uses the format of mainstream media breaking news and claiming that an Iraqi firm has discovered a cure to covid-19 virus, Mai pointed out:

I don't believe it because there are too many red flags. First of all, the picture shows people not wearing masks and doesn't seem reasonable. How they would say that in three days, everyone will get the cure to Corona. It just looks fake to me.

In the context of the focus group discussions where participants are aware of the subject of the meeting, it is possible that the reactions above stem more from the participants' biased expectations about the questions to be raised than from genuine media and news literacy skills. To reduce this inevitable bias within the research method, participants were also exposed to social media posts featuring genuine information from reliable media sources, such as a post from France-based Arabic speaking Monte Carlo Radio station. The post is reporting British Minister Boris Jonson's statement that the British variant of Covid-19 virus might be more deadly. Commenting on the post, Jude stated:

“The idea is, even if the news article is false, I would have believed it, because we have gone through pandemics and we have seen that viruses can be genetically modified, so the news is not far from truth... even if it could be false.”

Jude's statement clearly reflects an internal struggle with processing online news; especially that she is dealing with international news sources she is not familiar with. Similarly, although she was not sure about the post itself, nor about its source, Noura had to draw on her own personal experience as she was trying to determine if she was going to believe the information attributed to the British PM: When I went with my sister to [England], I realized that the spread of the new Corona virus is dependent on [social] environment. The fact that the public there were not following precautionary measures, not wearing masks and not using sanitizers, for sure [led] to a new variant of a virus.

A significantly high number of participants explained that they trusted news in the audio video format.

Khalifa, for instance, pointed out that I think videos are much better than pictures. I believe it more. Since I can see what's going on and they can't lie to me. I mean, they can make a scene or act or something like that, but it's always something off and you can feel it and see it better if it's a video (Paron, 2010).

Participants were prompted to reflect on the authenticity of videos online, and whether they can be trusted, especially with the advancement of deep fakes. While one student, Khalid, stated he was aware of it, the majority indicated that they are not. Mai, for instance stated that “*I have never heard of it before. But I know that people can, like, paste things and add them to videos*”.

The article sheds lights on the dynamic and complex process of resilience to misinformation, involving interaction between individuals and their environment. The study confirmed that some macro variables such as trust in government and mainstream media play an important but not deterministic role in building resilience to misinformation. Drawing on an understanding of resilience as dynamic and complex process that depends on the conflation between societal and individual variables, the study tries to transcend the limitations due to focusing either on the role of macro variables or individual aptitude and skills.

RQ1 examined the level of trust in media and official news sources and its potential link with media resilience. The results demonstrate that young people trust high government sources and use them frequently as sources for covid-19 related news. This is less true for mainstream media that have become much less used during the pandemic, although they still remain more trusted than individual social media sources. Despite these differentials in levels of trust, results do not show a strong correlation between trust in news sources and perception of and attitude towards covid-19 misinformation. It is worth mentioning that one of the most important factors supporting trust in official and mainstream media is the fact that a majority of the largest and most established media institutions in the country are owned or supervised by state-affiliated companies and agencies. This bolsters their status as public service rather than commercial institutions.

The results also confirm that while the macro variable of trust is important, it does not on its own determine the level of resilience against misinformation among youth. These findings are corroborated by the data obtained from focus groups reflecting the complexity of the issue of trust that rarely follows a unidirectional relationship between users and news sources, mainly mainstream media and government sources. What the data confirm is that users play a dynamic role in constructing the veracity of information through various strategies such as cross-checking local and international sources, discussing with opinion-leaders and engaging in peer-to-peer communication (participatory communication). This shows that the notion of trust itself is problematic and should be considered a dynamic process in which users negotiate information with multiple parties.

RQ2 probed the extent to which digital and news literacy among youth can determine their resilience against misinformation. The results show that awareness of the various nuances of misinformation and the respondents' ability to identify covid-19 fake news are above satisfactory. Based on the data, we discern a strong correlation between understanding the nuances constituting fake news and the causes exacerbating fake news, and a less strong correlation between understanding fake news and detecting fake news. Yet, results also indicate

that this awareness is more likely an outcome of mistrust and wariness of news than a reflection of critical thinking skills among youth. Indeed, both the survey and focus group data show that young people are highly on alert when it comes to covid-19 news. The data also show that there are important differentials in respondents' critical media skills as many tend to more readily trust visual communication, particularly videos.

RQ3 examined the main demographic variables affecting youth's attitude of misinformation in the UAE. Survey results indicate that age group, nationality, and educational major can play an important role in determining the ability of young people to identify and perceive misinformation. Gender is not a significant factor in this process. The focus group results further confirmed some of these results showing, for instance, that in the context of the UAE, and because most people are expatriates, non-Emiratis tend to get news from more diverse media compared to UAE citizens who rely much more on local media, which can affect young people's understanding and perception of diverse issues related to covid-19, including public confidence in vaccines. The results also show that students whose majors are from humanities and social sciences display more critical media skills because they are more likely to get exposed to educational material aiming at developing skills to deal with media content.

CONCLUSION

Finally, young people differ in their resilience readiness and skills, which are linked to individual attributes, but also to social background and level of exposure to critical skills at school. The UAE's paternalistic approach has clearly enabled it to contain both the pandemic and the infodemics effectively. Yet, there is clearly a need to incorporate media literacy skills in curricula and to address discrepancies in media exposure between nationals and non-nationals, as well as media awareness of the dangers and pitfalls of misinformation beyond covid-19 issues on social media.

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