Visual Representation of Gender in Morocco's Earthquake Coverage in International News Channel

Khaled Kh. Nser[1], Khawlah M. AL-Tkhayneh[2], Abdulkrim Ziani[3]

[1]College of Education, Humanities and Social Sciences, Al Ain University, UAE. https://orcid.org/0000-0002-4070-4067

[2]College of Education, Humanities and Social Sciences, Al Ain University, UAE. https://orcid.org/0000-0002-1034-5382

[3]Communication and Media College, Al Ain University, Abu Dhabi, UAE. https://orcid.org/0000-0002-5831-7217

Correspondence: Khawlah M. AL-Tkhayneh, College of Education, Humanities and Social Sciences, Al Ain University, UAE. https://orcid.org/0000-0002-1034-5382

Abstract

This study aimed at identifying the way of Media's framing of gender while covering Twitter official accounts for the international news channels concerning Morocco's earthquake. To achieve the study objectives. The researchers used quantitative and qualitative content-analysis approach by using MAXQDA software. Adopted in Ali (2014), where similar sample-selection way and analysis categories were used. The study's findings indicate that Al-Jazeera account was the most publishing site to mixed images (males/ females) with a total of 22 images, whereas (CNN) account was the most publishing site to women's images with a total of 17 images. The results of image-analysis, according to the category, revealed that the most common category was "helplessness" with a percentage of 46%. The images of "weakness and sickliness" were identical for the mixed and women's images, whereas only one image was for men. This revealed that women have usually been amongst the weakest categories that were more exposed to risks in case of natural disasters, such as earthquakes and floods. Image analysis revealed that the means of media supports the idea that some housework tasks are exclusive for women, and that those tasks may increase in times of natural disasters. Some images revealed that women remain physically strong and attempt to overcome this disaster, where they could break the stereotypical view implying that women are helpless in times of crises.

Keywords: framing, stereotypes, gender, visuals, Morocco's earthquake, international news channels

1. Introduction

Al Haouz earthquake is considered as one of the riskiest events witnessed by Morocco in 2023 with a magnitude of 7 on Richter scale, where it is devastating effects reached several cities, including Agadir, Rabat, Casablanca and even cities in the north. It is one of the strongest earthquakes that struck Morocco, as it exceeded the magnitude of Agadir earthquake, which resulted in 15.000 deaths, in the 1960s. The earthquake's center was in a mountainous area, 70 km away from Marrakesh, where 2,946 people were killed and 5,674 people were injured. This natural disaster was just like a shock for the Moroccan people who had just recovered from the effects of Covid-19. In order to demonstrate the practical domain for media framing theory, Morocco earthquake, or the so-called Marrakesh earthquake is the best example for that, where some media means suggested that incomplete image was conveyed about the earthquake- in this vein, there had been more focus on some shortcomings, while overlooking several positive sides, to the extent that tourists were warned of visiting Morocco, even though life activities were as usual there. Indeed, some French channels broadcasted live events from Marrakesh and urged tourists to leave the city due to the risks of staying there. However, tourists overlooked such warnings, considering them as only directed towards the French tourists to leave the city that mainly depends on tourism (Bdoor & Habes, 2024; Habes et al., 2020; Safori et al., 2024; Almakaty, 2024; AlQaruty, 2024).

The process of framing is a type of practice that takes place in the brain when the authors give a meaning to the events taking place around us; while, in fact, those events are meaningless, as they mainly aim to falsify reality. The process of framing started in psychology, and later it was introduced to Sociology. The idea of framing seeks to analyze the frames

in a process called framing-analysis. In framing, there are three levels, these are: framing at the language level, which refers to selecting a certain material of the text and using it as the communication center; the selected part shows some elements of the issue and overlooks others to serve the intention of the publisher. At the level of social context, the process of framing aims to present a model of natural life, or what natural things should be in life. Finally, framing at the level of media content refers to the way through which the means of media aim to create the ideal model for the targeted form of life. Frames represent abstract issues that seek to organize or paraphrase the meaning of a message (Habes et al., 2022; Habes et al., 2023).

Those frames are often used in news and political texts, where the frame is shaped by inserting information in a certain context, and designing it to serve the ideology of its producer or improve understanding. However, it is sometimes used as knowledge abbreviations to link the small indications with the whole image. Indeed, frames could be in the form of key words, concepts, metaphoric descriptions, visual images and symbols that are more focused within the context (Zibin et al., 2023). Based on repetition, this mechanism aims to demonstrate certain sides and exclude others. Due to adopting certain frames, this process results in a biased view, since it lacks objectivity by not presenting all the concerned frames of a certain topic to the targeted audience (Habes et al., 2024).

The problem of the framing process within the social context lies in not presenting a model of natural life, or what natural things should be in life. This is an important discussion that provokes a central question in this context: "who determines what is normal for a certain community? "Certainly, this question will lead us to address power from a different perspective; "who determines what is normal or acceptable for a community? Or in the case of the Arab community, what is legal or illegal concerning some controversial religious issues? Indeed, this context is mainly governed by the party that has power and authority, including the State's institutions, tribal heads; capitalist sand other stakeholders who seek to frame the community in accordance with their ideologies, by claiming that "it is normal to consider issues in this way". But how if community members didn't comply with those rules.

This study addressed Media's framing of gender while covering Twitter official accounts for the international news channels concerning Morocco's earthquake to identify the effects of international news channels on media's framing of gender. The importance of investigating media's framing of gender while covering Twitter official accounts for the international news channels lies in analyzing the social representation that reflects media's framing of gender according to the perspective of each media means. Also, the study could be beneficial in understanding the effect of images on beliefs and behaviors; therefore, understanding the way of perceiving gender in the means of media could help in analyzing the way through which these images can affect values and perspectives towards gender.

1.1 The Theoretical and Conceptual Framework

1.1.1 Media Framing Theory

This theory refers to concepts that have been derived from Sociology and communication sciences, where the theory demonstrates the reason why people focus their attention on one or more sides of reality, but not others, as they view reality from a certain perspective. Framing theory has been applied to media means, where the theory assumes that the reality introduced by media is a framed one (Abdo & Salama, 2009). Therefore, the so-called reality is only a part of it, while the other parts are derived from the generated frame. In this way, people's intentions and interests are directed towards a certain domain, where they consider things based on the intended view (Saleh & Salem, 2019).

In 1955, frames were defined as thinking instruments that can determine differences between things, where they are employed in determining the limits of a certain entity, and thus distinguish it from others. In 1974, the concept of framing was developed, where the key wasn't reality itself, but the way through which one interprets reality. The way through which the researchers understand information depends on the context in which it is introduced. For example, if the researchers framed "dangerous people", the authors would consider each person who comes close to that group as undesired regardless of belonging or not belonging to that group (Saleh & Salem, 2019).

Entman (2007) provided a detailed explanation about the way through which means of media introduce models of frames that explain events to audience. He suggested that frames typically include both the choice and the brief, focusing on selecting certain realized traits of reality and demonstrating those traits through the texts and messages transmitted via various media. According to Entman (2007) the most important factors of a frame are choice and effect, where setting the frame refers to selecting certain forms of reality and making them more apparent and effective in the media content (Entman, 2007). London (2013) defined framing as coordinating ideas, visualizing events and determining issues and news stories (London, 2013). This definition agrees with Cole & Fellows (2008). who suggested that media frame is a model for representation, choice, focus and exclusion. It refers to thought organization and problem defining (Cole & Fellows, 200: 107-109).

News frames represent the method employed by news channels to impose their control (Zibin et al., 2024). Therefore,

news frame can be defined as a continuous model of knowledge, interpretation and displaying with the aim of choice, assertion and deletion. In this vein, symbols are used and organized frequently either in a visual or verbal manner. Accordingly, it affects the visualization of the audience by generating the presented news material and events. However, scientists started to investigate the effects of public opinion materials, such as essays to determine the elements employed by the means of media to convey their perspective to the audience and shape the targeted attitudes. Media frames represent an automatic selection of the events that are integrated with each other in a certain way to come up with topics that are meaningful for the targeted audience. (AL-Tkhayneh, 2023)

Therefore, it has been necessary to pay more attention to the texts and means of media, considering them as the means through which meaning is conveyed to the audience. Even though the audience may have different explanations for those texts, those meanings could be derived from other texts for other common means of media based on a phenomenon known as contextualize or framing. Indeed, those phenomena allow for assessing the implied content for media messages presented by media means and explain the role of media means in shaping ideas and attitudes concerning issues; this context can be applied to Morocco earthquake and its relationship with the emotional and cognitive responses of the audience.

1.1.2 The Feminist Theory

It is a social theory that mainly aims to provide an understanding for women's experiments in the social theory and social sciences, where theories in the different sciences are often based on male's perspective.

The main idea of this theory is gender inequality, where males consider that they have dominance over females. It is thought that women and the issues related to them have a lower rank as compared to men and the issues related to them. Feminism theory seeks to interpret the causes and conditions in which men have more effect and aims to identify the causes for considering men's ideas and activities as more valuable than those of women (Gerhard et al., 2006).

The importance of feminism lies in achieving equality between males and females without affecting the rights of males. Indeed, this can be achieved by changing social structures and authorities that prefer men to women. In this vein, equality does not mean that men will become in a lower position as compared to women, but it rather means that both males and females will have equal rights and opportunities to achieve success in the community. Here, it is important to notice that feminism doesn't aim to underestimate men, but to achieve a state of equality between men and women without any bias or discrimination which will, in turn, benefit the whole community in terms of diversity and innovation and promote stability and advancement (Elareshi et al., 2021; Habes et al., 2022).

In short, feminism seeks to achieve equality between both genders without adverse effects on men, as the goal is to provide rights and opportunities without discrimination, and change the social ideas and beliefs that prefer one gender to the other (Attar et al., 2024; Habes et al., 2024).

1.2 The Study's Procedural Terms and Concepts

The visual representation of gender: it refers to the way of considering men and women based on the visual content published by newspapers. This presentation is based on the innovative and editing choices that determine the way through which individuals appear in such images, including the conditions, expressions, contexts and activities in which they are photographed.

Gender stereotype refers to the previous and simplified concepts concerning the roles and behaviors which individuals are expected to manifest based on their biological gender (male or female). Such stereotypes often enhance strict gender expectations and classifications and contribute to keeping variations and discrimination between both genders.

Framing woman's image in media: it refers to the way through which woman is introduced in various media means. Such a framing may considerably affect the way through which people understand the role of a woman in the community, her value and the expectations related to her behavior and appearance. Framing is not just a show of reality, but it is rather a process of choice and interpretation that contributes to shaping collective awareness and social situations.

2. Previous Studies

In a study, entitled "Gender issues in news coverage" (Geertsema-Sligh, 2019) addressed the participation and representation of women in the means of media. The results showed that women entered the domain of Press to attract the attention of the feminist audience in the 19th century, and it was expected that they would write about topics that are important to women, such as food, fashion, family and furniture. The results revealed that women are still lack sufficient representation at all the levels of news channels, where there is a barrier that prevents woman from reaching the higher positions. Female journalists, in particular, face challenges in war reports and sports reports; in addition to challenges has writers in the pages of public opinion. In terms of representation, woman is represented negatively in the

means of media. Despite the increased interest in this domain, there is still alack in the information about this topic outside the Western.

In their study, Yan & Bissell (2018) addressed the extent of news coverage from three major American newspapers about 292 natural disasters worldwide during (2004-2014).The results revealed that the American newspapers neglected international disasters as compared with local ones, and that there had been a disproportional favor toward huge disasters in comparison with smaller ones.The results showed that the predicting model was obvious, where severity was the most significant determinant of disasters reports, followed by the severity of deviance. The results showed that the geographic distance and degree of relevance between countries failed to predict any variance related to news coverage. These results could demonstrate that the news worthiness should be more dependent on the characteristics of the event itself.

In a similar vein, Ali (2014) under the title of "Visual representation of gender in flood coverage of Pakistani print media", addressed gender's representation within the visual coverage of the 2010 floods in Pakistan. Data were collected from the images of the floods published in the major English language newspapers in Pakistan, the News and Dawn. This study analyzes the way of framing gender in the images of the floods. It was suggested that the visual representation of gender enhanced the gender stereotyping and the cultural standards of the Pakistani community. Also, it seemed that the coverage of floods directed towards gender in both newspapers often adopted the reductionist approach, where women were viewed as helpless individuals and victims of floods. Those images provoked feelings of sympathy between readers and donors and urged them to provide immediate financial and non-financial support to the victims of floods. Perhaps, the agenda set by the means of media aimed to exploit the policies of sympathy, but they influenced supporting the stereotypes related to both genders.

Furthermore, Pantti (2018) conducted a study entitled "Crisis and disaster coverage", where the study revealed that the stories of crises and the wide-ranging damage were a part of Press work since the beginning of this profession. The coverage of crises was emotional in nature, and the major crises recently enjoyed wide-ranging and immediate coverage. The results of media literature review showed that the means of media played an important role in demonstrating the way of understanding crises and responding to them. This context addressed the main interests for the profession of the Press and its role in facing crises. The results showed that there was a particular focus on the way through which the economic, ideological, and institutional structures shaped the methods by which journalists introduced their reports about crises. The study addressed questions, such as "how does a disaster become news? Which disasters attract more media coverage, and which do not? How are disasters and their victims represented in the coverage of news? How can journalists report disasters in ways that generate empathy and action? and how can digital technologies improve and democratize the reporting of disasters?"

In his study entitled "New media and natural disasters", Murthy (2011) addressed the role of blogs after tsunami disaster in the Indian Ocean in 2004 by using a blog established by journalists in South Asia as a case study. The study suggested that new means of media could be a democratic factor in the least developed countries. This study also suggested that some blogs related to tsunami provided the regional journalists with a method that enabled them to overcome the manipulative narratives concerning the effects of tsunami. The study could also benefit from the blogs related to tsunami to highlight the questions about new means of media and report about the disasters in the less developed countries in general, including the discussions about the digital gap.

Moreover, the study by Ali & Gill (2022) entitled as "Media framing and agenda setting (tone) in news coverage of Hurricane Harvey: A content analysis of the New York Times, Wall Street Journal, and Houston Chronicle from 2017 to 2018" suggested that media organizations can quickly publish information from official sources to the audience. The study revealed that media played an important role before, during, and after natural disasters by publishing early warnings, coordinating strategies of emergency-management, and offering advice on protective measures. Accordingly, it is important to investigate how news media employ various framing instruments, such as story selection, placement, and quotations from official agencies and citizens in the coverage of crisis news. The study investigated the printed media coverage of Hurricane Harvey by using the data from three newspapers: *New York Times* (online), *Wall Street Journal* (online), and *Houston Chronicle*. By investigating the use of descriptors, and wording concerning Hurricane Harvey, the study explored how media coverage framed a certain structure for the public and private sectors concerning their roles in response processes. The results revealed that the frame of human-interest received more attention, whereas the ethical frame gained less attention. As for attitude, the results showed that the attitude concerning the government response was balanced and less negative. The results suggested that media attitude varied among three governmental levels: the attitude for the federal government was more negative, the attitude for the city and state levels was somehow positive, and for the private sectors, the profit sector coverage received a negative attitude, whereas the non-profit sector had a strong positive attitude. By introducing a descriptive analysis of framing and attitude, the study results showed how the printed media viewed the various parties involved in recovery efforts concerning Hurricane Harvey.

In their study entitled "Preparing for the worst: Lessons for news media after Hurricane Maria in Puerto Rico", (Takahashi et al., 2020) revealed that Hurricane Maria in 2017 was the most devastating hurricane in Puerto Rico during the last 90 years. The whole communication system was damaged, including the networks of cellular phones. In this vein, only one broadcasting station in Puerto Rico was able to transmit information during and after the arrival of the hurricane to land. The study addressed the changes in journalistic practices, organizational readiness, disaster coverage plans, and the preparedness of infrastructure after 18 months of the hurricane. The study extends the horizons of the limited research by investigating long-term changes concerning news media plans in the context of disasters and extends the theoretical understandings of media practices in the context of the hierarchy model of the effects. The results revealed that infrastructure damage considerably hindered the news organization's ability to perform their work; however, cooperation among media means- immediately after the disaster- was effective. Each media agency played an important role after the disaster based on their resources and organizational structure. The results showed that readiness plans were insufficient, where changes were implemented slowly to face the challenges related to electricity, infrastructure and technology. The study presented recommendations to improve responses to natural disasters in the future.

Similarly, the study by Ali & Mahmood (2013) entitled "Photojournalism and disaster: Case study of visual coverage of flood 2010 in national newspapers" suggested that the phenomenon of flood after winter season is not new in Pakistan; however, the floods in 2010 was the hardest ever, where floods affected and left millions of people homeless. The results confirmed the role of photojournalists at the time of crisis, since they can affect people by publishing only one picture instead of using words. The study used content-analysis to analyze the photographic coverage of the 2010-floodin national newspapers. The study mainly focused on the frames used in visual coverage of the 2010-flood. The study also analyzed moral issues, such as showing dead bodies, grief as well as gender stereotyping in the photos of the 2010-flood. Analysis was performed in English language (Dawn, The News, Express) and Urdu language (Jang, Express, nawa-i-waqt) which, in turn, helped in identifying the differences in visual framing of both languages. The Census-sampling method was used with all the images (2156 images) including important news photos, stand-alone photos, and the images with distinctive stories- in the above-mentioned newspapers, analyzed from July 2010 to November 2010. The main frames in the visual coverage of the 2010-flood included human-interest frames, political frames and economic frames. It was noticed that the human-interest frame was more dominant in English newspapers, whereas the political frame was more prominent in Urdu newspapers. The results revealed that there were few images that portrayed dead and mutilated bodies. Visuals photos are considered as gender stereotypes, where females are mainly framed within negative roles.

Finally, in their study entitled "analysis of media agenda setting during and after Hurricane Katrina: Implications for emergency preparedness, disaster response, and disaster policy", Barnes et al. (2008) suggested that media agenda analysis refers to the purposive coverage of the various topics or events to affect public opinion and policy. The study performed a quantitative content-analysis of four newspapers to investigate how the media collected and distributed news to establish the priorities of public policy during Hurricane Katrina. The results revealed that the media framed most stories about Hurricane Katrina by emphasizing the governmental responses. Also, some articles addressed response and recovery more than mitigation and preparation. In short, the investigated newspapers focused more significantly on government's response than on the key roles of public health in disaster management. The study discussed specific implications concerning public health professionals, policymakers, and those working in media to enhance coordination between them before, during, and after disasters.

This study aims to address gaps in existing research by exploring two critical questions related to the representation of gender in the coverage of Morocco's 2023 earthquake. First, it investigates how gender is portrayed in the reporting of international news channels during this significant event. By analysing the narratives and imagery used, the study seeks to uncover the ways in which male and female voices are included or marginalized in the media discourse. Second, it examines how different media platforms either perpetuated or challenged gender stereotypes through their visual coverage. By evaluating the portrayal of individuals affected by the earthquake, the study aims to reveal whether the media reinforced traditional gender roles or contributed to a more nuanced understanding of gender dynamics in crisis situations. Through these inquiries, the research aspires to provide a comprehensive analysis of gender representation in contemporary media narratives surrounding natural disasters. The study tried to answer the following research questions:

1. How is a gender represented in the coverage of the international news channels to Morocco's earthquake 2023?

2. How did media means eliminated or otherwise promoted the gender stereotypes in the visual coverage of Morocco's earthquake 2023?

3. Methodology

This study used the same methodology adopted by Ali (2014) entitled "Visual representation of gender in flood coverage of Pakistani print media", where the same sample selection and analysis categories were used. In this study, the researcher used quantitative and qualitative content-analysis approach by using MAXQDA software. Analysis categories were determined as shown below.

3.1 Analysis Categories

3.1.1 Helplessness

The stereotype of women is that they are helpless, where women sit inactive, while waiting for men to help them in all situations.

3.1.2 Weakness and Sickliness

Women are usually the first victims of environmental crises due to their vulnerable social status. Women are vulnerable and more exposed to extreme dangers during an earthquake, since they have little knowledge and awareness of how to secure themselves in such risky situations.

3.1.3 The Traditional Roles of Housewives

Research revealed that many families are responsible for the procedures of preparation, evacuation, and shelter and those women assume their duties, in addition to caring for children, during all the stages of a disaster. Indeed, this may increase the woman's weakness, and thus exhaust her.

3.1.4 Work at the Community's Level

Here, woman is passively represented in the news in the media, instead of giving her a direct role, and considering her just like the other gender; therefore, the myth of the feminine margin is highlighted.

3.1.5 Men in Leadership Roles

It is a stereotype assuming that men are leaders by nature, and that women are forced to follow the path set by men. The traditional roles in rural society define men as activists and as prominent members of the family – the smallest unit of community– and the community.

3.1.6 Man as a Saviour

Women act as nurturers and men as protectors, and this is more evident in times of disasters. Women are overlooked in planning disaster-response activities, where their significant efforts in natural disasters are not emphasized, and the male is viewed as the rescuer model.

3.1.7 Women Are Traditionally Bound to Wearing the Hijab

As an Islamic society, women are traditionally forced to wear the hijab, especially in rural areas, where a hijab is worn to cover the head, ears and the main parts of the body. Wearing a hijab is viewed as an integral part of a woman's dress code routine.

3.1.8 Gender Segregation

Intermingling of the two sexes is considered against cultural norms, where women are allowed to attend and remain in women's gatherings under strict controls.

3.1.9 Women Are Weak Physically and Emotionally

Men are considered muscular and strong, both physically and emotionally. In contrast, women are considered physically and emotionally weak.

3.1.10 Women Are Not Physically Weak

Media coverage of disasters constantly portrays women as seeking help, and thus reinforces the victim model; this weakens their ability to deal with emergency situations.

3.2 Sampling

The study selected three accounts that follow three international means of media on the Twitter platform: Al Jazeera English, CNN, and BBC, where they represent the most prominent international media outlets that are most followed on Twitter platform, and have the most coverage of the events of the 2023-Moroccan earthquake.

Table 1. The number of followers of Twitter accounts (X) for international news channels

Number of followers in Millions	Channel	Account
8.5	Al Jazeera English	https://twitter.com/AJEngli
14.6	CNN	https://twitter.com/cnni
40.3	BBC	https://twitter.com/BBCWorld

All the images related to Morocco earthquake 2023, published on three accounts during 8-18, September 2023, were gathered, where 322 images were sorted, as they included two groups: the first group included images of women, men, and women with men, whereas the second group included images without humans. The study focused on the mixed images between men and women, women's images, and men's images, whereas the images including children or those not including humans were excluded, since the study is mainly concerned with analysing and understanding the cultural perspective of international media means while covering the 2023 Morocco earthquake based on gender. The researchers also excluded all the repeated images, so that the final sample consisted of 95 images distributed according to the following table:

Table 2. The number of photos published about the Moroccan earthquake on Twitter accounts (X) previously on international news channels

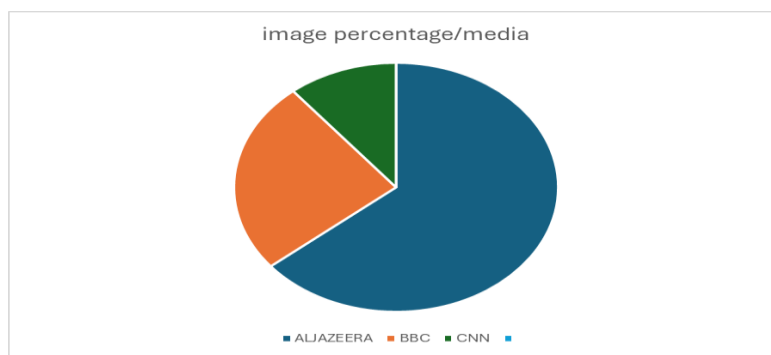|	Percentage	women's images, women and men's images	Channel	Channel's account
1	39%	37	Al Jazeera English	https://twitter.com/AJEngli
2	30%	29	CNN	https://twitter.com/cnni
3	30%	29	BBC	https://twitter.com/BBCWorld
	100%	95		

Figure 1. Percentage of images previously published about the Moroccan earthquake on Twitter accounts (X) for each channel

4. Results

The results of a content analysis of Images published by women on Twitter (X) accounts previously, for international news channels during their coverage of the 2023 Morocco earthquake, show us the following results:

4.1 Image Type

Table 3. The number and type of Images published Twitter accounts (X) about the Moroccan earthquake

Image type	Al Jazeera	BBC	CNN	Total
Men	2	3	4	9
Mixed images	22	14	8	44
Women	13	12	17	42
TOTAL	37	29	29	95

Table 4. Image Type, of photos published on official Twitter accounts (X) about the Moroccan earthquake

Valid cases: 95; Missing cases: 0 (0.0%)

Image type	N	Percent	Percent(valid)	Percent(cum.)
Men	9	9.5	9.5	9.5
Mixed images	44	46.3	46.3	55.8
Women	42	44.2	44.2	100.0
TOTAL (valid)	95	100.0	100.0	
MISSING: System	0	0.0		
TOTAL	95	100.0		

The previous tables showed that most published images on Twitter accounts for the means of media were either mixed (46%), or for men or women only (44%), whereas the images including men represented (9%). Moreover, the previous tables revealed that Al Jazeera account published more mixed images (22 images), whereas CNN account published more women images (17 images). BBC published the least number of images for men (3 images) only. The researchers can say that whether the image includes only women or is a mixed one, most of them advocate the traditional stereotype which implies that women are more exposed to weakness and sickliness as well as physical and emotional fatigue as compared to men in case of natural disasters.

Figure 2. Al Jazeera - 18 Sep 2023

The mixed figure 2 shows that women standing behind men, where women seem helpless in face of the disaster and waiting for men to provide help to them. On the other hand, the image shows men as rescuers carrying an elderly woman to help her after being unable to walk on her own. Indeed, this supports the stereotype implying that although the image is mixed and includes men and women. The man is viewed as stronger than the woman, where the image portrays women as helpless, weak, and confused, and waiting for the man's decision.

Figure 3. CNN-17 Sep 2023

Figure No. 3 shows that women are physically and emotionally weak in face of the natural disasters. The woman represented in the image shows the state of waiting, confusion and helplessness.

4.2 Image Analysis

Table 5. Overall categories of analysis: Images of the Morocco earthquake

Categories	N	Percent	Percent (valid)	Percent (cum.)
Traditional roles of housewives	5	5.3	5.3	5.3
Men in a leading role	5	5.3	5.3	10.5
The man as a savior	10	10.5	10.5	21.1
Weakness and sickliness	11	11.6	11.6	32.6
Helplessness	44	46.3	46.3	78.9
Work at the local community level	9	9.5	9.5	88.4
The woman is not physically weak	3	3.2	3.2	91.6
Women are physically and emotionally weak	8	8.4	8.4	100.0
Total (valid)	95	100.0	100.0	
Missing: system	0	0.0		
Total	95	100.0		

Table 6. Number of Images in each news channel

Image Analysis	Al Jazeera	BBC	CNN	Total
Traditional roles of housewives	3	1	1	5
Men in a leading role	1	1	3	5
The man as a savior	2	5	3	10
Weakness and sickliness	4	3	4	11
Helplessness	19	13	12	44
Work at the local community level	3	2	4	9
The woman is not physically weak	1	2	0	3
Women are physically and emotionally weak	4	2	2	8
TOTAL	37	29	29	95

Valid cases: 95; Missing cases: 0 (0.0%)

Table 7. Image Analysis, Image Type (Absolute frequencies)

Image Analysis	Men	Mixed image	Women	TOTAL
Traditional roles of housewives	0	1	4	5
Men in a leading role	0	5	0	5
The man as a savior	4	6	0	10
Weakness and sickliness	1	5	5	11
Helplessness	1	23	20	44
Work at the local community level	3	3	3	9
The woman is not physically weak	0	1	2	3
Women are physically and emotionally weak	0	0	8	8
TOTAL	9	44	42	95

Valid cases: 95; Missing cases: 0 (0.0%)

4.3 Helplessness

Based on image analysis, the category of helplessness was the most with (46%). As for the relationship between helplessness and the means of media, it was in favor of (ALJAZEERA) with 19 images, followed by (BBC) with 13 images, and finally (CNN) with 12 images. It is worth noting that the images which represent helplessness are either 20 mixed images or 23 women's images which, in turn, advocates the prevalent stereotypical view that helplessness is more related to women than men.

Figure 4. ALJAZEERA - 9 Sep 2023   Figure 5. CNN 11 Sep 2023

Figure 6. BBC- 14 September 2023

Figure No. 4 shows a woman sitting in a campaign that was designed after Morocco earthquake in 2023. She seems to be in a state of helplessness and deep thinking, while waiting for help and solution for that situation.

Figures 5 and 6 show a woman sitting on the remains of damaged houses that had been left devastated after the earthquake, with some personal objects and devices distracted everywhere. The woman also seems helpless without knowing what to do and waiting for rescue efforts.

All the previous images confirm that the investigated means of media deliberately show the stereotypical image of women who are helpless during natural disasters and need man's help in all the situations. The images also show that men are absent, where they might have gone to search for help or find the possible solutions to rescue the members of their families in those cases of natural disasters.

4.4 Weakness and Sickliness

The category of weakness and sickliness represented (13%) of the total images. Those images were distributed equally between women's images and mixed images, whereas this category only included one image for men. This finding confirms the hypothesis assuming that women are more vulnerable to risk during natural disasters and asserts the lack of experience in dealing with such situations. Furthermore, the image analysis shows that the ratio of weakness and sickliness was approximate among the investigated means of Media: ALJAZEERA (5 images), CNN (4 images), and BBC (3 images).

Figure 7. ALJAZEERA -10 Sep 2023   Figure 8. CNN- 10 September 2023

Figure 9. BBC-16 September 2023

The above figures show women in an obvious state of weakness and sickliness, indicating their inability to face the consequences of the earthquake. Figure No.7 shows a woman who is weeping while watching the remains of her damaged house. Figure 8 shows a group of women who attempt to sympathize with a sad woman and mitigate the adverse effects of the disaster n her, whereas Figure 9 shows a woman and her little daughter, while standing confused and thinking of the problem without knowing what to do.

All the previous images represent state of weakness and sickliness as well as lack of experience or knowledge among those women who are unable to deal with such natural disasters.

4.5 Traditional Roles of Housewives

The analysis of the images shows that a small percentage of them is related to the traditional roles of housewives (5%). Most images of this category were published by ALJAZEERA (3 images), whereas both BBC and CNN published only

one image for this category. Based on the analysis of this category, the authors can conclude that women usually take responsibility of taking care of children and performing the domestic tasks, particularly during natural disasters which, in turn, makes them more vulnerable to psychological stressors and weakness in such situations.

Figure 10. ALJAZEERA - 11 Sep 2023

Figure 11. BBC-13 Sep 2023

Figure 12. BBC-13 Sep 2023

Figures (10) and (11) show that women do extended efforts to prepare food, whereas figure (12) shows women who take care of children in hard circumstances such as draught. These images demonstrate the stereotypical view concerning woman's role as a housewife. Therefore, the researchers can say that the means of media supports the idea that some housework tasks are exclusive for women, and that those tasks may increase in times of disasters.

4.5 Work at the Level of Local Community

The analysis of the images shows that a small percentage of them is related to work at the level of local community (9.5%). The images of this category were published as follows: ALJAZEERA (3 images), BBC (2 images), and CNN (4 images). Even though women are viewed as the weakest group in terms of their contribution "work at the level of local community", the analysis of images shows that women have a good attendance during Morocco earthquake 2023. Frankly, the images show woman's role in providing logistic and medical assistance. The images related to this societal work were about (6 images), whereas the other (3 images) represented man's societal work while providing help and rescue services to others.

Figure 13. ALJAZEERA -10 Sep 2023

Figure 14. CNN- 12 Sep 2023

Figure 15. BBC-13 Sep 2023

Figures 13 and 14 show the contribution of women in the category of "work at the local community level", in terms of collecting blood donations and preparing them for use in saving the lives of the injured people. Figure 15 shows a woman providing medical and psychological assistance to one of the women affected by the earthquake.

4.6 Men in a Leadership Role

The category of "Men in a leading role" represented only a small percentage of the total images (5 images). These images were divided as (3 images) for ALJAZEERA and one image for each of BBC and CNN. Also, all the images were within the type of "mixed image". The analysis of the images shows that men play a leadership role, where he has control over actions during the period of natural disasters, especially the 2023 Morocco earthquake. Indeed, the man is the one who leads the family while moving from one place to another (a safer place), and he is the one who organizes aid and relief processes in the local community. He is also the one who leads the process related to burying the dead, within the context of traditional mentality, where woman and children implement the arrangements set by man.

Figure 16. ALJAZEERA -13 Sep 2023

Figure 17. CNN-14 Sep 2023

Figure 18. BBC-11 Sep 2023

Figure No.   16 represents a man leading his donkey to move to another, safer place and his wife follows him while riding on a donkey. The image shows that the man is the leader and the decision-maker. Image No. 17 shows two men discussing the process of organizing assistance for those affected, and the authors can see a group of women working under the leadership of two men. Image No. 18 shows a leading father in the process of leading his family members

concerning the items they will carry with them of those remained after the earthquake. The researchers can also notice that the wife and children are waiting for the instructions given by the father.

4.7 Man as a Saviour

The images that express the category of "man as saviour" represented (10.5%) (10 images) of the total number of pictures in the study sample, including (5 images) published by BBC, (3 images) by CNN, and (2 images) by ALJAZEERA. Most of the images show a physically strong man rescuing those affected, especially the elderly women. Therefore, the authors can notice that all the images confirm that the man is the saviour.

Figure 19. ALJAZEERA - 18 Sep 2023

Figure 20. ALJAZEERA - 18 Sep 2023

Figure 21. BBC- 09 September 2023

Figure 19 shows two men working in civil defence and carrying an old woman, unable to walk. The researchers can see a group of women and young men watching the heroic situation performed by the man as a saviour during the earthquake. The same scene is repeated in figure 20, where civil defence workers are carrying one of the affected by the earthquake. In figure 21, one of the civilians shows courage by carrying an old woman to take her to a safer place.

4.8 A Woman Is Traditionally Obligated to Wear Hijab

Given that Morocco is a Muslim Arabic County, wearing hijab by women is traditional in this country. By analysing the images, the authors noticed that (86%) of the images either as mixed images or women's images show women wearing hijab, whereas (4%) (4 images) show women that aren't wearing hijab. Even though this percentage is a small one, the Moroccan community is open to the issue of wearing hijab, considering it as a personal issue. The remaining 9 images don't include wearing hijab, since they are for men only. The highest percentage for women wearing hijab was published by ALJAZEERA with (33 images), whereas (26 images) were published by BBC, and (23 images) were published by CNN.

Table 8. Hijab

Categories	N	Percent	Percent (valid)	Percent (cum.)
Wear hijab	82	86.3	86.3	86.3
Do not wear hijab	4	4.2	4.2	90.5
Does not apply	9	9.5	9.5	100.0
TOTAL (valid)	95	100.0	100.0	
MISSING: System	0	0.0		
TOTAL	95	100.0		

Table 9. Hijab, Document group (Absolute frequencies)

Purdah	ALJAZEERA	BBC	CNN	TOTAL
Wear hijab	33	26	23	82
Do not wear hijab	1	1	2	4
Does not apply	3	2	4	9
TOTAL	37	29	29	95

Valid cases: 95; Missing cases: 0 (0.0%)

Figure 22. ALJAZEERA-09-September 2023

Figure 23. CNN- 10 Sep 2023

Figure 24. BBC- 11 September 2023

The figures 22, 23 and 24 show women wearing hijab, as a part of the traditions adopted in this country even during the period of natural disasters, such as Morocco earthquake 2023. Also, the images show that there is a slight difference in the shape of hijab, particularly in the image No. 24, where the image shows a woman wearing a black veil, as compared to figures 22 and 23 where the veil has different colours.

4.9 Gender Segregation

Table 10. Gender Segregation

Categories	N	Percent	Percent (valid)	Percent (cum.)
Does not apply	11	11.6	11.6	11.6
There is no gender segregation	71	74.7	74.7	86.3
There is gender segregation	13	13.7	13.7	100.0
TOTAL (valid)	95	100.0	100.0	
MISSING: System	0	0.0		
TOTAL	95	100.0		

Table 11. Gender Segregation * Document group (Absolute frequencies)

Gender Segregation	ALJAZEERA	BBC	CNN	Total
Does not apply	3	2	6	11
There is no gender segregation	29	25	17	71
There is gender segregation	5	2	6	13
TOTAL	37	29	29	95

Valid cases: 95; Missing cases: 0 (0.0%)

The analysis shows that most images do not include gender segregation (75%), and a small percentage includes gender segregation (14%), whereas gender segregation doesn't apply to the remaining (11%) of the images. It is worth noting that the high percentage of the images that represent gender segregation is attributed to the nature of the chaotic and disastrous state that followed the earthquake, as the traditional organization for gender segregation was temporarily broken, and thus mixing between both genders has become inventible due to the increased and urgent need for food and medical assistance, or the fear of the occurrence of more earthquakes. The investigated images reveal that the few images representing gender segregation refer to women performing domestic work.

The analysis also reveals that ALJAZEERA published (29 images) for gender segregation, BBC (24 images), whereas CNN published (17 images).

Figure 25. ALJAZEERA15 Sep 2023

Figure 26. CNN-17 Sep 2023

Figure 27. BBC-9 Sep 2023

Figures 25, 26 and 27 obviously show mixing between both genders, due to the nature of the circumstances of the natural disaster, as men and women gather to receive food and medical assistance. Also, both men and women, gather in public places due to the fear of the occurrence of more aftershocks.

4.10 Women Are Physically and Emotionally Weak

The percentage of the category of "women are physically and emotionally weak" represented (6%). The analysis also revealed that ALJAZEERA published (4 images), whereas each of CNN and BBC published (2 images).

Figures 28, 29 and 30 symbolize the physical and emotional weakness of women in the face of the challenges of the earthquake. Image No. 28 shows the fear shown by a mother tightly embracing her little child, while she is weak and emotionally weak due to the adverse effects of the earthquake. In image No. 29, women seem crying, where they are physically and emotionally weak, and most likely in pain due to the financial and human loss from which they have suffered. Image No. 30 shows a weak woman with sad gestures in the mid of the rubble that remained of her damaged house.

Figure 28. ALJAZEERA - 10 Sep 2023

Figure 29. CNN-12 Sep 2023

Figure 30. BBC- 11 September 2023

4.11 Women Are Not Physically Weak

The category of "women are not physically weak" is almost absent from the analysis of the sample images. Only 3 images: one image published by ALJAZEERA and 2 images published by BBC. Indeed, this confirms that the general attitude shown in the images implies that women are physically weak in times of crisis, and the same applies Morocco earthquake in 2023.

Figure 31. ALJAZEERA - 12 Sep 2023

Figure 32. BBC- 18 September 2023

Figures 31 and 32 show the challenges faced by women in the face of this natural disaster, where they try to carry heavy objects and deal with the financial losses caused by the earthquake. These images symbolize that women remain physically strong and try to overcome the consequences of the disaster. In fact, this would break the stereotype implying that women are helpless and not physically strong during disasters.

5. Discussion

The results of the current study revealed that ALJAZEERA account published more mixed images (male and female), with a total of (22 images), while CNN account published more images of women, with a total of (17 images). The researchers can say that whether the images include only women or mixed ones, most of them support the traditional stereotype implying that women are more vulnerable to cases of helplessness, weakness, as well as emotional and physical weakness as compared to men during natural disasters. The results of image-analysis, according to the category, revealed that the most common category was "helplessness" with a percentage of (46%). The images of "weakness and sickliness" were identical for the mixed and women's images, whereas only one image was for men. As for the relationship between helplessness and the means of media, it was in favor of (ALJAZEERA) with 19 images, followed by (BBC) with 13 images, and finally (CNN) with 12 images which, in turn, advocates the prevalent stereotypical view that helplessness is more related to women than men. The category of weakness and sickliness represented (13%) of the total images. Those images were distributed equally between women's images and mixed images, whereas this category only included one image for men. This finding confirms the hypothesis assuming that women are more vulnerable to risk during natural disasters, such as floods and earthquakes, and asserts the lack of experience in dealing with such situations. Also, image analysis showed that the ratio of weakness and sickliness was approximate among the investigated means of Media: ALJAZEERA (5 images), CNN (4 images), and BBC (3 images). Image analysis showed women wearing hijab, as a part of the traditions adopted in this country even during the period of natural disasters, such as Morocco earthquake 2023. Also, the images showed that there was a slight difference in the shape of hijab, where some published images represented a woman wearing a black veil, while other images showed women wearing veils with different colours. Image analysis also revealed the physical and emotional weakness among women, where they seemed crying as well as physically and emotionally weak, and most likely in pain due to the financial and human loss from which they have suffered. Image analysis also revealed that the means of media supports the idea that some housework tasks are exclusive for women, and that those tasks may increase in times of natural disasters. Some images revealed that women remain physically strong and attempt to overcome this disaster, where they could break the stereotypical view implying that women are helpless in times of crises. This finding agrees with (Geertsema-Sligh, 2019), where women are portrayed as helpless. This agenda, set by the means of media, may aim to exploit sympathy policies as they influence advocating the stereotypical image related to gender. As for representation, women are often represented negatively in the means of media. This finding agrees with Geertsema-Sligh, (2019). Despite the increased interest in this domain, there is still paucity in the inflammation about these topics outside the Western countries.

6. Conclusion

Based on the results, the researchers recommended raising awareness of the importance of media and its role in shaping general trends related to various issues and events, particularly in the framing of gender. They also recommend conducting further studies in the field of communication theories, especially concerning modern communication and technological developments. It is essential to investigate the impact of media on policymaking and public opinion, as well as to examine how media agendas affect attitudes. Furthermore, there should be increased support for funding research in the field of media and communication to enhance understanding of their impact on community, culture, and policy. Finally, future studies should consider gender and news coverage in countries that lack research in this area. Additionally, future research should replicate this study in other countries and identify gaps in its findings.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Redfame Publishing.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

Open access

Copyrights

References

Abdo, A., & Salama, A. (2009). News frames concerning the journalistic processing for Arabic issues in the Egyptian journals. *The Egyptian Journal for Media Research*, (33).

Ali, A., & Mahmood, S. (2013). Photojournalism and disaster: Case study of visual coverage of flood 2010 in national newspapers. *Journal of Interdisciplinary Studies, 2*(9). https://doi.org/10.5901/ajis.2013.v2n9p168

Ali, S. A., & Gill, D. A. (2022). Media Framing and Agenda Setting (Tone) in News Coverage of Hurricane Harvey: A Content Analysis of the New York Times, Wall Street Journal, and Houston Chronicle from 2017 to 2018. *Weather, Climate, and Society*, *14*(2), 637-649. https://doi.org/10.1175/WCAS-D-21-0009.1

Ali, Z. S. (2014). Visual representation of gender in flood coverage of Pakistani print media. *Weather and Climate Extremes, 4*, 35-49. https://doi.org/10.1016/j.wace.2014.04.001

Almakaty, S. (2024). The Impact of Artificial Intelligence on Global Journalism Industry: An Analytical Study.doi: 10.20944/preprints202408.1014.v1

AlQaruty, S., Al Qaruty, R., Al-Tkhayneh, K. M., Hadi, S. A., & Ellala, Z. K. (2024, September). The Role of Artificial Intelligence in the Media Content Industry (Chat GPT as a model). In *2024 International Conference on Multimedia Computing, Networking and Applications (MCNA)* (pp. 50-56). IEEE.DOI: 10.1109/MCNA63144.2024.10703917

AL-Tkhayneh, K. M. (2023). The Role of Digital Media in the Spread of Violence and Crime in the Light of a Number of Crime Sociology Theories. In: Alareeni, B.A.M., Elgedawy, I. (eds) Artificial Intelligence (AI) and Finance. *Studies in Systems, Decision and Control*, vol 488. Springer, Cham. https://doi.org/10.1007/978-3-031-39158-3_6

Attar, R. W., Habes, M., Almusharraf, A., & Alhazmi, A. H. (2024). Exploring the Impact of Smart cities on improving the quality of life for people with disabilities in Saudi Arabia. *Frontiers in Built Environment, 10*(3), 1398425. https://doi.org/10.3389/fbuil.2024.1398425

Barnes, M. D., Hanson, C. L., Novilla, L. M., Meacham, A. T., McIntyre, E., & Erickson, B. C. (2008). Analysis of media agenda setting during and after Hurricane Katrina: Implications for emergency preparedness, disaster response, and disaster policy. *American Journal of Public Health, 98*(4), 604-610. https://doi.org/10.2105/ajph.2007.112235

Bdoor, S. Y., & Habes, M. (2024). Use Chat GPT in Media Content Production Digital Newsrooms Perspective. In *Artificial Intelligence in Education: The Power and Dangers of ChatGPT in the Classroom* (pp. 545-561). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-52280-2_34

Cole, T. W., & Fellows, K. L. (2008). Risk communication failure: A case study of New Orleans and Hurricane Katrina. *Southern Communication Journal, 73*(3), 211-228. https://doi.org/10.1080/10417940802219702

Elareshi, M., Habes, M., Ali, S., & Ziani, A. (2021). Using Online Platforms for Political Communication in Bahrain Election Campaigns. *Social Sciences & Humanities, 29*(3), 2013-2031. https://doi.org/10.47836/pjssh.29.3.28

Entman, R. M. (2007). Framing bias: Media in the distribution of power. *Journal of Communication, 57*(1), 163-173. https://doi.org/10.1111/j.1460-2466.2006.00336.x

Geertsema-Sligh, M. (2019). Gender issues in news coverage. *The International encyclopedia of journalism studies*, 1-8. https://doi.org/10.1002/9781118841570.iejs0162

Gerhard, U., Jenson, J., Devreux, A. M., & Heinen, J. (2006). Féminismes: théorie et politique: Réflexions à partir des cas allemand, canadien et québécois. *Cahiers du Genre*, (3), 159-179. https://doi.org/10.3917/cdge.hs01.0159

Goshorn, K., & Gandy, O. H. (1995). Race, risk and responsibility: Editorial constraint in the framing of inequality. *Journal of Communication*, 45(2), 133-151. https://doi.org/10.1111/j.1460-2466.1995.tb00733.x

Habes, M., Alghizzawi, M., Salloum, S. A., & Mhamdi, C. (2020). Effects of Facebook personal news sharing on building social capital in Jordanian universities. In *Recent Advances in Intelligent Systems and Smart Applications* (pp. 653-670). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-47411-9_35

Habes, M., Alhazmi, A. H., Elareshi, M., & Attar, R. (2024). Understanding the Relationship Between AI And Gender on Social TV Content Selection. *Frontiers in Communication*, 9, 1410995. https://doi.org/10.3389/fcomm.2024.1410995

Habes, M., Elareshi, M., Ali, S., & Ziani, A. (2022). Analyzing the portrayals of child sexual abuse of urdu newspapers in developing countries. https://doi.org/10.47836/pjssh.30.4.03

Habes, M., Elareshi, M., Mansoori, A., Pasha, S., Salloum, S. A., & Al-rahmi, W. M. (2023). Factors Indicating Media Dependency and Online Misinformation Sharing in Jordan. *Sustainability, 15*(12), 1-15. https://doi.org/10.3390/su15021474

Habes, M., Salous, M. H., & Al Jwaniat, M. I. (2022, April). Applying the uses and gratifications theory to college major choice using social networks online video. In *International Conference on Advanced Machine Learning Technologies and Applications* (pp. 388-400). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-03918-8_33

London, S. (1993). How the media frames political issues. *Scott London*. http://scott.london/reports/frames.html

Murthy, D. (2011). New Media and Natural disasters. *Information, Communication & Society, 16*(7). https://doi.org/10.1080/1369118x.2011.611815

Pantti, M. (2018). Crisis and disaster coverage. *The International Encyclopedia of Journalism Studies*, 1-8. https://doi.org/10.1002/9781118841570.iejs0202

Safori, A., Habes, M., Alzobi, A., & Ali, M. (2024). An Analysis of Television News Media and Its Impact on Public Life. In *Artificial Intelligence and Economic Sustainability in the Era of Industrial Revolution 5.0* (pp. 1071-1082). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-56586-1_78

Saleh, M., & Salem, S. (2020). *Media and communication theories: a critical study in the light of communication revolution*. (1st ed.). Al-Falah library for publishing and distribution.

Takahashi, B., Zhang, Q., & Chavez, M. (2020). Preparing for the worst: Lessons for news media after Hurricane Maria in Puerto Rico. *Journalism Practice*, 14(9). https://doi.org/10.1080/17512786.2019.1682941

Yan, Y., & Bissell, K. (2018). The sky is falling: Predictors of news coverage of natural disasters worldwide. *Communication Research*, 45(6), 862-886. https://doi.org/10.1177/0093650215573861

Zibin, A., & Altakhaineh, A. R. M. (2023). A blending analysis of metaphors and metonymies used to depict the deal of the century by Jordanian cartoonists. *Language and Cognition*, 15(2), 377-404. https://doi.org/10.1017/langcog.2023.1

Zibin, A., Altakhaineh, A. R. M., & Jarrah, M. (2024). Compound nouns as linguistic framing devices in Arabic news headlines in the context of the Israel-Gaza conflict. *Russian Journal of Linguistics*, 28(3), 535-558. https://doi.org/10.22363/2687-0088-34555