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Social Media and Spreading Panic Among Adults During Climate Change

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Abstract

Social media is usually correlated with the potential large-scale spreading effect of whatever content is posted on any of its platforms, where terms like "viral" and "trending" usually explain that effect. As the news and constant updates about climate change came to surface over the past few years, risks of spreading panic and fear of potential climate change natural disasters emerged and became increasingly alert among the adults who use social media platforms regularly. Thus, this study examines the effect of social media usage on panic dispersal among adult users and identifies the extent to which social media can be considered a fear-causing means regarding climate change news. Moreover, this study investigates the credibility of transmitting climate-related information through social media. To understand the relationship between social media and spreading panic in climate change contexts, the study utilizes a quantitative survey applied to a sample of Egyptian adults. As a result, most respondents confirmed that social media causes them stress and anxiety about climate change and makes them vulnerable to fake news.

Keywords: Social Media, Panic, Egyptian Adults, Climate Change

Introduction

Over the past decades, we experienced various environmental changes and challenges such as soil erosion, depletion of natural resources, generation of unsustainable waste, desertification, and acid rain, and on top of them, and the most prominent of them was the problem of climate change, which plays a significant role in environmental changes.

It is proved in the (Veltri & Atanasova, 2017) study that climate change is a complex subject to discuss. Nevertheless, it is a significant concern for society. Beyond most people's biographical boundaries, it has multiple causes and effects.

Additionally, it has been noted that the media play a particularly significant role in developing people's basic understanding of climate change. However, as increased stakeholders, including scientists and policymakers, use social media to disseminate information about climate change and mobilize support for action, as grown people use social media, the climate change discourse on social media becomes a priority research area.

Research Objectives

1- To determine the level of effect that social media have among adults because of climate change.

2- To identify whether social media is considered a tool for spreading fear about climate change.

3- To investigate the trust level of Egyptian adults in climate change news transmitted through social media.

4- To discover the effect of social media on inducing a feeling of threat among adults when being informed about climate change.

Research Importance

This research gains critical attention for being trendy and under debate because the impact is unknown. Also, to find out if there is a relation between the panic spread by social media and climate change.

Research Problem

The problem is that social media is a double-edged tool that has taken a considerable part of our lives for years. Although it plays a vital role in exchanging information, it may also help spread awareness about some topics. Still, it also may spread panic by sharing inaccurate information in climate change news, causing some anxiety issues to the receivers and fear feelings due to the vast amount of exchanged information that may contain much false news.

Literature Review

The (Maran & Begotti 2021) study explored how media exposure to climate change can be related to audience climate anxiety. The study asked the university students via a questionnaire. The results found that they were exposed to a vast amount of information about climate change week through social media and different TV programs. Also, the results pointed out that the consideration paid to information about climate change was positively related to climate anxiety.

Social media plays a massive role in allowing people to share their opinions and information about climate change through it, which can be a powerful tool. In the (Mavrodieva, Rachman, Harahap, & Shaw, 2019) study, the researchers explored the effect of social media in raising awareness and engagement towards climate change. Findings did not confirm sharply that social media is a soft power but confirmed that there is a correlation between social media and the audience's perceptions which consequently meant that their opinions are being affected.

In addition, (Wonneberger, Meijers, & Schuck, 2019) study aimed to analyze the relationship between the media coverage of COP21 and its impact on audience engagement, involvement, and behavioral intentions in the Netherlands as its effect relies on the participation level of people. This was done through a survey on social networking sites and evaluating the media coverage of climate change. The results revealed that critical events might cause limited changes in public opinion.

The (LeonieTuitjer & Dirksmeier 2021) study examined social media users' climate change perceptions. Findings indicated slight and reasonable differences in perceived climate change efficacy. Also, it was found that the level of Facebook negatively relates to perceived climate change efficacy.

Also, the study by (Cabecinhas, Lázaro, & Carvalho, 2008) examined the social representation of climate change and its correlation with media consumption. The researchers surveyed Portuguese participants. The results found that the respondents know moderately about climate change, have a high level of anxiety and apparent risk towards the possible impact of climate change, have emotionally negative images linked with climate change, and have a low frequency of climate-friendly individual behavior. In addition, news media are reported to be the primary sources of information on climate change and are positively evaluated in terms of credibility.

Awareness was explored in numerous studies. The (Piccolo & Alani, 2015) study explores social media's importance in raising awareness of climate change and saving energy. This study used the survey to find people's positions on climate change and saving energy. The results highlighted that social media doesn't represent a primary source of information in this context, as the discussions that may be triggered are based on self-experience. In addition, the (Ruiu, Ruiu, & Ragnedda, 2022) study investigated the role of traditional and new media in expecting the audience's climate change awareness. Results explained that traditional media does not have any role in the audience's awareness about climate change which contradicts the new media, which plays

a significant role even if it is a "lower degree of climate change acceptance." The (Yang, Chen, & Ho, 2019) study also indicated that users' attention, understanding, and awareness of the media messages about climate change are correlated to their illusion of knowing.

Awareness and attention were also discussed in the study (Berglez & Al-Saqaf, 2021) study aim to examine what causes the increased attention trying to find out if there is a link between them and digital communication on English-language Twitter during 2008–2017. Results revealed that most users whom tweet do not say 'extreme events' or 'extreme weather' but concentrate on and highlight a specific type of extreme event, such as heat and climate change, drought, or global warming. Also, (Ogunjinmi, O.R., Ogunjinmi, & Adekoya, 2016) study's results indicated that social media influences users' knowledge and concerns about climate change. Results revealed that half of the respondents talked about climate change with friends on their networks, while most learned about it through social media.

Climate Change Twitter Posts were evaluated through content analysis of the random selection of images (photographs, illustrations, and graphics) in the (León, Negredo, & Erviti, 2022) study. The findings showed various images used in the climate change posts, such as the "show 'real people,' tell a story, include a local connection, and show impacts or actions by people directly affected."

Also, climate change on Twitter was investigated in (Yuan, Chen, & Chen, 2022) study to find out the diverse types of network gatekeepers who use violent styles that influence their dissemination. Findings presented that the frequency of aggressive tweets about climate change was few. However, the researchers highlighted that the present aggressive tweets were "more likely to be politicized and retweeted."

Even the interactions of scientists were analyzed on Twitter in their negotiations and discussions about climate change in the (Walter, Lörcher, & Brüggemann, 2019) study. Findings indicated that scientists discuss climate change issues with their colleagues, but communication away from the scientific community is essential.

The climate change and flooding coverage in British Press were explored in the (Gavin, Leonard-Milsom, & Montgomery, 2011) study. It was found that the newspapers' coverage input to genuine debate, that the link between everyday types of reportage and the scientific understanding of the phenomena is often vague and questionable. However, another study (Poulson & Huang, 2015) questioned the dependence of local journalists on social media to fetch information about climate change using the survey tool and content analysis. The results found that those who frequently report on climate change and those who value the interests of the public are more likely to depend on social media as the primary source. In addition to the (Kakonge, 2020) study where journalists covering climate change in Kenya's press and television channels coverage from 2010 to 2019 were examined. It was found that various challenges were encountered in improving media coverage of climate change, and still, there are opportunities if journalists are trained, and funding is present.

The (Balarabe & Hamza, 2020) study evaluated the correlation between climate change and media coverage, the impact of the various policies on climate change, and the ways it concretes new viewpoints and understanding amongst individuals about climate change issues in Kano, Nigeria. The study finds that media coverage and representations of climate change have benefited and shaped people's version of the problem in Kano. There is a very high media awareness about the climate change issue in Kano. The study also reveals that social media platforms continue to be the primary information source about the climate change issue in Kano. The causes of climate change in Kano are considered artificial rather than natural, and the most apparent effects of climate change in Kano are changes in weather patterns. The study concluded that media representations and coverage of climate change influence people's perspectives, understandings, and knowledge of the issue in Kano, Nigeria.

The portrayal of climate change in the television coverage of the Australian Broadcasting Corporation's main television channel was also addressed in the (Debrett, 2015) study. It was revealed that the audience believed the coverage and had trusted and understood climate change because of the information broadcast.

Two series in Swedish media on climate change, one in a tabloid newspaper and one in public service television news, were investigated by a (Höijer, 2010) study to find out the presence of emotional anchoring and objectification in their coverage. Findings showed that the news coverage in both selected samples pointed out the threat of climate change, confirming the presence of frames because of emotional anchoring and objectification.

The threat was also stated in the (Hart & Feldman, 2014) study as the researcher examined the U.S. network television news stories that have expressed direct and indirect threats and valuable information about climate change through arguing and framing climate change effects and activities. It was found that the news coverage always discussed topics about climate change using the threat tone; however, it provides contradictory efficacy messages, often including both positive and negative effectiveness signs.

Research Questions

1. What is the level of effect that social media have on adults because of climate change?

2. To what extent does social media spread panic about climate change?

3. Can social media be considered a tool for spreading panic among adults about climate change?

4. What is the trust level of Egyptian adults in the social media news about climate change?

5. Do many social media posts about climate change create a feeling of threat and discomfort?

Research Hypothesis

1- The more users spend time on social media, the more they are afraid when they read about climate change.

2- The more news on social media about the issue of climate change, the more likely the people who read this news will suffer from anxiety.

Research Methodology

This research is quantitative; the survey tool was used to find people's opinions about if social media caused panic for them about climate change.

Research Sample:

The survey was conducted on a sample of 214 Egyptian adults.

Theoretical Framework

This research will depend on the Media dependency theory because the main objective is to examine the correlation between the users' dependence on social media and its role in spreading panic among users about climate change.

According to (McQuail, 2010), in 1976, Sandra Ball-Rokeach and Melvin DeFleur developed the Media Dependency Theory. In McQuail's Mass Communication Theory book, it was high-lighted that in 1977, Golding was the first one to point to the possible effect that goes with media dependency is not limited to cultural or ideological messages in the content. Instead, it mentioned that it relates to professional guidelines and principles involving journalistic ethics and news values.

The central hypothesis of this study is that the more dependent a person is on the media for fulfilling their needs, the more important and influential the media will be to that person, as stated (Ball-Rokeach & DeFleur, 1976). It was mentioned that the theory extends the idea of people who depend on the media to satisfy their needs. It explored the importance of the media to its users.

Results

The survey conducted on 214 respondents of Egyptian adults revealed that around half of the study sample believed that social media sometimes spread panic among them; 50.5% of the respondents reported that social media spread panic among them but not all the time. Moreover, 40.1% confirmed that social media spread panic among them. However, only 8.4% of the respondents reported that social media did not spread panic among them. This indicates that the vast majority of respondents contend that there is a relationship between social media and spreading panic.

As per the trust level in social media news about climate change, 49.5% of the respondents reported that they only sometimes trust social media news. On the other hand, 28% of respondents said that they trust social media news, yet only 22.4% of the study sample confirmed that they do not trust social media news. The assessment of the sample's trust levels clearly shows that social media is not a fully trusted medium among Egyptian adults regarding climate change news transmission.

Regarding social media posts about climate, respondents were asked to rate the potential threats they thought climate poses to their health and safety on a scale from 1 to 5. Most of the respondents chose 3, representing 36.9% of the sample. Then, respondents who gave a 5 rating out of 5 represented 23.8% of the research sample. However, the least represented rating was 1 out of 5, with only 5.6% of the sample. Consequently, the impact of social media on spreading a threatening feeling among Egyptian adults can be considered moderate due to the sample being centered in the middle of the scale, represented by 3 out of 5.

The study sample was dominated by female respondents, who represented 70.6%, while males represented only 29.4% of the sample. As per the educational level of the respondents, undergraduate students had the highest representation in the study sample at 47.7%; meanwhile, Egyptian adults with a bachelor's degree represented 26.2% of the sample and were followed by master's degree holders, who represented only 9.8% of the respondents. The rest of the respondents identified their education level as "other." This indicates that the highest proportion of social media users who follow climate news among Egyptian adults is females and undergraduate students.

It is concluded that most of the study sample believed in the presence of a relationship between social media use and spreading panic about climate change news. Nevertheless, Egyptian adults' trust levels in social media news were low. Furthermore, the impact of social media on spreading a feeling of climate-caused threats among the sample was moderate. These insights were reported by most females and undergraduate students, who constituted the most significant proportion of the survey respondents.

Compared to the literature review, the study findings agree with the correlation between social media use and increased anxiety about climate change. Furthermore, the study findings confirm what the literature results went for concerning social media's diminished credibility levels in light of Egyptian adults' low trust levels in social media news. Although the findings of the review of the literature showed that the impacts of social media on fear induction among the users were severe in most cases, the current study findings reveal that the effect among Egyptian adults is moderate.

In light of the media dependency theory, the study results partially agree with its hypotheses where the constant dependency of Egyptian adults on social media was not reflected in complete fear or stress state among the Egyptian adult users. Furthermore, the dependence on social media must be translated into complete trust in whatever is transmitted through its platforms about climate.

Regarding the research questions, the study results confirmed that social media has a considerable emotional effect on Egyptian adults regarding climate change. Additionally, it was found that many respondents believed in a relationship between social media and stress levels, and most confirmed that social media is a tool for spreading panic. Concerning the trust level in social media news, it was found that the study sample has a low level of trust in social media climate news. The relationship between social media news and the threat feels needs to be fully confirmed where the respondents reported moderate levels of threat caused by social media.

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